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## **PRACTICAL TEACHING MODELS THROUGH OUTDOOR EDUCATION IN THE CORE PROCUREMENT CYCLE**

**Henrietta, TORKOS, University Assistant, PhD,  
Aurel Vlaicu University of Arad  
[torkos\\_henriette@yahoo.com](mailto:torkos_henriette@yahoo.com)**

**Editha, COȘARBĂ, University Assistant, PhD student,  
Aurel Vlaicu University of Arad  
[ecosarba@yahoo.com](mailto:ecosarba@yahoo.com)**

**Abstract:** *Learning outside the study hall is educational plan-based instructing and learning exercises that go past the dividers of the homeroom. It incorporates any educational program-based movement that happens outside the school running from a gallery or field visit, to a games trip, or open-air instruction camp. It is based on the curriculum, and also on the imagination of teachers, who have to properly and wisely combine the curricular contents, methods and resources in order to get the most efficient results. These results are not just based on school grades, but also regarding transversal competencies and emotional intelligence. In the present article, we would like to present a set of outdoor teaching and learning practical models, based on the core procurement cycle curriculum in Romania, in order to help primary school teachers in organizing similar activities for their classes, based on different school subjects. We would also like to present a main model of planning outdoor learning activities and its outcomes.*

**Key words:** *outdoor education; teaching; model; practical; core procurement cycle.*

### **Introduction**

Teaching and learning outside the classroom portray school educational program learning, other than with a class of understudies sitting in a room with an educator and books. It envelops science field trips and looking for

creepy crawlies in the school garden, just as indoor exercises like watching stock control in a nearby shop, or visiting a gallery. It is an idea at present appreciating a restoration due to the acknowledgment of advantages from the more dynamic style. (Kellert, 2005)

It is based on specific aims that can be evaluated at the end of each outdoor educational activities. These are presented as it follows:

- figure out how to conquer misfortune
- improve individual and social turn of events
- build up a more profound relationship with nature.
- raise fulfillment through better educating and learning encounters.

Open air training is regularly utilized as a way to make a more profound feeling of spot for individuals in a network. Feeling of spot is showed through the comprehension and association that one has with the zone wherein they dwell. Feeling of spot is a significant part of environmentalism just as ecological equity, since it makes the significance of supporting a specific biological system substantially closer to home to a person. (Wells & Evans)

### **Theoretical foundation**

There is a lot of narrative proof in scientific articles about the advantages of outdoor education encounters; educators, for instance, regularly discuss the improvement they have involved with understudies following an excursion. Nonetheless, hard proof indicating that open air training has a verifiable long-haul impact on conduct or instructive accomplishment is more enthusiastically to recognize; this might be to some extent in light of the trouble engaged with directing investigations which separate out the impacts of outside instruction on significant results. (Munoz, 2009)

Various studies have recorded expanded school execution through outdoor education. Exploration has report expanded government sanctioned grades, upgraded mentality about school, improved in-school conduct, improved participation also, in general improved understudy accomplishment when understudies learn in and about nature. Also, outdoor learning successfully utilizes a more prominent scope of youngsters' insights. Numerous scientists contribute the expansion in execution to expanded significance and hands-on understanding of adapting outside. Adapting outside is dynamic and builds understudies' physical, mental and social wellbeing. A few examinations have even shown development (e.g., non-school) physical action increments with open air learning. Admittance to nature has likewise been appeared to diminish the manifestations of ADHD. Open air learning and admittance to nature additionally diminish feelings of anxiety of both pupils and educators. Outside encounters assist understudies with expanding their comprehension of their common and human networks which prompts a



feeling of spot. (Peacock, 2006) Through association with place, pupils create more grounded natural mentalities and metro practices. Outside learning encounters are the establishment of raising the up and coming age of dynamic residents who deal with their common and human relationships. (Bell & Dymont, 2006)

### **Recent perspectives**

Outdoor education, whether used as a single form of learning or as a learning strategy in traditional education, brings with its positive changes both in terms of learning styles and in terms of how to adapt existing methods in various situations. The most common way to use the outdoor approach is by using methods already established and known in outdoor contexts. In this way, outdoor education becomes efficient and easy to use by every teacher, regardless of the age of the group they work with. (Coşarbă & Torkos, 2020)

In outdoor education, both traditional learning methods and interactive methods that develop the level of group cohesion can be used. Depending on the objectives set, the number of participants, the aims and the chosen framework, the methods that will be used can be established, but also how they will be adapted, so as to correspond to the needs of the group and for the whole activity to lead to learning.

In the current conception and comprehensive in terms of effects in use, the teaching method according to the definition given by Ionescu, is a way of action, a tool with which students, under the guidance of the teacher or independently, acquire and deepen knowledge, develops and develops intellectual and practical skills and abilities, abilities, competencies, behaviors, aptitudes, attitudes, etc. (Ionescu, 2003). According to this definition, it can be stated that outdoor education is an educational strategy that develops skills, and can be used in multiple learning situations. Outdoor education operates with all kinds of known methods, traditional, established, used mainly in the classroom, but also with modern, interactive, used in any environment where learning situations can be organized.

### *The organization of outdoor learning activities*

In the organization and description of outdoor activities, it is usually specified:

- ✓ the title of the activity,
- ✓ the disciplines involved,
- ✓ the number of participants,
- ✓ the number of organizers,
- ✓ the date,
- ✓ the time required to carry out the activity,
- ✓ a brief description of the steps followed,
- ✓ methods used

✓ how in which the teacher adapted them to the respective activity.

The latter action depends on the creativity and openness of each teacher organizing outdoor activities. Equally important is the correlation of the method with the framework and the contents pursued. In external education, interactive group teaching strategies are used, which favor the interrelation exchanges between the participants in the activity through interpersonal processes of cooperation and constructive competition, because this approach is allowed, even facilitated by the easy space in which activities can take place.

The personality of students in a class is constantly shaped by the processes of communication and interaction exercised within it. According to the literature (Roman&Balas, 2010), life in the classroom has as a constituent element cooperation in activity. This action is carried out by relating the students, involving participation in solving a common task established by the class, a group of students or the teacher. Through cooperative learning activities the student can amplify his relationships with colleagues because engaging in a common activity allows information to flow faster. Through outdoor activities that involve the use of interactive methods in combination with traditional ones, learning is achieved through dialogue, cooperation and has the effect of improving individual intellectual performance. The light and open environment offered by outdoor education challenges the teacher to resort to methods that are not exclusively frontal, offering students opportunities to interact. At the same time, teachers who choose outdoor education as a way of carrying out instructive-educational activities are put in the situation of thinking about various activities using various learning methods.

The conceptual scheme of the model proposed (Fig. 1), contains the following elements:

- Outdoor education activities
- Curriculum of the fundamental acquisitions cycle
- The transversal competencies pursued
- Deployment environment
- Materials and tools used
- Actors involved
- Evaluation method

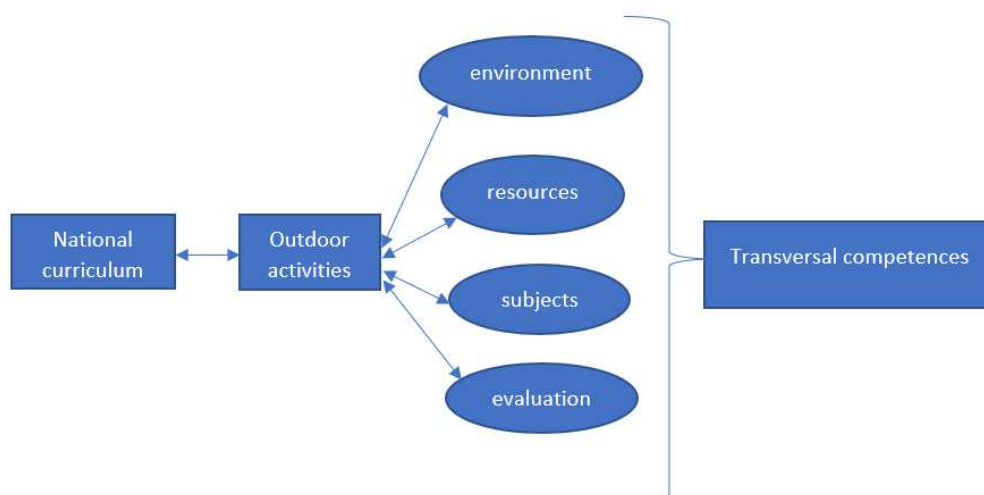


Fig. 1. The outdoor learning activity preparation model

### Examples of outdoor learning activities

In some educational systems, the National Curriculum includes directions for the participation of students of all ages in a series of outdoor, planned, progressive and creative learning experiences. These are challenging opportunities that occur throughout and outside of school. In Romania, following the analysis of the National Curriculum, we notice the encouragement of this type of activities and learning experiences even if they are not mentioned in documents as activities belonging to outdoor education. If there are so many motivations and positive directions in this regard, all that remains is to face the challenges of ensuring that outdoor education is strongly anchored in the curriculum, so that it becomes a reality for students in Romania. This approach becomes a responsibility of each teacher, who will have to plan and integrate outdoor education activities in the instructional-educational process, in the form of interdisciplinary projects and in the form of cross-curricular activities. Each curricular area is molded to outdoor education, because each discipline has specific benefits in this regard. When planning outdoor activities, connections with educational activities undertaken in the classroom should be taken into account in the context of using the curriculum as a whole. Instead of offering a week of outdoor learning or a special day of outdoor workshops, it is more desirable that formal activities that take place in the outdoor environment be part of a holistic teaching-learning approach that is linked to a process. educational complex in progress.

Outdoor education is used in schools all over the world, at all curricular levels. The practice of outdoor activities within the core subjects reflects the confidence of teachers in the fact that curricular objectives can be met through this approach. The members of the management of the schools

where this type of education is constantly used also state that they have visibly intensified the effects of learning, motivated the students and encouraged the teachers to be innovative. The University of Plymouth, England, published a guide report in 2016, in which it presented the main valences of using outdoor education:

- Inspiring creativity in the area of language and communication, through the first-hand experiences they received from nature, because starting from real experiences in nature you can reach real compositions that greatly develop children's vocabulary and writing.
- Supporting the main concepts in the area of mathematics and science, transforming the difficult ones into realities (for example the concepts of perimeter, area, lengths, quantities)
- Ensuring experience and admiration, which transforms the entire curriculum into a living one, by leaving the science laboratories and putting students in direct contact with the natural environment. (Plymouth University England, 2016)

As specified above, outdoor education is based on various topics, is focused on the main curricular areas, integrating several disciplines and even more curricular areas. In the following we will present some ideas that illustrate the potential of putting outdoor education into practice with the related activities, on curricular areas or large study topics.

### ***Outdoor education models in teaching language and communication***

Most Romanian authors, writers of poetry, prose or drama, use nature as inspiration or as a place for events in their works. Some students who are shy to express themselves in writing in the internal environment will find the external environment less formal and will be motivated to do so there. Also, the involvement of children in practical outdoor activities helps them to build a specific vocabulary, and when returning to class, outside experiences will be useful in understanding the contents to be studied and in understanding the texts read. Nature can become a source of inspiration for young authors, and they can learn about the process and purpose of writing in real society.

Outdoor activities that develop students' desire to communicate and write are done starting with finding ways to leave traces, regardless of the surface and the tool used. You can use different types of soil, dust, air, water or different leaves. It is encouraged to write short lyrics on any of the surfaces mentioned above, which are then photographed to keep the memory of the work done, but also to be able to evaluate.

You can choose different objects from nature, by each participant, after which you can create stories including one of the chosen objects. The object is passed on, the story can continue with another participant who in turn adds another object. The line continues until all the ideas are exhausted.

An activity that stimulates the desire to read and is specific to any age, is to choose a book or story, and read it in a chosen location outside. Spaces can vary, starting from a corner of the school grounds, to the school yard, or even in a tree, it is important that the chosen location is related to the title of the book or story. It is recommended here, as an evaluation, to observe the emotional connections of the subjects with the chosen place and story. The teacher's reading can be done by a campfire or in a shady place, where students can sit relaxed, and listen to the story sitting on a stone, in a calm and noise-free environment.

### ***Forms of outdoor education in education for society subject***

Learning about the world and society is a fundamental experience that every student needs to understand the present and future directions. He must also be aware of places and environments rich in history and tradition. As mentioned in previous chapters, knowing the environment in which the child lives and develops can help him become more connected to the local community. Social and historical content becomes more relevant when students come into direct contact with different people, hear more opinions and can ask questions. The use of various places in the social environment gives students the opportunity to empathize with the communities of the past and those of the present, especially by visiting historical sites they study in textbooks, comparing images with the realities they discover, analyzing objects from the historical past, etc. In order to develop a sense of perception of space and time, it is recommended to create maps, either of the local community or of tourist destinations with educational values in terms of history.

Students can create a replica of a museum, or even an outdoor museum. Students can participate concretely in this activity through their own contributions, bringing from home an old object to discuss, describe the story of the object, play with objects, share the history of their own family, even involve family members, presenting and inviting them to the activity.

Other activities can be carried out around old photos, they can be placed in chronological order, assumptions can be made about the place and time they were photographed, about the significance of each. Maps can be made of the school or of some places present in the local community, which hide tradition, which show respect for human nature and for the rights of each individual.

Visits can be made to historical or archaeological sites, and even to famous places of battle or places where the nation's heroes are honored, with the specification to give each student enough time to develop empathy for the events and people who participated. Discussions can be organized about how these events have influenced religion, culture, history, traditions today.

This curricular area also includes religious education, or more recently moral education. Within these activities, real opportunities arise to explore the existing beliefs and values in the world. Being in the external environment, the soul is calmer, and the individual can ask personal questions: Who am I? What is the purpose of life? Who rules the universe? Where are we going? and so on, the great religious traditions of the world, the differences in spirituality and the varied way in which each person seeks to connect with the divinity, are topics that can be debated in these activities. Outdoor environments, be they places of worship, temples, churches or even nature in its very simplicity, are resources meant to encourage personal reflection and development from a religious or spiritual point of view. Freedom of expression, communication, choice of discussion partners, the joy of touching, touching, smelling, feeling, speaking are just fragments that offer rich learning experiences. (Torkos, 2018)

In this sense, some clear examples are presented that can be used in outdoor activities that have as their theme religiosity or spirituality. For example, you can visit well-known places that have a strong religious charge, where you can discuss religious objects, or you can participate in various religious events, festivals, traditions. You can analyze different types of letters or documents; you can study religious texts or other symbols. In outdoor education, small gardens can be created to serve meditation and self-discovery, they can be decorated with different plants, decorations, wooden benches or statues. Interculturality can be practiced at the most intense levels, and the degree of respect and acceptance of students increases with each other by knowing the culture of all members of the group. They can share different games or religious songs, dances or traditions, and others can get actively involved and try to play them, thus fully integrating and empathizing with the person in question. You can write or draw different symbols, drawings on asphalt or in earth and sand, representing the culture or religion of each people. Artifacts can be painted or even made of clay or ceramics, which are then used to decorate the study area. Usually you can make paintings on glass, create different murals, make collages of glass or porcelain, etc.

Romania is a rich country and from this point of view, temples, places of worship, splendid courtyards of churches, exceptional monasteries, all these contributing to the discovery of the self, and the discovery of each individual's place in society and history, in nature. Living a simple and satisfying life can lead to great satisfaction on all levels of life. Through outdoor education in combination with modern curricular requirements, authentic, multi-cultural, integrated, holistic learning is designed for the needs of each student.

### ***Examples of outdoor activities used in teaching mathematics and sciences***

Every student needs to develop a deep understanding of mathematical concepts and numerical skills, so they must engage in value contexts in which these abstract concepts can be applied to real life situations. In order for this approach to take place, it is recommended to use outdoor education in this curricular area as well. Numbers serve to make people's lives easier, and this must be understood even from an early age. Mathematics or science should not be difficult and should not scare students. Children can benefit from learning mathematics using outdoor strategies through the access that nature or the outdoor environment offers to various resources. Practical work as well as teamwork help students to develop communication situations through which they independently develop their mathematical language.

There are many activities in this regard, which can be used at any age. Especially at the level of the fundamental acquisition cycle, when students are eager to learn and curious to experiment, the mathematical and scientific activities carried out outside the classroom are more than beneficial, streamlining learning and the pace of accumulation of educational experiences leading to learning. Distances, measurements, comparisons with different objects collected from nature, calculations or the use of mathematical or physical formulas are much easier in nature, when students have the opportunity to experiment in a practical, direct, and not abstract. For some students this is a real help, because abstract concepts are harder to understand. At the preschool level, as they are used to learning through the use of different tools, it is more difficult for them to adapt to school age, where the use of these educational resources is increasingly rare.

A useful exercise in calculations is the one in which the students sit in a single row, one behind the other, and at the organizer's whistle, they run one by one, on a distance of 400 meters. At the end of the race, each student will hear a simple operation with two terms, addition or subtraction, and will choose the result from a lot of posters that will be placed in front of him on the ground. The strong points of this exercise are: spending time in nature, physical exercise, a minimum of competitiveness, enough time to think about the exercise, fun, learning through play, etc. If such an exercise were done in the classroom, there would not be enough time for each child to go to the blackboard, on top of that there would be embarrassment and fear that he has to answer correctly or he will be laughed at in front of colleagues. During this exercise, each child has the opportunity to come forward, even several times in 15 minutes allocated to the exercise, and teachers have the opportunity to add other exercises at that time and capitalize on other content.

Another exercise designed to ensure the practice of mathematics is that in which each student stands with his feet apart in front of a tree and moves his gaze from the top of the tree to the base. When the student can clearly see the

top of the tree, he will ask a colleague to measure the distance between the child and the tree. Then, to this distance is added the number that represents the length of the first student's leg. The end result is actually the height of the tree. (West Lothian Primary School, 2017)

Choose a place on the school grounds and mark it with chalk. Students spread over the entire surface of the field and choose different ways to reach the marked place. Beforehand, they estimate how many of the chosen moves will be needed to reach the marked place. The estimate is tested by the actual implementation of the movements. The exercise can be repeated by choosing other movements during the time allotted to the activity. (Education Scotland, 2011)

Introductory exercises in mathematical activities, with short duration, can be the choice of stones of different sizes and the choice of a partner. It will be calculated who has more and who has fewer elements. With a chalk, draw the representative signs (<, > or =) to measure the quantities or sizes of the objects found. The activity can continue with the change of partners and with the performance of other measurements using the same representative signs. (Education Scotland, 2011)

Usually the mathematical exercises performed in the outdoor environment start from the students' curiosities and questions: How tall is the biggest building belonging to the school? How can we measure it? Each student can come up with answers and ideas, and even choose the most appropriate ones and test them. All the exercises are discussed in the classroom, and even some of them are written down in notebooks and thus the educational process is continued, the two spaces complementing each other.

Within the natural sciences, a discipline belonging to the same curricular area, as many outdoor activities can be performed. It has been proven that all disciplines that are based on science are studied much more easily in practice, outside the classroom, where each student can experiment at his own pace. Natural sciences connect biology with physics and chemistry, and studied in the natural environment and out of the ordinary classroom, students have unique learning experiences. In addition to these aspects, the natural sciences studied in the external environment, encourage the correct thinking of children related to the correct use of resources and related to the impact of man on the environment. Moreover, students have the opportunity to interact with the natural environment and its elements, learning freely about plants and animals, climate, cardinal points, etc. The effects of these outdoor activities do not take long to appear, because the respect for the environment and for all those around it increases in this way. Observation, experience, scoring and drawing conclusions are the steps that usually take place during science classes at the level of the fundamental acquisition cycle. Many principles can be observed, understood and applied even on a simple



outing in nature or even on a simple walk around the school or on green spaces. (McCoy, 2010)

Suggested activities in this regard include experiences started right in class, when students can germinate some wheat seeds in a jar and can wait for the plant to grow in a jar, this exercise being beneficial in the sense that it is desired to explain the components of a plant. The exercise can continue with planting small trees, plants or flowers around the school or in the school garden. The activity can continue in the classroom, where students can come up with ideas about how to best care for these plants, how they grow or how people can intervene in their growth process. (Nature learning initiative, 2013)

More complex activities can be achieved by sending students to the school yard and encouraging them to find and photograph different plants or insects, discuss identified differences, motivate their choice, make an exhibition with all the photos and especially write down the multitude of questions. which can be born related to everything they observe, hear or feel in the external environment. Together with a partner, or in a small group, you can discuss questions and select those that are connected to the area, discipline, or topic of Science. This exercise can continue if the organizer asks students to choose those questions that can be researched, and together or in small groups to try to find answers.

Students can make short outings in the four seasons and observe the changes that take place in nature. Orientation, or orientation with map and compass is a very good example of this. In order to have a clearer picture of the orientation activities, we want to present the steps necessary for such an activity. Each orientation lesson begins with a plan. As leaders of the orientation activity, we need to know exactly the number of students we will work with. We also need to choose an area, taking into account some of the following aspects: size, placement, age of the children involved in the orientation activity and the difficulty of the terrain. The next step is the map. If there is no map of the desired area and the leader cannot borrow or print it, he must create it himself. (McNeill, 1996) There are several applications that may be useful in this case, but if there is no other possibility, the leader can adapt an existing map to the needs of the group. The leader can also present different maps to the students, so that they can get a more obvious picture of the types of maps they can work with. Explanatory discussions should be made about the elements that can be found on a map, for example the colors of the relief forms, how they are represented, what each means, the measures on the map versus their meaning in reality, where the dangerous areas are, where there are areas slippery or damp, what areas should be avoided, etc. All maps should include the following: ladder, north arrow, legend and title. For starters, you can make maps of the classroom, of the school, of smaller areas, and you can study with the class before the longer outings. (Bagness,

1995) There are three types of orientation activities: with compass, map and compass, and only with map. (Kjellstrom, 1994)

There are certain steps that should be taken into account when planning guidance activities, with reference to safety and risk. Students should have a general knowledge of the plants and wildlife they may encounter along the way. They should know what they can touch, what they can pick and what they can eat. (Palmer, 1998) They should be aware of poisonous plants and animals and all the dangers involved. They should have first aid equipment on them and should know how to use it in case of accidents. Clothing is another important aspect of this type of activity. Each student should be responsible for dressing appropriately and bringing their own watch. The participant in well-equipped orientation activities must have a whistle, a long-sleeved shirt, a wristwatch; wrist compass, durable and comfortable boots or sneakers, tear-resistant old pants. (Bratt, 2002) They should also have a backup plan in case of sudden changes in the weather, and the group must stay together at all times and act responsibly at all times of the activity. Perhaps the most important aspect is the experience during these activities, because observation and living are the main aspects of orientation activities. You can analyze plants, animals, geographical areas, spaces and land. All these experiences are rich in learning situations, which can only take place outside.

### **Conclusions**

Teachers who have integrated outdoor activities into the daily routine of students, unanimously say that after a short time it does not matter to be outside, in an outdoor environment, but the learning that takes place there. After a while, the planning of activities did not focus on "outdoor education", but the curricular area and disciplines involved, or even the topics that will be used, because the venue is no longer the main concern, but the experiences that took place in that environment. This really means a learning experience that continues regardless of time or space, an experience that will never depend on boundaries.

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# THE PARENT' S ATTITUDE TOWARDS THE INTEGRATION OF STUDENTS WITH SPECIAL NEEDS

**Nicoleta Raluca LUPU, PhD.**

**Transilvania University of Brasov, România**

[nicoleta.lupu@unitbv.ro](mailto:nicoleta.lupu@unitbv.ro)

**Abstract:** *The present article is a quantitative research which it responds to the following question: what is parent's attitude towards the integration of the students with special needs. The attitudes were measured using a scale designed for this purpose. The results showed the degree of proximity to this category of students influenced the attitude positively.*

**Key words:** *parent's attitude; integration; special needs*

## **1. Introduction**

What is parents' opinion on the integration of students with special needs in mainstream schools? Lupu (2018) answered this question using the group interview method. Ten respondents, parents of typical urban school students, secondary school, participated in the focus group. The results showed a positive attitude towards people with disabilities in general, but the degree of tolerance and acceptance of parents decreases when it comes to integrating students with special needs with their own children. Based on these results, it was intended to develop a scale to investigate the attitude of parents in greater numbers, in a shorter time and respecting the principle of anonymity.

This study is part of the doctoral thesis entitled "Educational Implications of Game in students with Special Educational Needs from the Inclusive Schools" and responds to this goal.

The main concepts that formed the basis of the research are synthesis in the following table:

**Table no. 1** *Conceptual delimitations*

<b>Attitude</b>	Allport (1959) apud Lupu (2017a) defines the attitude towards the subject's stance as another subject, object, or situation. Larousse (1998) apud Lupu (2017a) explains that the concept of attitude is covering various meanings. There are personal attitudes that do not put in question than the individual and social attitudes that have an impact on the groups, both having in common a set of personal reactions toward an object determined: animal, person, idea, or thing.
<b>Integration</b>	According to Verza (1998) apud Lupu (2017a) integration represents a way of achieving normalisation. Normalisation means ensuring conditions for children with special needs similar to those of normal children. Gherguț (2001) apud Lupu (2017a) recalls about a functional normalisation (ensuring specific conditions persons with deficiencies), a social normalisation (membership of a small group) and a societal reconstruction (widening social group towards public life). School integration according to the same author involves the inclusion of student with special needs and school participation, depending on the potential, along side other children in learning activities.
<b>SEN</b>	Vrăsmaș, Daunt, and Mușu (1996) apud Lupu (2017b) considers the “special needs” those requirements in relation to education, which are additional and complementary to the general objectives of education. The following categories are included in this syntagm: emotional and behavioural disorders, mental/retardation disabilities, physical/motor disabilities, sight impairment, hearing impairment, language disorders, learning difficulties.

## **2. Methodology**

### **2.1. Research objectives**

The objective of the study is to investigate the attitudes of parent's of typical students towards the integration of students with special needs in mass education. Parent's attitudes influence the process of integration of the pupil with special needs, knowledge of this attitude by allowing the elaboration of programmes to change attitudes and hence favouring integration.

### **2.2 Research hypothesis**

Starting from this objective, the following **assumptions** are formulated:

Hypothesis I: The attitude of parents is influenced by the degree of proximity to the people with special needs.

Hypothesis 2: There are significant correlations between attitude and the socio-professional characteristics.

### 2.3 Research method

The research was carried out in several inclusive schools in Braşov City, during the school years 2016-2017 / 2017-2018. The overall design of the research is the descriptive, correlational design.

The attitudes of parents were measured using a scale designed for this purpose.

The scale of measuring the attitude towards the integration of the students with special educational needs is addressed to the teachers, the students in inclusive schools and their parents.

The scale of measuring the attitude towards the integration of the students with special educational needs is a Likert scale. The answers are graded from 1 to 5 where: 1 - expresses total disagreement, 2 - partial disagreement, 3 - neutral, 4 - partial agreement, 5 - total agreement.

*The measurement scale of the teachers' attitudes towards integration (Lupu, 2020)*

The scale is made up of 40 items distributed in three sub-scales, of which 15 items are items with reverse scoring: Subscale I - General attitude towards people with deficiencies and their integration in mass education, Subscale II - Attitude towards the integration of the students with special educational needs in the school where the teacher teaches, Subscale III - Attitude towards the integration of the students with special educational needs in the class where the teacher teaches.

*The parents' attitude measurement scale regarding the integration of the students with special educational needs.*

The scale of measuring the teachers' attitudes towards the integration of the students with special educational needs was adapted to parents. The parent scale is made up of 29 items distributed in three sub-scales, of which 14 items are items with reverse scoring: Subscale I - Overall attitude towards people with deficiencies and their integration in mass education (6 items), Subscale II - Attitude towards integrating the students with special educational needs in the school where their own children learn (14 items), Subscale III - Attitude towards the integration of the students with special educational needs in the class where they their own children learn (9 items). The scale has an internal consistency coefficient of .79. The first subclass has an Alpha coefficient of .66, the second a coefficient of .43, and the third subclass a coefficient of .84, which shows an average internal consistency

(tab. No 2). There are strong correlations between the scale and its subscales at a  $p < .01$  (tab. No 3).

**Table no. 2** *Internal consistency coefficient*

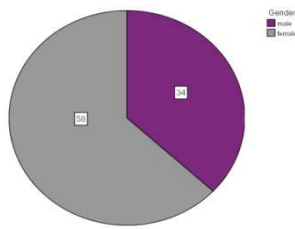
Subscales/Scale	Alpha Coefficient	Number of items
Subscale 1	.66	6
Subscale 2	.43	14
Subscale 3	.84	9
Scale	.79	29

**Table no 3** *Correlations between the scale and its subscales*

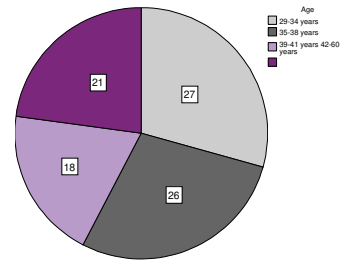
		Scale III	Scale II	Scale I
Scale	Pearson Correlation	.83	.80	.66
	Sig.	.00, $p < .01$	.00, $p < .01$	.00, $p < .01$
	Number of participants	92	92	92

#### **2.4. Research group**

The participants are 92 parents. 34 are male and 58 female, from urban area and are between the ages of 29 and 60, as follows: 27 parents are aged 29-34 years, 26 parents are aged 35-38 years, 18 of them between 39-41 years, and 21 parents between 42-60 years. 40 respondents have higher education, 33 of them have high school education, 12 middle education, and 7 parents post-secondary education. 15 of the participants are parents of a child with SEN.



**Figure 1** Distribution of participants participants after gender



**Figure 2** Distribution of participants after age

### 3. Results

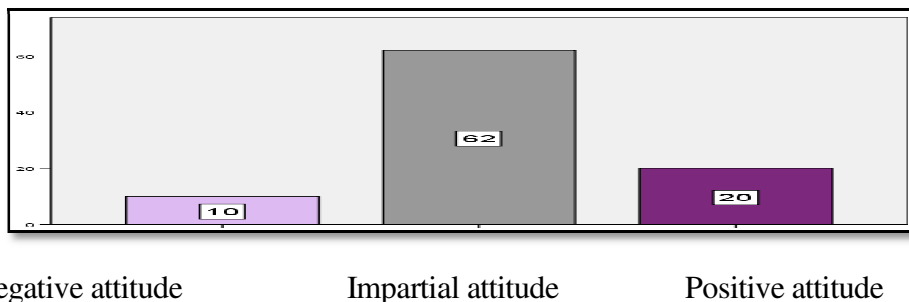
**Hypothesis I:** *The attitude of parents is influenced by the degree of proximity to the people with special needs.*

The attitude variable has three dimensions: the attitude towards the integration of people with deficiencies in society, the attitude towards the integration of students with special educational needs in the school where their own child learns, the attitude towards the integration of students with special educational needs in their own child's class.

*The attitude towards the integration of people with deficiencies in society*

The overall attitude was measured through the first subscale of the questionnaire. The "general attitude" variable was created by adding the gross scores obtained in this subscale, and the variable "general attitude by classes" was created after recoding to a new variable.

The census method shows that most parents have a neutral attitude towards the integration of people with special educational needs in society and in mass education (62 neutral attitudes, 10 negative attitudes and 20 positive attitudes) (fig.3)



**Figure 3** The attitude of parent's towards the integration of people



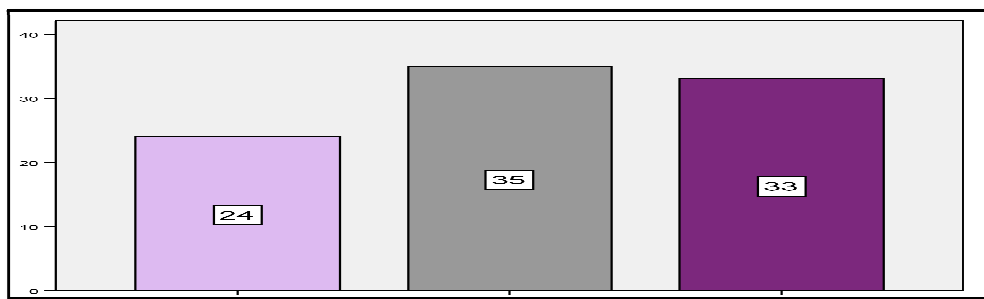
*with deficiencies in society*

*The attitudes towards integrating students with special educational needs into school where their own children learn.*

The results show a neutral attitude of parents towards the integration of students with special educational needs in school (35 parents show a neutral attitude, 33 a positive attitude and 24 a negative attitude) (fig. 4)

*The attitude of parents towards the integration of students with special educational needs into their own children's class*

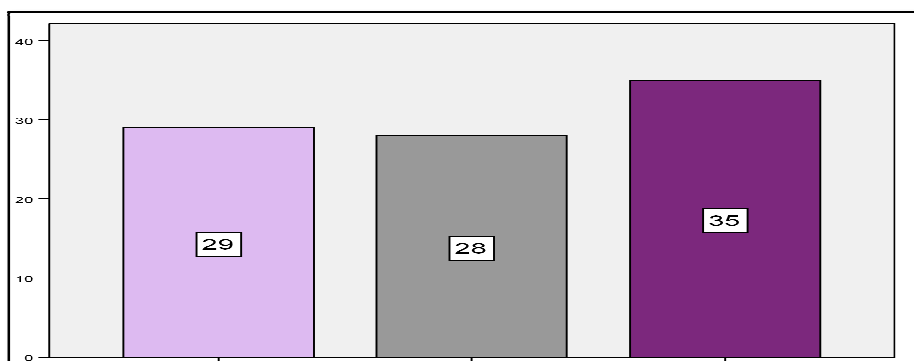
The results show a positive attitude of parents towards the integration of students with special educational needs into their own children's class (28 parents show a neutral attitude, 35 a positive attitude and 29 a negative attitude).



attitude).

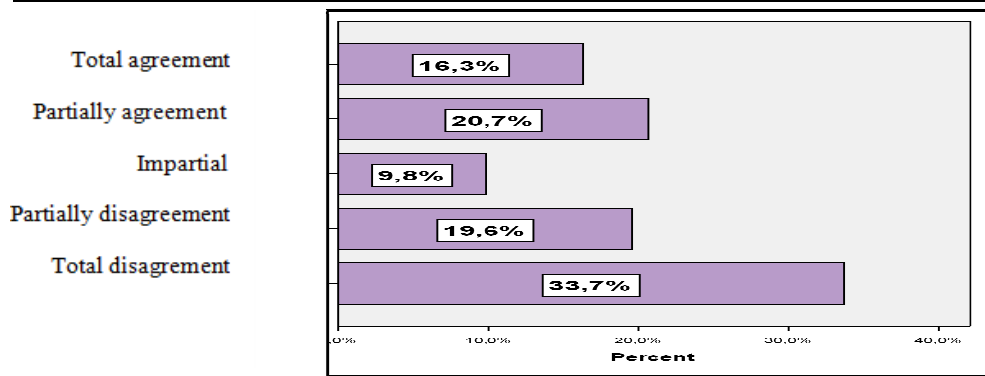
Negative attitude    Impartial attitude    Positive attitude

**Figure 4** *The attitudes of parent's towards integrating students with special educational needs into school where their own children learn*



Negative attitude    Impartial attitude    Positive attitude

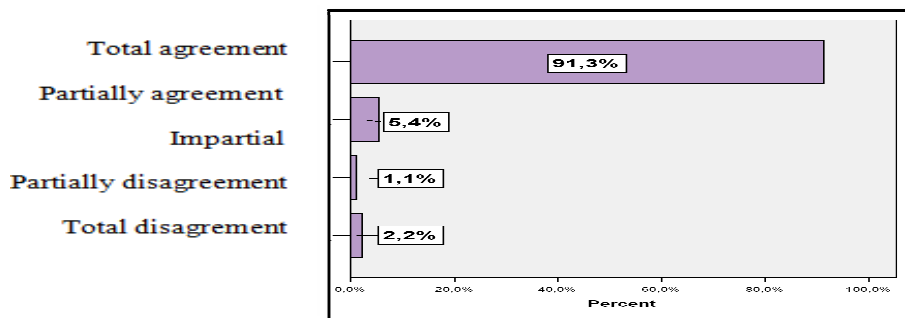
**Figure 5** *The attitudes of parent's towards integrating students with special educational needs into their own children's class*



**Figure 6** „People with special educational needs have the right to education”.

For a better analysis of the results, the parents' answers to some key questions in the questionnaire are presented below, using the census method.

It is noted that the majority of parents (91.3%) fully agree with the statement "People with special educational needs have the right to education" (fig. 6)



**Figure 7** The attitudes of parent’s regarding the form of education

Regarding the form of education, 33.7% of the interviewed parents do not agree that the place of students with special needs is in special education institutions. Instead, 16.3% consider that students with special educational needs should be educated in special classes and institutions, regardless of their disability (fig. 7)

Concerning integration in mass education, depending on the severity of the deficiency, 30.43% and 27.17% of the parents totally and partially agreed that students with severe disabilities should only be partially integrated into the mass education. In addition, most parents surveyed are more tolerant of moderate impairments, 60.9% and 25% totally and partially agreeing that

moderately impaired students can make progress in a class with typical students. Parents have a high degree of tolerance towards students with physical deficiencies, with 82.6% agreeing with the acceptance in mass education of students with such disabilities.

## Hypothesis 2

*There are significant correlations between attitude and the socio-professional characteristics.* The data obtained do not support the hypothesis. There is no statistically significant correlation between the three dimensions of attitude and the socio-professional characteristics such as age, gender, and studies (tab. No. 4)

**Table no. 4** *Correlations between attitude and the socio-professional characteristics*

		Gender	Age	Studies
<b>Attitude</b>	Pearson	-,14	,03	-,03
	Sig.	,17, p>.05	,77, p>.05	,71, p>.05
	N	92	92	92
<b>Attitude_school</b>	Pearson	-,08	,14	,11
	Sig.	,43, p>.05	,17, p>.05	,27, p>.05
	N	92	92	92
<b>Attitude_class</b>	Pearson	-,12	,11	-,11
	Sig.	,22, p>.05	,26, p>.05	,26, p>.05

Regarding the conditions offered by the integrative school for the students with disabilities, 79.3% of the participating parents fully agree with the adaptation of the institution to meet the needs of these children (access ramps, adapted toilets, resource rooms), a percentage 62% strongly agree that the image of the inclusive school is not affected by the presence of students with special needs. As for the class attendance, 27.2% and 34.8% of parents totally and partially disagree that students with special educational needs monopolize the teacher's attention, to the detriment of the other students.

As regards the attitude towards the integration of the students with special educational needs according to the type of disability, parents show a language disorders, with the most rejected categories being severe mental disabilities, associated disabilities and hearing impairment. The data obtained do not support the hypothesis. There is no statistically significant correlation between the three dimensions of attitude and the socio-professional characteristics such as age, gender, and studies (tab. No. 4)

#### 4. Conclusions

It was assumed that the attitude of community members towards the integration of people with deficiencies in society would be a positive one, as the integration into society and mainstream education of these people does not necessarily require contact with this category.

The integration of students with special educational needs into school where their own children learn and into their own children's class will change attitude, from a positive attitude towards integration in general to a negative attitude, as contact with this category becomes inevitable. This hypothesis was based on studies (Clough, Lindsay, 1991, Norwich, 1994, Fritz, Millo, 1995 apud Subban, Sharma, 2005) which showed a negative attitude of teachers towards the acceptance of students with SEN in the classroom, despite claims that people with disabilities have the right to education. It is inferred from this that "these people have the right to education, but not in my school and in my class".

The census method showed that most parents have a neutral attitude towards the integration of people with special educational needs in society and in mainstream schools (62 parents with a neutral attitude, 10 with a negative attitude and 20 with a positive attitude). The results show a impartial to positive attitude of parents towards the integration of students with SEN into school where their own children learn (35 parents show a impartial attitude, 33 a positive attitude, and 24 a negative attitude). Compared to the integration of students with SEN into their own children's class, the results show a predominantly positive attitude of parents (28 parents show a neutral attitude, 35 a positive attitude, and 29 a negative attitude).

The degree of proximity to this category of students influenced the attitude positively. The closer they approached, the more the parents participating showed a greater degree of tolerance and acceptance. The impartial and positive attitude of parents can be explained by appealing to the two functions of attitude: the function of adaptation - expressing attitudes to receive the approval of others and the function of defending the ego - a declared positive attitude protects the individual's self-esteem against internal conflicts.

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## ETHICAL PERCEPTIONS OF ENGINEERING STUDENTS ABOUT CHEATING AND PLAGIARISM

Lorena PECULEA, Adrian PECULEA, Ph.D.,

<sup>a</sup>Specialized Department with Psycho-Pedagogical Profile, Technical University of Cluj-Napoca; <sup>b</sup>Faculty of Automation and Computer Science, Computer Science Department, Technical University of Cluj-Napoca

[lorena.peculea@dppd.utcluj.ro](mailto:lorena.peculea@dppd.utcluj.ro)

**Abstract:** *Academic dishonesty is an important issue in education that continues to be a worldwide problem in the academic field. This paper embodies the findings from a small part of a larger study on academic dishonesty. Its purpose was to investigate the frequency of cheating and plagiarism behaviours, reasons, attitudes towards cheating and plagiarism and to find out ways to prevent and reduce cheating and plagiarism. This study was conducted through a 5-point Likert scale questionnaire completed by 466 engineering students at the bachelor and master level at a university from Romania. The study indicates that cheating and plagiarism are sometimes common among students, while the need to increase attitudes so as to modify students' behaviours toward honest classroom practices has been identified. Students felt that passing exams was a strong reason for cheating and plagiarism. The study also proposes several recommendations to mitigate levels of academic misconduct.*

**Keywords:** *academic dishonesty; cheating; plagiarism; awareness; behaviours; reasons; attitudes.*

### 1. Importance and motivation of the study

Cheating, plagiarism and other forms of academic misconduct are a significant issue in higher education. Besides intellectual development of students contributing to the prosperity of society, universities should have a simultaneous influence on the development of students' moral competences. Moreover, some research suggests a link between student academic dishonesty and later workplace dishonesty. To ensure that the university fulfils its purpose to increase the academic integrity of their students as one of the core values of higher education, it is necessary for students to

understand what constitutes academic dishonesty, such as cheating and plagiarism, their practices, reasons and attitudes towards these unethical issues. The objectives of the present study were as follows: to determine the frequency of the behaviours practiced by students regarding cheating and plagiarism; to examine reasons for cheating and plagiarism among respondents; to identify students' attitudes towards cheating and plagiarism; and to find out ways to prevent and reduce cheating and plagiarism. University members should understand the perceptions of academic dishonesty that engineering students have. The results can be used to determine the potential action strategies to be considered in the university where the study was conducted and, possibly, in other Romanian universities, to increase students' awareness and appreciation for academic integrity.

## **2. Theoretical foundation**

Academic integrity includes values, principles, norms and regulations for managing appropriate behaviours in education and research. It is based on these six core values: “honesty, trust, fairness, respect, responsibility and courage” (International Center for Academic Integrity, 2014, p. 16). Carefully constructed university policies are essential to promote a culture of academic integrity. They provide value-based frameworks to manage acceptable and unacceptable practices in academia (Morris & Carroll, 2016), support student learning (Bretag & Mahmud, 2016) and explain how content is adopted in the curriculum (Bretag et al., 2011). On the other hand, academic dishonesty is the antithesis of academic integrity; it is characterized by different ways in which students are dishonest in their academic practices. It has been a constant problem for years at all educational levels. It is a fact and is a challenge to the integrity of higher education and its reputation. However, in the fight against academic dishonesty, what is being witnessed is an increasing number of educational institutions that publish and disseminate widely codes of ethics, written statements, policies or procedures for members of their university. The positive effect of a code of conduct/ ethics on university members can subsequently create positive influences on students' academic behaviour (Noddings, 2002).

There are eight broad areas of academic dishonesty (OECD, 2011): obtaining unauthorized aid or information; giving unauthorized aid or information; committing plagiarism from written, electronic or internet sources; misrepresenting facts or data; offering bribes; using the library resources unethically; using computer resources unethically; and knowingly assisting in any of the above practices. Cheating can be described as an act of evasion, thus influencing the result by fraudulent means. On the other hand, plagiarism refers to the act of imitating the ideas, thoughts, language, methods or dates of a person's activity without the authorization or acknowledging the original author.

Some causes of cheating and plagiarism identified in the literature include among others (Carpenter et al., 2006; Anderman & Murdock, 2007): time pressure; hard courses; laziness; competition with others; coping with stress; difficult exams; chances of getting caught are minimal; punishment is not serious etc. The findings of Teixeira & Rocha's (2010) study suggest that cheating favourable environments, familiarity with someone who cheats regularly and students' opinion regarding cheating stand out as conditioning factors in the development of cheating acts. De Lambert, Ellen & Taylor (2006) identified the form of assessment as being a contributing factor in the incidence of cheating, suggesting that teachers who used predictable and unimaginative assessment techniques, were more likely to find their students engaging in dishonest practice. Gross (2011) considers that students' cheating has become more acceptable because there is a "different, post-millennial, value orientation" about the meaning of education and how it is acquired. Millennials are characterized by a preference for decisions "based on personality, relationship and expediency, rather than abstract rules about right or wrong" (Gross, 2011). Ethical practice is central to the integrity of the engineering profession. However, research shows that engineering students are among those most likely to engage in academic dishonesty in higher education (Carpenter, D.D. et al., 2011). Engineering institutions and faculty members play a key role in facilitating academic integrity among engineering students.

In the study of Ives & Giukin (2020) researchers identified in the literature review three problems of academic dishonesty: first, the problem is widespread, most reviews finding that more than 70% of students in higher education cheated or plagiarized (e.g. Gallant et al., 2014; Ludlam et al., 2017); second, cheating and plagiarism invalidate the results of academic assessment (Munoz-Garcia & Aviles-Herrera, 2014) and may be associated with poorer learning (Brimble & Stevenson-Clarke, 2005), as well as damage to universities' reputations (Engler et al., 2008); third, students engaged in academic dishonesty may be more likely to engage in dishonesty in the workplace (Desalegn & Berhan, 2014).

In two European projects that examined the state of academic integrity within universities (Glendinning et al. 2013; Foltýnek et al. 2018), it was concluded that all the participating institutions viewed plagiarism and academic dishonesty as a serious issue and that there were many examples of innovative practice. One of the few comprehensive studies on this topic (Foltýnek & Glendinning, 2015) shows that Romania is ranked 4th in Europe by the rates of plagiarism (over 50% of the Romanian respondents believed that they might have plagiarized accidentally or deliberately at least once). In Romania there are several studies that have found high levels of acceptance of plagiarism among medical students (Badea-Voiculescu, 2013) and university students in general (Teodorescu & Andrei, 2009). A survey



conducted with over 1000 students from six universities in Romania found that more than 90% reported engaging in a certain type of academic dishonesty (Ives et al., 2017). Recently, the Ministry of Education and Research (Order of the Ministry of National Education No. 3131/2018) decided to promote mandatory courses (both at the Master's Degree and Doctoral Degree) and optional courses (at the Bachelor's Degree) of ethics and academic integrity in all Romanian universities.

Consequently, studying behaviours, reasons and attitudes toward cheating and plagiarism can help students to realize the risks, dangers and consequences of engaging in unethical behaviour at the academic level, while helping teachers, decision makers and educational institutions to overcome or, at least, to limit the growing trend of academic dishonesty. To address this issue, the study is expected to explore views on behaviours, reasons and attitudes towards these academically incorrect behaviours and to find out ways to prevent and mitigate cheating and plagiarism.

### **3. Research questions**

The purpose of this study was to examine the frequency of cheating and plagiarism behaviours, reasons and attitudes towards cheating and plagiarism and to find out ways to prevent and diminish cheating and plagiarism amongst the undergraduate and graduate students of Technical University of Cluj-Napoca from Romania.

We seek to answer the following basic research questions:

- How frequently do students cheat and plagiarize?
- What are the most important reasons for cheating and plagiarism in university?
- What are students' attitudes towards cheating and plagiarism?
- What ways to prevent and reduce cheating and plagiarism do students propose?

### **4. Methodology**

To evaluate perceptions of cheating and plagiarism by undergraduate and graduate students, a designed self-report questionnaire was used as the main instrument for this study. A sample of 466 students - 252 males (54.1%) and 214 (45.9%) females - participated in this study. Over 50% of students were undergraduates with 69 (14.8%) students enrolled in first year, 85 (18.2%) in second year, 50 (10.7%) in third year, 62 (13.3%) in fourth year. At Master's level, the distribution of the surveyed population was made between 96 (20.6%) first year students and 104 (22.3%) second year students. In terms of age, the students were aged between 18-20 years (28.3%), 21-23 years (36.9%), 24-26 years (28.3%) and over 27 years (6.4%). 340 (73%) students

are from urban residence and 126 (27%) students from rural residence. More than half (51.3%) were working at the time of the study.

The questionnaire consists of two sections, first is the demographic characteristics of the subjects and the second is the main body of the questionnaire. A 5-point Likert scale from 1 (“strongly agree”) to 5 (“strongly disagree”) was used to assess the reasons and students’ attitudes towards cheating and plagiarism. The frequency of students’ behaviours towards cheating and plagiarism was measured on a 5-point Likert scale, ranging from “always” (1) to “never” (5). Some questions have been adapted from the measurements that are used to examine students’ attitudes (e.g. Amua-Sekyi, E.T. et al., 2016). The results for the Cronbach’s Alpha showed that the internal consistency of the whole questionnaire was  $\alpha = 0.887$ . The answers to the open-ended question, provided by the students, were analysed using a content analysis technique for qualitative data: the data were unitized, coded and grouped into themes. Descriptive statistics was used, to analyse both qualitative and quantitative data.

Regarding the ethics of data collection and publication, the questionnaires received by the students protected the confidentiality and anonymity of the participant by eliminating the factors that could have revealed their identity. Data were collected between January and February 2020 by the authors of the study.

## 5. Results and findings

The quantitative data from the questionnaire will be presented descriptively, through some statistical analyses will be presented in order to examine the distribution of responses across the contexts where this is seen as throwing light on issues arising from the data.

Table 1 highlights the frequency of cheating and plagiarism behaviours of students. Under this category, asked how often colleagues have used cheating and plagiarism in the last six months, engineering students responded saying that their colleagues used often the electronic devices (mobile phone, computer, headset, smartwatch etc.) during a test or exam ( $M = 2.82$ ,  $SD = 1.174$ ), copied the answers from a colleague’s work during a test or exam ( $M = 2.83$ ,  $SD = 1.065$ ) or whispered and signalled answers to someone during a test or exam ( $M = 2.85$ ,  $SD = 1.113$ ). Rarely students take a test or exam instead of another person ( $M = 4.68$ ,  $SD = 0.664$ ).

Table 1. Cheating and plagiarism behaviours of students

No	Behaviours	Mea	SD
.		n	
1	Using unauthorized material (crib notes, handwriting,	3.02	1.04

	sheets with written resolutions etc.) during a test or exam.		7
2	Copying the answers from a colleague's work during a test or exam.	2.83	1.065
3	Unauthorized using of electronic devices (mobile phone, computer, headset, smartwatch etc.) during a test or exam.	<b>2.82</b>	1.174
4	Whispering and signalling answers to other colleagues during a test or exam.	2.85	1.113
5	Allowing another person to copy from them during a test or exam.	3.05	1.180
6	Failure to follow the instructions related to the test or exam time (e.g., continuing to write after the allotted time has ended).	3.57	1.286
7	Taking a test or exam instead of another person.	<b>4.68</b>	0.664
8	Reproducing a test or exam questions and sharing them with friends.	4.11	1.114
9	Finding an excuse to temporarily leave the exam room in order to have access to outside help.	3.86	1.146
10	Reporting cheating practiced by a colleague.	4.64	0.759
11	Presenting a work as its own that has been copied, in whole or in part, from the Internet or from another source without using proper citation.	3.60	1.170
12	Writing a work for friends which uses as its own work.	3.73	1.093
13	Presenting a work as its own that has been written/ completed, in whole or in part, by others (colleagues, companies/ specialized sites etc.).	3.72	1.129
14	Reporting plagiarism practiced by a colleague.	4.57	0.83

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**Mean of means = 3.65**

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It is obvious that technology plays a major role in intensifying cheating and plagiarism. Whether it is the use of mobile phones and social media, or hacking to have access to online solutions manuals, today's students are often more tech savvy than some of their teachers. Thus, Curtis and Vardanega (2016) suggest that, through technological and educational initiatives, we can counteract the potential of cheating and plagiarism. Though technology seems to be a major factor in academic misconduct in the study institution, older methods of cheating are still used and should not be underestimated. Raising awareness of the techniques being used and having discussions with students about the types of activities could be beneficial to creating appropriate remediation ways. For students' assignments, plagiarism can be reduced and prevented by constructing policies made by the universities to detect plagiarism such as Turnitin or iThenticate. These kinds of tools or software can also be used to improve students' academic writing skills and to develop their citation skills.

A large majority of students also responded that they had never reported their colleagues for cheating (76%) and for plagiarism (72.1%). This implies that there is not only limited practice of reporting the incident, but also the limited practice is probably addressed to friends who do not take any measure. It is important to consider students' opinions of cheating and plagiarism by others because students' perceptions of their colleagues' behaviour have a strong effect on their own behaviour. The implications of these findings must be considered in relation to the research by McCabe et al. (2001) and Rettinger and Kramer (2009), which found, that when students believe others have cheated, they are more likely to choose to cheat themselves. The fact that others are cheating may also suggest that, in such a climate, the non-cheater feels left at a disadvantage. Thus, cheating can be regarded as an acceptable way. On the other hand, giving plagiarism a considerable place in an educational program, focusing on prevention rather than penalty and stressing out the importance of academic integrity need to be part of the university's plagiarism policy.

An examination of the reasons for cheating and plagiarism showed in Table 2 that passing exams is the most common reasons cited by respondents ( $M = 1.67$ ,  $SD = 0.920$ ) followed by the pressure to get good grades ( $M = 1.98$ ,  $SD = 1.030$ ). This is consistent with Teixeira and Rocha's (2010) findings that cheating to pass an examination or to get a better grade is a significant incentive to cheat. This finding may also indicate an academic environment in which the rewards for cheating (e.g. passing the course) are

not counterbalanced by the application of appropriate sanctions when caught (e.g. failing the course) (Teixeira & Rocha, 2010). While most students agreed that cheating is unethical, a substantial proportion are subjected to stress, fear of failure ( $M = 2.02$ ), too much workload ( $M = 2.05$ ), ignorance, unpreparedness of students for assessment ( $M = 2.06$ ) or helping a friend ( $M = 2.09$ ), as seen in Table 2. Almost 40% of students disagreed that misunderstanding the issue of cheating and plagiarism is a reason for academic dishonesty. Students are under pressure not only to pass exams, but also to get good grades (these are generally associated, in society, with the potential for success), with any possible price, resulting in cheating. These findings corroborate with the conclusions of Lucifora and Tonello (2015), who reported that pressures for good grades, stress and ineffective deterrents were some of the determinants of cheating.

Table 2. Reasons for cheating and plagiarism

No.	Reasons	Mean	SD
1	Low information organization skills	2.40	1.079
2	Time pressure in the evaluation	2.29	1.093
3	Increased difficulty of evaluation	2.25	1.080
4	Ignorance, unpreparedness of students for assessment	2.06	1.072
5	Cheating as a common behaviour, acceptable among students	2.61	1.074
6	Passing exams	<b>1.67</b>	0.920
7	Helping a friend	2.09	0.854
8	Low academic writing skills	2.97	1.081
9	Lack of interest in completing the task	2.51	1.124
10	Too much workload	2.05	1.032
11	Course content irrelevant / unimportant for the exam	2.12	1.035
12	Encourage and facilitate cheating using technology and the Internet	2.66	1.096
13	Misunderstanding the issue of cheating and plagiarism	<b>3.18</b>	1.193
14	The pressure to get good grades	1.98	1.030

15	Tolerance of dishonest behaviour	2.65	1.040
16	Stress, fear of failure	2.02	1.001
17	High expectations from parents	2.22	1.132
18	Failure to apply penalties	2.62	1.144
19	Unimportant sanctions	2.73	1.155
20	Lack of study time due to employment	2.34	1.093
21	Laziness	2.25	1.208
22	The student simply cannot respond to the given tasks	2.72	1.082
23	Too many exams during the session	2.40	1.117
24	The difficulty of the course content	2.17	1.039
25	Lack of attention when writing a paper	2.67	0.975
26	Poorly designed assessment tasks	2.62	1.002
27	Misunderstanding the idea of intellectual property	2.74	1.130
28	Too tight deadlines for works	2.40	1.071
29	Great temptation and ease of cheating	2.38	1.105
30	Ignorance of teachers	2.56	1.160

**Mean of means = 2.41**

Table 3 depicts the third category of questions that aimed at exploring the level of students' attitudes towards cheating and plagiarism. The majority of respondents agreed that it is wrong to cheat even if the course content is difficult ( $M = 1.94$ ,  $SD = 1.001$ ) and if the teacher gives them too much work ( $M = 1.94$ ,  $SD = 1.018$ ); similarly, the majority agreed that it is wrong to plagiarize, regardless of the circumstances ( $M = 1.89$ ,  $SD = 1.043$ ) and even if they do not understand the subject matter or the teacher's instructions ( $M = 1.97$ ,  $SD = 1.059$ ). Majority of respondents disagreed that they would plagiarize if they knew a colleague was also plagiarizing (78.8%) and that they would report the incidence of a cheating committed by a friend student (76%). The answers indicate ethical positions that see cheating and plagiarism negatively and are inconsistent with stress, fear of failure or pressure to get good grades that are among the most frequent reasons for

cheating and plagiarism. Results show a difference between students' beliefs and their actions. Most of the students believe that these behaviours are wrong, yet they still report that they do. Despite their beliefs, many students are willing to sacrifice these stated values to get better grades or help fellow students. The idea of explaining that they do these behaviours to help and not to cheat or plagiarism can be attributed to what Kolker (2012) who refers to the new culture of "sharing" among today's students. Respondents' ethical values and actions are therefore completely in dissonance. Students' attitudes toward academic dishonesty appear to be neutral. It would be even more important to change attitudes and norms so as to modify student behaviour in the direction of honest classroom practices. Changing students' behaviour cannot only be the responsibility of academic institutions, but also the whole families or communities must be involved.

Table 3. Students' attitude towards cheating and plagiarism

No.	Statements	Mean	SD
1	I would cheat if the exam questions were too difficult.	2.89	1.245
2	I would cheat to obtain a higher grade.	3.12	1.249
3	I would cheat to avoid failure.	3.04	1.261
4	I would cheat so as not to disappoint my family.	3.44	1.304
5	I would cheat if other colleagues in my year/ group did the same thing.	3.37	1.245
6	I would cheat if the teacher did not teach well.	2.61	1.319
7	I would cheat if there was too much work.	3.24	1.216
8	It is wrong to cheat, even if the course content is difficult.	<b>1.94</b>	1.001
9	It is wrong to cheat, even if the teacher gives you too much work.	<b>1.94</b>	1.018
10	It is wrong to cheat, even if I am in danger of failing the exams.	2.09	1.079
11	It is wrong to cheat, regardless of the circumstances.	2.08	1.139
12	I would report the incidence of cheating committed by an unknown student.	4.03	1.023

13	I would report the incidence of a cheating committed by a friend student.	<b>4.16</b>	0.992
14	I would plagiarize if I knew I would not be caught.	3.79	1.139
15	I would plagiarize if I did not have enough time to do the work.	3.61	1.200
16	I would plagiarize if I did not know how to quote, how to mention references.	3.67	1.137
17	I would plagiarize if I knew that severe sanctions would not apply.	3.81	1.120
18	I would plagiarize because it is easy to copy and insert from the Internet.	3.84	1.105
19	I would plagiarize if I knew the teacher would not care.	3.50	1.316
20	I would plagiarize to accomplish the task and get a better grade.	3.73	1.174
21	I would plagiarize when I could not express another person's ideas in my own words.	3.75	1.151
22	I would plagiarize if I knew a colleague was also plagiarizing.	<b>4.12</b>	0.971
23	I would plagiarize because it is easier than working on a topic.	4.08	0.980
24	It is wrong to plagiarize, even if I do not understand the subject matter or the teacher's instructions.	1.97	1.059
25	It is wrong to plagiarize, even if I do not pay importance to the idea of intellectual property.	2.00	1.026
26	It is wrong to plagiarize, regardless of the circumstances.	<b>1.89</b>	1.043
27	I would report the incidence of plagiarism committed by an unknown student.	3.88	1.117
28	I would report the incidence of a plagiarism committed by a friend student.	3.96	1.107



**Mean of means = 3.20**

The open-ended question asked students to suggest any ways and means of preventing and eradicating cheating and plagiarism in examinations. The given suggestions were assorted and after coding, they were divided into 6 major themes and highlighted, as follows:

Table 4. Students' suggestions on methods to prevent and reduce cheating and plagiarism

<b>Suggestions</b>	<b>Frequenc y</b>	<b>Percen t</b>
<b>1. University policy</b>	<b>78</b>	<b>17.33</b>
Training at the beginning and at the end of the courses/ exams (on the rules of honest conduct in academia, on the causes and consequences of cheating and plagiarism)	36	8
Compulsory ethics courses and workshops in the early stages	14	3.11
Campaigns to raise awareness and promote academic honesty (the idea of originality, the idea of intellectual property)	12	2.67
Personal development courses	7	1.55
Providing a strict, appropriate, clear, detailed, up-to-date code of conduct and assigning tasks on ethical issues to specialized people	4	0.89
Courses or trainings for the elaboration of academic works	3	0.67
Prevention and mitigation measures taken at the level of the Ministry or university	2	0.44
<b>2. Teaching and learning processes</b>	<b>142</b>	<b>31.56</b>
Clearer, more pleasant, more practical and more interesting teaching	46	10.22

Diminished, structured, organized, useful and updated volume of information	34	7.56
Improving the quality of teachers in the university (psycho-pedagogical, specialized and ethical training of teachers in a responsible, updated and involved way)	30	6.67
Complex and well-made courses/ seminars/ laboratories with interactive, unique, attractive and useful topics specific to the group/ student	13	2.89
Collaboration and communication between teachers and students	7	1.56
Improving adequate teaching resources, extensive learning resources (accessible bibliography, sites, platforms)	7	1.56
Providing and solving subject models before exams	3	0.67
Increasing students' motivation	2	0.44
<b>3. Evaluation process</b>	<b>103</b>	<b>22.89</b>
Modern and diversified evaluation methods and means (e.g. oral examination, practical exams, projects, using the learning management systems, computer tests without internet access, problemsolving)	25	5.56
Checking the works using plagiarism detection software by specialized persons	21	4.67
Exams with medium difficulty, with fewer, realistic and varied requirements	14	3.11
Scholarships and accommodation on students' campuses without taking into account the grades obtained at exams	9	2
Fewer tests/ partial exams during the semester	8	1.78
Assessments in accordance with the level of students and the content taught	6	1.33

Consultations, training courses before exam sessions	4	0.89
Exams based on the student understanding and effort, not on memorization	4	0.89
More attention in correcting works/ projects, elimination of distracting factors	3	0.67
Fewer exams at longer intervals	2	0.44
Serious and sincere evaluations of teachers, measures taken against teachers who received negative feedback	2	0.44
Faculty admission based on evaluation tests, not on files competition	2	0.44
More opportunities to take an exam	1	0.22
Chance for students to express opinions related to exams	1	0.22
Rewarding the student for new solutions or ideas	1	0.22
<b>4. During the examinations</b>	<b>57</b>	<b>12.67</b>
Closer supervision during the exam, vigilance	20	4.44
Prohibiting the use of mobile phones or other technologies during the exam, strict control at the beginning of the exam	17	3.78
Higher number of teachers during the exam	8	1.78
Exams in rooms without internet access, jamming devices	5	1.11
Giving students enough time to complete their work	3	0.67
Installing surveillance cameras	2	0.44
Long distance between students, multi-line evaluation, randomizing seating orders	2	0.44
<b>5. Sanctioning cheaters and plagiarists</b>	<b>63</b>	<b>14</b>
Strict enforcement of existing rules and regulations, not just threats (from verbal or written warnings to	60	13.33

exposure of student to the university community and expulsion from the institution)		
Developing and revising the existing rules and regulation in line with the sophistication of recent cheating and plagiarism strategies	3	0.67
<b>6. Social and financial aspects</b>	<b>7</b>	<b>1.56</b>
Accommodation on student campuses provided for everyone	3	0.67
Several social scholarships	2	0.44
Tax increases	1	0.22
Reducing the number of students	1	0.22
<b>TOTAL</b>	<b>450</b>	<b>100</b>

In order to discourage cheating and plagiarism, the faculty must establish a strong and clear policy, inform students about this policy and apply the policy with strict consequences. Thus, in order to avoid any confusion in understanding exactly what cheating and plagiarism mean and how to avoid them, it is imperative that expectations of academic integrity be communicated explicitly, directly and repeatedly. Regarding sanctions for cheating and plagiarism, engineering students agreed with re-writing the paper, verbal or written warning and lower grade for work and less with expulsion from the program, suspension for one year or repetition the entire year of study. Students should be made aware of the consequences from the beginning of higher education through direct training or designated programs. Such programs should ensure that the students see the relationship between cheating, plagiarism and academic punishments, respectively, so that the exposure could reduce the possibility of what Yeo (2007) stated as the act of defying authority. One of the problems relating to the intention of cheating and plagiarism is clearly due to the uncertainty about the concepts and consequences of cheating and plagiarism.

Teachers play a key role in helping students to develop academic integrity. There are many situations in which the teachers can explicitly teach students what academic honesty means, for example: at the beginning of the semester, when they present topics of study and the learning rules; before a learning task; when students have to face evidence of dishonesty; or when they form the integrity of students in their own teaching. Consistent with students' opinions, teaching, learning and evaluation activities can be

considered effective in increasing academic integrity as long as the following conditions are met: ensuring a stimulating, activating, interactive, dynamic educational environment; careful analysis of the knowledge that students need to acquire, what is their stage of knowledge; imagining and elaborating didactic strategies as coherent and open systems to the unforeseen; the role of the teacher as a guide, facilitator, mediator of student information and training activities, of interactions and interpersonal communication; overcoming conformist models and multiplying sources of information, causing students to master them; operationalization of knowledge, favouring the acquisition of systematized, structured knowledge with increasing complexity; engaging students in the development of cognitive, psychomotor, affective-attitudinal competencies, both disciplinary and transdisciplinary; increasing the intrinsic motivation and higher cognitive motivation of students; involving students in an autonomous, independent manner in the activity; ensuring a formative, systematic, continuous, dynamic, analytical, flexible and creative evaluation focused on the learning process, integrated with teaching and learning; providing formative, permanent, continuous, structured and effective feedback etc.

Many students proposed that the plagiarism detection software be used to check academic papers and that teachers check the cited references. Various and increasingly sophisticated programs are, now, available, to help teachers to find out information, without doubt, the uniqueness of the work submitted. Tools such as Turnitin or iThenticate can be used to enhance students' academic writing skills and to develop their citation skills.

Many students felt that more supervision was needed during the exam, but also prohibiting the use of mobile phones or other technologies before the exam, a strict control at the beginning of the exam, including the exam sheets. In addition, teachers should be encouraged, to not hesitate reporting immediately cheating cases, to the competent authorities.

McCabe (2005) in his research found that widening the gap between teacher and student, rather than limiting it, can change the university classroom culture, because it pits the teacher against the student. McCabe advises educators to “find innovative and creative ways to use academic integrity, as a building block, in our efforts to develop more responsible students and, ultimately, more responsible citizens” and stresses that “campuses must become places, where the entire “village” – the community of students, faculty and administrators – actively works together, to achieve this goal” (McCabe, 2005, p. 29).

The data from this study can be used to develop local and institutional programs to improve preventive and educative strategies to minimize cheating and plagiarism, while also improving students' understanding of the academic culture. It is strongly recommended for faculty and students to engage in extensive conversations about academic honesty, to organize

seminars, workshops and symposia to educate students about cheating and plagiarism, their consequences and tools and techniques to avoid cheating and plagiarism and to write academically correctly.

## 6. Conclusions

Concerned about frequency of cheating and plagiarism among university students, this paper sampled engineering students through a questionnaire. Closed and open-ended questions were administered that focused on students' practices, reasons and attitudes towards cheating and plagiarism. The results indicated that, although most students acknowledged that cheating and plagiarism were unethical conduct, they would still sometimes engage in cheating or plagiarism during examinations or assignments. This was probably due to pressure to pass exams and get good grades, being reasons behind what constitutes acts or practices of cheating and plagiarism. While the study found that cheating and plagiarism were sometimes a common offence among some students who displayed indifferent attitudes towards the immorality of these practices, the results suggest that faculty and university management should allocate resources and address the reasons behind academic dishonesty.

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## **SOCIAL AND EDUCATIONAL IMPLICATIONS REGARDING THE RAISING OF CHILDREN IN NARCISSISTIC FAMILIES. THEORETICAL APPROACH**

**Alina COSTIN, Ph.D.,**

**Faculty of Science Education, Psychology and Social Work**

**Aurel Vlaicu University of Arad**

**costintalina@gmail.com**

**Abstract:** *The paper aims at an integrative review of current knowledge about narcissistic parenting, and the impact of this disorder on the child. A child can experience the most hidden forms of abuse in his or her own family when one or both parents experience narcissistic personality disorders. The pattern of action specific to this family includes practices such as manipulation, non-compliance with barriers, enhancement, triangulation, isolation, hoovering, projection etc. tactfully exercised by the narcissistic parent for the purpose of acquiring the control and power absolutely necessary for his deconstructed self. The child of a narcissistic parent will experience repeated adversity (Crocker, 2009; Monk, 2001) that will affect his mental health, and according to some theories (Menzies, 2010) this unhealthy family dynamic will repeat itself. In this harmful environment, the child will grow up with unrealistic expectations from himself and others against the background of an uncontaminated and negative self, you will encounter difficulties of healthy relationship as well as in privacy. This work aimed at educational professionals in order to become aware of the seriousness of the abuse experience and to familiarize themselves with its less visible symptoms.*

**Key words:** *parental narcissism; co-narcissism; abuse; co-narcissism; educators; reporting abuse*

### **Background. Brief introduction to the issue of narcissism**

A simple search on the Google Academic engine of the term narcissism indicates 246,000 works, which demonstrates the special interest of specialists for this type of disorder. A brief foray into the history of the concept of narcissism (Raskin and Terry, 1988) shows that it was first used in 1925 when Walder used it to describe a personality totally absorbed by self-admiration associated with the tendency to lose sexual emotions. As the two authors observe, the term is later associated with sexual perversion (Nacke, 1899) and the term is integrated into Freud's research. Narcissistic personality disorder is part of category B of personality disorders, characterized according to DSM V by a very low empathic level, a pattern of behaviour dominated by the need for validation, grandiosity, admiration, with a strong self-centred personality.

Category B personality disorders include: antisocial personality disorder, Borderline personality disorder, histrionic personality disorder and narcissistic personality disorder. Although distinct as symptoms and manifestations, the common characteristics of the four personality disorders are: the existence of interpersonal conflicts, emotional imbalances and impulsivity (Nioche et al, 2010), an exacerbated egocentrism and lack of empathy, ranked by Baron Cohen (2020) "zero-negative empathy".

Narcissistic disorder presents precise characteristics on the 6 levels of functioning, namely the concept of self, social adaptation, human relationships, standards and ideals, love and sexuality and cognitive style (Akhtar & Thomson, 1982). Literature in the field distinguishes between grandiose narcissism and vulnerable narcissism. Grand narcissism includes the exacerbated need for approval and admiration giving rise to the outward search for self enhancement. The vulnerable narcissist experiences anger, lack of empathy, aggression, low self-esteem, shame, avoidance (Akhtar, 2003, Dickinson and Pincus, 2003, sunset Campbell, 2011). Narcissistic personality is distinguished by a grandiose sense of self-importance, exhibitionism, and constant concern for success, brilliance, ideal love, low resistance to stress and criticism, interpersonal exploitation, overridealization and devaluation in relationships, etc.

### **Methods**

The literature review was performed on the Academic, Elsevier and Web of Science platforms. The searches were limited to the years 2003, or later to ensure the inclusion of the most current research in the field, we referred only to 3 older reference works.

### **Specific features of narcissistic personality disorder.**

He has an exaggerated sense of his own importance and manifests a grandiose behavior, always poses and displays an attitude of superiority; has a constant and acute need to be admired and validated by those around him, whom he paradoxically treats with arrogance and contempt. He's persistently seeking this admiration with which he feeds his inner emptiness. His behaviour varies according to the context: kind, charming and seductive on the outside becomes critical, angry and irresponsible within the family. He is not emotionally available until he has a precise purpose, unable to admit his mistake, envious and jealous, unable to show empathy. The need for control is exaggerated, it applies double standards in relationships with others, it feels entitled to receive special treatment, it is perceived as special- it is distinguished by the fact that it humiliates any success or success of other people, minimizing their merits. They have an immature perception of the world, frame people and deeds in black and white; He's a complete manipulator, he's used to challenging people and then blaming them.

These peculiarities of the person with narcissistic disorder "are justified" by his extremely low esteem, by the huge fear of being known to others as they perceive themselves: weak, unimportant, unvaluable, self-esteems that they formed in their small childhood in the context of emotionally deficient relationships with their parents. Therefore, they learn from a young age that if they seem bright, valuable, important they will receive the love they so badly need; this behavioural pattern becomes an axis of their life, becomes a lifestyle, therefore they become manipulative and seek by any means to make a good impression, to feed on appreciation and praise to maintain their self-esteem.

Due to the fragility of the self-confidence, the very low self-esteem, the narcissist reacts violently to any criticism, or any rejection situation being a victim of the loveless environment in which he grew up. He experienced the "guilt" of not being loved, so he reacts totally inappropriately to guilt and shame. In fact, the entire arsenal of harmful acts that describe narcissist behaviour are nothing but largely unconscious defence mechanisms. Narcissism is about lack of self-worth, where the self is besieged and armed against adversity (Hendrick, 2016).

### **Looking for the roots of the narcissistic personality disorder**

In the etiology of narcissism determinants are genetic and environmental factors - research argues that genetic factors significantly influence the contouring of a particular type/variation of narcissism, the stability of narcissism and its associations with other personalities, Cai (2018). According to the theory of Bronfenbrenner ecological systems (1979 apud Washburn, & Paskar (2011) child development is influenced by the

microsystem, mesosystem, and macrosystem, respectively by the interaction of caregivers, brothers, school, organizations with which the child comes into direct or indirect contact. The paradoxical characteristics of the narcissist consist in the attitude of superiority over those whose admiration and acceptance is most needed (Thomaes, Brummelman, & Sedikids (2018). Moreover, Menaker (1953) observed that masochist parents compensate for the lack of sufficient positive maternal feelings by spoil and overprotecting their children. Children in such backgrounds are often able to secure their love only through inappropriate behaviour (Berliner, 1947) or physical illness (Panken, 1983), leading them to believe that they are most loved when they suffer. Fernando (1988) presents a different point of view, more precisely contrary to the perspective at that time on the etiology of narcissistic personality disorder: the author presents a clinical material that demonstrates that the narcissistic personality is formed under the conditions of an attitude of overprotection, parental overvaluation, spoiled during childhood, which leads to difficulties in regulating self-esteem and a poor integration of the superego.

### **Growing up with a narcissistic parent- "Don't be yourself! Be the one I need!!"**

According to Golomb (1992) parental narcissism is considered as excessive self-absorption where the needs of the parent are more important than the needs of the children. A childhood in which the child's desires, needs and feelings are less important than those of the primary parental figure can generate an adult "who develops a foul sense of self". The parent with mental health problems will most likely grow a child with psychiatric problems; Berg-Nielsen, T.S., Wichström (2012) identify emotional and behavioural dysfunctions in 922 pre-schoolers with one of the parents with borderline, antisocial or narcissistic disorder. It is recommended to know by specialists in social services the symptoms of these disorders which represent a real risk to the mental health of the child. Another study of 328 young people aged 17-25 shows that overprotection is a specific risk factor in the formation of narcissistic traits (both vulnerable and grandiose) in children rather than neglect or mistreatment behaviour (Van Schie, Huxley, 2020). In general, the narcissistic parental environment can be characterized by physical, emotional or sexual abuse, psychological and physical neglect, violently treated mother, drug use, mental illness, divorce and detention (Felitti et al., 1988). Since 1974, Berkowitz has noticed that in narcissistic families the child responsible for parental self-esteem is systematically devalued. The problems of perception of reality, emotional response and poor adaptation of the narcissistic parent facilitate in turn the formation of dysfunctions of the child Fjelstad, McBride (2020, p.19); the most common are:

- Difficulty trusting their feelings and thoughts

- Emotionally dysfunctional understanding;
- Struggle with appropriate bounces
- Fail to recognize healthy romantic partners
- Fall into a caretaker role and people
- May develop narcissistic behaviours themselves

The need to feed his de-structured self and to feel superior is so strong that the narcissistic parent always criticizes his child, humiliates him to fulfil his need for superiority. The child of such a parent will feel that he is never good enough, cannot live freely or make his own choices due to the constraints imposed by the narcissistic parent. He will understand that he must deserve the love of his parents, being therefore, under a permanent pressure to do everything perfectly to satisfy his always dissatisfied parent. He does not respect the limits and desires of the child but imposes and projects on him his own dreams; the child represents for him a means to fulfil his selfish needs (positive image, respect, admiration). The child cannot feel the unconditional love of the parent, on the contrary, he represents a danger, a threat to his parent, therefore his successes will be minimized and the child always assured that something is wrong with him.

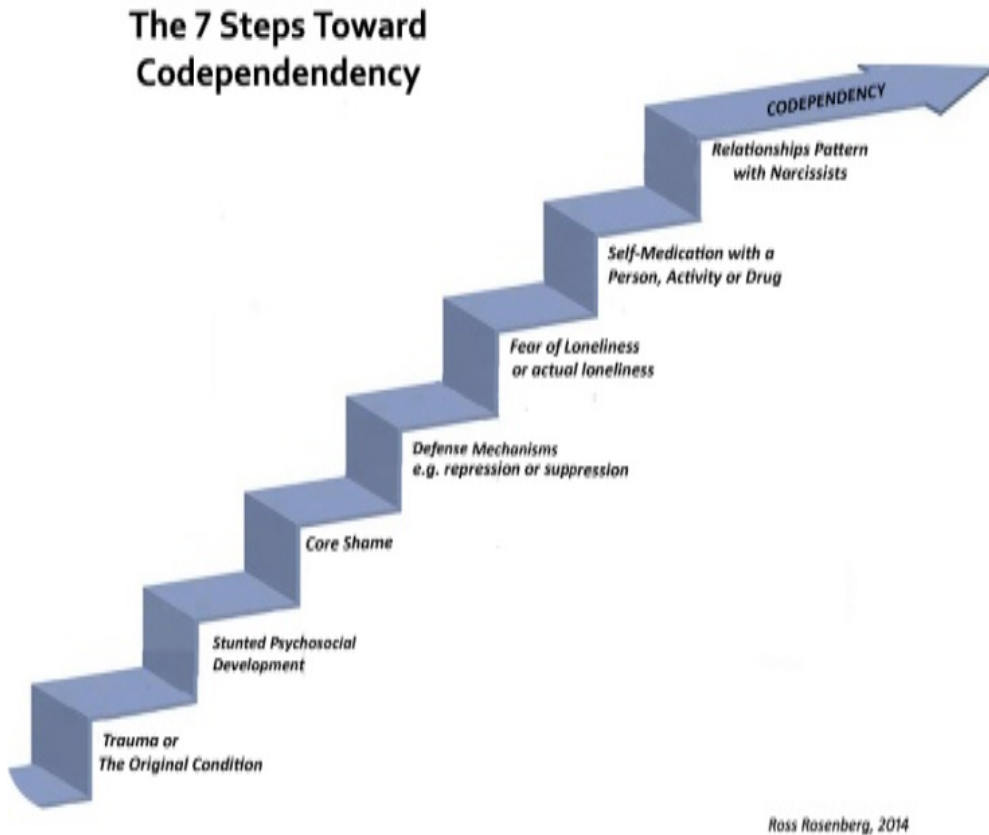
However, the child is invited and taught to believe himself as strong, important and special; however, the narcissistic parent will apply in the relationship with the child or the same well-known manipulative practices: gaslight, inducing guilt, triangulation (permanent comparison with someone perceived better), emotional blackmail. Beliefs and dysfunctional habits, the quality of victim in the relationship with the narcissistic parent, feelings of guilt and a distorted self-image, here are some dimensions of the child's universe with narcissistic parents that are objectives in the process of healing, understanding the context and liberation from under "tyranny" of the parent with narcissistic disorder.

Growing up with a narcissistic parent Rappoport (2005) frames the adaptive responses to the behaviour or abuse of the narcissistic person in the term co-narcissism. The author shows that a significant segment of people fail to develop healthy means of self-expression. The child of the narcissistic parent learns to respond to the demands of the parent who punishes his need for freedom, or any inappropriate expression.

The prospect of the withdrawal of the affection places the child in the posterity to build a false self- he does not have the necessary maturity to counteract the blame, unjustifiable anger or humiliation of his parent, so he adapts, but in an unhealthy manner, becoming the child who deserves to be loved according to the parents' criteria. The emotional development of the child is threatened in a narcissistic family, so his or her childhood is an atraumatic (Määttäi et al, 2020). The child gradually learns to respond appropriately, i.e. according to the needs of parents, and will become dependant on it in relations with others. Rosenberg (2018) is developing a

linear progress on Trauma scheme. Starting from the abuse of the narcissist father, the development of the child's psychosocial development

### *The 7 Steps Toward Codependency*



The dynamics of the child's relationship with the parent, that is, of the narcissist with the co-narcissist, includes co-dependency: the narcissist is at the forefront seeking appreciation, attention and confirmation and the co-narcissist makes sure that he can provide these things Rappoport (2005). The author differentiates between what is meant by the relationship naturally and the narcissistic encounter in which there is only one person, namely the narcissist. Gardner (2006) speaks of a false self-conformity of the child who sacrifices himself for the narcissistic parent. Later, the child experiences a strong conflict determined by the need to abandon the malignant identity taken from the narcissistic parent and the need to absorb it. The Self Absorbed Parent (Brown, 2008) focused on himself in any circumstance

defines the narcissistic parent who manifests the following symptoms: grandiosity, entitlement attitude, envy, arrogance, lack of empathy, intolerance of the child's needs, etc. The most powerful feelings of the child are betrayal (because he is not loved for himself but for the submissive role of the parent), shame (because he does not have the courage to be himself), the need to please others (to be able to gain the acceptance, love and respect he needs), guilt, fear, frustration. McBride (2019, p.41) identifies ten clues to the relationship dynamics between the child and the narcissistic parent: repeated attempts by the child to gain the love, attention and approval of his parent, the parent was more concerned with appearances than what the child feels, envy or the jealousy of the parent on his own child, the parent does not support the free and authentic expression of the child's self if it contradicted his needs, everything is organized according to the needs of the narcissistic parent, healthy boundaries are not respected, the child does not enjoy privacy, the narcissistic parent is critical, empathetic and unable to manage his emotions. Of course, the child correctly receives the emotional vacuum of the narcissistic parent (Frans de Waal, 2012).

In a narrative research, Määttä&Uusiautti (2020) describes the perception of the investigated subjects regarding their narcissistic childhood: incompetent childhood, isolated childhood, and denied childhood. If my own mother can't love me, who can? The narcissistic mother creates the connection with her child only when she needs that connection, the child learns that he is valuable and worthy of love only when he is useful, so he will try to be useful and please everyone (Mc Bride, 2008). In the mother-daughter relationship, the author describes some consequences of the narcissistic relationship between the two: difficulties in experiencing and trusting one's feelings, difficulty in living one's own life authentically, difficulty in perceiving oneself as a person independent of one's mother. and so on It seems that this rejection of the eastern mother is perceived as a physical pain, being activated the same areas of the brain, the damage being extremely high depending on the intensity and frequency of these traumatic events. (Kross et al. 2011) The child does not allow himself the freedom to be who he is, he must be the extension of the parent, to be the one that the parents need (Haller, 2013).

In the narcissistic family, the circle of trauma continues from parents to children, from one generation to another; the roles given to each member depend, among other things, on gender, however, a parent's narcissistic traits leave deep imprints on each member of the Wilson family (2020). Menzies (2010), in a broader context on the conditions that favor the transmission of intergenerational trauma, identifies with the individual and the family, the community and the nation. He proposes a scheme of these factors among which Child welfare, family violence and mental health are vulnerable points in narcissistic families.





Figure 2. Intergenerational Trauma Scheme

The category of family factors includes: episodes of violence, abuse, poor child-parent ties, irregular contact or absence with the caregiver / mother. The literature shows that in narcissistic families with several children, one of them will bear the burden of being the golden child, designated by the narcissistic parent to represent his perfect, idealized image. The role of the golden child is to be perfect in everything, he does not apply the rules that other members follow (Johnson, 2017). In this situation, the child becomes a property, an extension of his parent who projects on him all the grandeur and perfection, as his images. The personality of the parent cancels the personality of the child who will represent the narcissistic parent in the format he needs. This merging that no longer allows the child to build a separate identity is called enmeshment. The overestimation of the golden child contradicts the denigrating, humiliating treatment applied to the child called the scapegoat who is permanently triangulated, ie compared, placed in the shadow of the golden child to accentuate his self-doubt and discourage him from any attempt to threaten this pathological model. Two parental models of care have emerged that may constitute aetiologies of narcissistic personality disorder: overprotection and neglect. In the first case, the child does not have the opportunity to face adversity, does not have the opportunity to activate his resources; develops as an adult, lacking problem-solving strategies, feels like insult, insult, offense, every contradictory opinion. His constant focus on his childhood needs limits his empathic development. He outlines a fragile personality, but being accustomed to

pampering will develop a demanding, arrogant attitude and will live an illusory reality. Too little emotional attention also leads to the development of narcissistic traits. The child without love, looks for her in every person around her, "shouts" for affection and approval in all his relationships; " the narcissistic wound "gives him a" narcissistic power "to be charming, seductive, bright in order to receive in return the love he so desperately needs. So the narcissistic wound has its origin in the huge pressure to be successful in the individual's family; the lack of parental empathy awakens an "insatiable hunger" for valorisation (Haller, 2013, pp73-75.)

### **The fundamental role of the educator in recognizing Indicators of emotional abuse**

The educator has a fundamental role in the early recognition of possible cases of abuse, although some studies argue their reluctance to report them (Goebbels, 2008). Emotional abuse has been recognized in the mental health and legal professions, although legislating measures to report these cases is difficult due to the difficulty of recognizing indicators of this type of hidden abuse. In some states, licensing of professionals is conditional on taking a 2-hour course to identify and report child abuse (Reiniger et al, 1995). It is unanimously accepted that a child raised by a narcissistic parent experiences emotional abuse, at least if not physical or sexual. Emotional abuse is a mark of narcissism and includes accusation, minimization or refusal, unequal treatment of siblings.

The effects are most often behaviorally visible but often translate into psychosomatic symptoms, speech disorders, or developmental delays. The most visible indicators are Deep bruises or broken bones malnutrition (as psychic signs), aggression, lack of self-confidence, radical changes in behavior, reduced availability of cooperation and dialogue, poor relationships with others, more mature or immature behavior compared to biological age, destructive behavior with oneself and others, lying, discomfort at the physical approach of other people, etc. (Tower, 2003). Beck et al (1994) report the reluctance of professionals to report cases of abuse: the authors argue a tendency to report more strongly cases of sexual abuse and less likely cases of emotional abuse.

### **Conclusion**

Various studies (Monk, 2001, Crocker, 2009) have found correlations between parental narcissism and adverse mental health and relationship outcomes. Righteous people create conflict and hostility in their relationships (Moeller, Crocker, Bushman, 2009), this type of relationship being associated with high scores of depressions and lower scores of self-esteems (Leggio, 2018). In the narcissistic family, the child is systematically

devalued, the parent's priority being to restore his own balance (Berkowitz, 1974); Shaw (2010) identifies among the effects of exposure to narcissistic pathology, the loss of intersubjective functioning in relationships of adult children. A variety of behavioral, physical, and developmental indicators can be identified by educators.

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## TRENDS IN THE 21st CENTURY EDUCATION

Vali ILIE, Ph.D.

Teacher Training Department, University of Craiova  
[brainstorming71@yahoo.com](mailto:brainstorming71@yahoo.com)

ORCID: <http://orcid.org/0000-002-5354-4787>

**Abstract:** *The implementation of new information technologies is considered one of the most important problems at the beginning of this century. This enterprise involves the introduction of computers and gadgets into education and requires the use of modern methods and techniques. In both developed and developing countries, young people are increasingly dependent on technology. Employers are beginning to demand new competencies in order to increase competitiveness in a global market. Entrepreneurial skills are considered key competencies, and entrepreneurship education prepares people to be responsible and enterprising people. Intercultural education is the answer to cultural diversity, in a connected and multicultural world. All the contents of education are important, but we believe that the emphasis should fall on these three dimensions: digital education, entrepreneurship education and intercultural education. Meant to observe, the present research aims to identify the main directions in the field of education, to present the ways of adapting to the new social conditions and to highlight the difficulties encountered in this endeavour. The purpose of this study is to highlight the main aspects of education that are specific for the beginning of the 21st century. The reform of education requires more than a list of competencies. It requires a radiography of the problems faced by education, a listing of its vulnerabilities and, depending on the specific of the current society, establishing certain clear directions of action.*

**Keywords:** *education; digitalization; entrepreneurship; intercultural*

### Introduction

The 21st century is an era of innovations, scientific discoveries and exploitation of the creative potential in all fields of knowledge and in all dimensions of the social sphere. The more complex the world becomes, the

more education matters in the equation that includes research, economics and social relations. New horizons seem to create new challenges and we wonder if humanity is ready to make a leap in its evolution. Identifying some of the landmarks of the "history of the future" and trying to outline the profile of Homo Deus, Y. N. Harari asks: "If we really keep hunger, plagues and war under control, what will take their place at the top of the humanity's agenda? Like firefighters in a world without fire, in the 21st century humanity must ask an unprecedented question: what will we do with ourselves? In a healthy, prosperous and harmonious world, what exactly will our attention and ingenuity require?" (Harari, 2018, p. 10).

The Z (the first generation of digital natives – iGeneration or i-Pod) and Alpha (the generation of those born after 2010, connected to an interactive audio-video and kinesthetic environment) generations are the most connected in history. Their representatives meet people from all over the world online and they can easily make friends from anywhere on the planet, even before completing the compulsory studies. The competencies required from the pupils and students of the 21st century are both interdisciplinary and transdisciplinary, reconfiguring the set of knowledge they need, but also the attitudes and capabilities, the skills necessary for their professional integration in an ever changing world. In today's world, information is growing at a rapid pace so that no one can learn everything about a topic. In addition, what may seem true today, tomorrow may be false. Therefore, students need to "learn how to learn", that is to process, to analyse, to create in new situations and contexts, so that the skills they form could help them to adapt to the environment, in relation to different demands.

The social and technological changes have influenced the way we see childhood. Compared to previous generations, children and young people have a harder word to say in family decisions, they are more accustomed to being in the spotlight, expressing themselves freely, critically approaching situations, events, ideas. When asked "Are children today different from what they used to be?" the answer is based on studies published in recent decades. They compared the physical, cognitive and psychosocial characteristics of children and adolescents from different generations and identified a number of changes (Valkenburg & Taylor Piotrowski, 2018, pp. 32-36): early puberty, increased intelligence, more self-esteem and self-awareness, but also a higher degree of narcissism and behavioural problems (such as hyperkinetic disorder with attention deficit and anxiety).

Children, young people and adults are assaulted by the multitude of news, rumours, fake news, information more or less relevant to their evolution. Media has a great influence today in society. Being one of the main mass media means of information, television has become a partner of



the family members, a vital element of family life, monopolizing communication with the outside world or replacing other sources of information. The cultivation theory, launched by the American sociologist G. Gerbner in the late 1960s, focuses on the fact that television and the other types of media cultivate so much a common culture that they can blur the differences between the elite and the rest of the population: "People are born into a symbolic environment with television as its mainstream" (Gerbner, 1998, p. 180). Thus, media cultivates attitudes and values that are already present in a culture, it maintains and propagates it among the members of a culture. However, it should be emphasized that the nature and proportion of the media effects largely depend on the user's personality and the social context in which that particular medium is used (as shown by a study conducted by H. Cantril, a psychologist at Princeton University).

In a world where dogmas fall and the paradigm shift confuses human existence, we notice the diversity of opinions regarding education and the way we refer to school as an important factor in education. The 21st century school must reflect the specificity of its time: a changing world, rapid global transformations, acceleration of progress, openness to innovation, globalization and interculturality, digitization at the social level, facilitating access to resources through entrepreneurship. The various scenarios for a changing world relate during their development to the theme of education. The wave of changes and news that besieges the life of humanity has stressed the concerns for the study of the problems in the contemporary world. The syntagma of worldwide issues was proposed by the Club of Rome, represented by prestigious scientists who conducted prospective research and recommended general solutions to solve the crisis. The members of the Club of Rome offered scenarios for analyzing the problems of the contemporary world and stressed the need to prepare the human for the society of the future - a society of knowledge and conscience. Even if not all the reports have been officially approved, and some of them have critical reviews, they present a state of the system (Judge, 2018): "The Limits to Growth", 1972; "No Limits to Learning: Bridging the Human Gap", 1979; "The Barefoot Revolution", 1985; "The Scandal and the Shame: Poverty and Underdevelopment", 1995; "Governance in an Era of Globalization", 1999; "Rethinking Civilization: Resolving Conflict in the Human Family", 2006; "To Choose Our Future", 2015; "The Seneca Effect: Why Growth is Slow but Collapse is Rapid", 2017).

The reports of the Club of Rome are points of reference from which different bifurcations that outline frames in designing a map of the future start. The map of the future is based on education and work, seen as activities that are carried out throughout our life, conceived as continuous processes: "It is thus created a new framework for the development of the individual's

life, who has ahead of him compact work sequences alternating with educational ones. Such a revolution requires a change in social conceptions, legislation and institutions. It brings to society new solutions in the use of the labor force, in the lives of women, in the organization of social assistance and in specifying the role of the state and the responsibilities of the individuals” (Malița, 2001, p. 242).

### **1. Methodical benchmarks: finalities, principles, strategies**

Mapping the social dynamics is the basis of the geomodern project and contributes to finding a path to the education that is characteristic of the 21st century. Between the axiological and the social approach, education must include both values and facts, concrete results. If the facts highlight the praxiological dimension, the values are the benchmarks of the human model ordered by the society. It takes the form of the educational ideal (of philosophical source), which expresses the type of desirable personality. The educational ideal is the category with the highest degree of generality, it expresses the social function of education and learning system being translated through pedagogical goals and objectives.

The purpose of education reflects the level of economic and cultural development of the society and translates the projective model of personality towards which the society tends (the free, total and harmonious development of the human individuality, the formation of autonomous and creative personality, which should develop its entrepreneurial and civic spirit, for social inclusion, for achieving equal opportunities and for integration in the labour market). The technological advance will determine people to be more creative and to differentiate themselves from robots and intelligent machines, with which they will compete on routine or cognitive tasks or jobs. On the other hand, the modern economy will demand new skills. In order to be competent, a person should be able to interpret the situation in context, to have a repertoire of possible actions to be taken, and to have been trained in the possible actions of the repertoire, if this is relevant.

At the level of education we consider important the following *directions*:

- Accessing the mechanisms and levers that are necessary to succeed in a modern and globalized world;
- Personalizing education, an approach that will allow to reach the maximum potential of each person;
- Connecting with the community, in an analogous and digital way;
- Interacting with people from different cultures;
- Active, open and efficient communication with the other members of the company;
- Lifelong learning

The purpose of education is to ensure social order, to facilitate access to resources, to prepare for life, to train future citizens to face the challenges in the field of economy, health, environment, etc. The prospective character of education refers to anticipating the future of the school from a scientific perspective (the purpose of school is to teach people not to guess their future, but to decide it). In the second half of the last century, the objectives of prospective education were: to know how to lead, to collaborate, to adapt, to cultivate (Dottrens, Mialaret, Rast& Ray, 1970, pp. 11-20 ), to look far ahead, to look widely, comprehensively, to analyze in depth, to take risks, to think about man (Berger, 1973, p. 79), to learn how to learn, to learn how to live, to learn how to think freely and critically, to learn how to love the world and to make it more human, to learn how to be perfect in creative work (Faure, 1974, p. 119).

In this respect, the competencies of the 21st century are thought globally through openness and flexibility, collaboration and partnership. The European Reference Framework of Key Competencies for Lifelong Learning defined eight key competencies (European Commission, 2018, p. 8):

- Communication in the mother tongue;
- Communication in foreign languages;
- Mathematical competency and basic competencies in science and technology;
- Digital competency;
- Learning to learn;
- Social and civic competencies;
- Sense of initiative and entrepreneurship;
- Cultural awareness and expression.

By analysing the transition from the local community to the global community, from social cohesion to participatory democracy, from economic growth to human development, J. Delors emphasizes the need for lifelong education and identifies four pillars of knowledge (Delors, 2000): learning to know, to learn to do, to learn to live together with others and to learn to be. These main ideas (acquiring the tools of knowledge, interacting with the environment, cooperating with others in human activities and harmonious developing of each individual) are the basis of the educational principles specific to today's society.

*The principles* we consider to be 21st century education benchmarks are as follows:

1. The principle of making the connection among education, research and economics – so as to encourage innovation and ensure sustainable development.
2. The principle of ensuring the universal and global character of education – education should be a priority for all nations.

3. The principle of lifelong learning – in order to ensure the employability and valorize the potential of each member of society.

4. The principle of democratization of education – by ensuring equal opportunities.

5. The principle of promoting interculturality – through the exchange of good practices.

6. The principle of formation and development of the entrepreneurial spirit – in order to speculate on opportunities, to capitalize on professional opportunities.

7. The principle of balancing the classical and new dimensions/ sides of education – so as to achieve the development of the integral and harmonious personality.

8. The principle of technologization and digitization education – through online training and mobile devices that facilitate access to education.

9. The principle of achieving an attractive and efficient education, which will stimulate and motivate – by using modern strategies, adapted to the particular age and individual characteristics.

10. The principle of education based on collaboration – to stimulate communication between the actors/ factors of education in order to achieve common goals.

The way people experience education has changed over the centuries. Because an acceleration of change is being noticed, people need to adapt quickly and learn new things. "People want to learn, but they find traditional methods increasingly inefficient and unattractive; the contents are uninteresting and the institutions ever more bureaucratic. As a result, many turn to self-education at a time when it is becomingly increasingly easy to access vast stores of information" (Fundación de la InnovaciónBankinter, 2011, p. 24).

*The current educational strategies* are centred on active-participative methods, of a constructive and interactive nature, they capitalize on new technologies, support the digitization of education and combine a series of organizational forms (from the independent-individual or individual-supported, to the one in pairs, teams or groups - homogeneous or heterogeneous, up to the frontal one). Today, projects, creative exercises, simulations, problem solving, scenario imagining are preferred. Sound and video tapes, layouts, web pages, CD-Rom, experimental materials complete the picture of educational strategies.

Constructivist strategies promote the role of real, authentic search experience of understanding, of solving problems. On the other hand, and on the mental level, the use of different methodological possibilities that stimulate cognitive flexibility is encouraged. The strategies used in the construction of knowledge offer alternatives for asking questions, reflecting

on cognitive tasks, encouraging curiosity, taking risks in making choices. Strategies that integrate in a constructivist way the external conditions of learning are also exploited. The resort to situational learning uses multimedia and sends to simulation, modelling and cooperation. The scenario method causes the cognitive and even action or computer simulation of a real case-task to be solved. The strategies that integrate the internal conditions of learning bring forth motivation, mental processing of information and metacognition elements. Facilitating metacognition by asking questions reinforces the formative aspect of education while at the same time the methods can be optimized by appealing to intra- and interdisciplinary correlations, by making analogies, by finding relations, by suggesting new approaches, by reconstructing mental schemes, by affirming creativity.

## **2. Capitalizing on educational content**

### ***2.1. Digital education***

The computerization of education implies the use of the computer as an educational resource in order to reach the finalities of education. The online dialogues with specialists, the access to virtual libraries, the possibility of reading scientific articles are just some of the possibilities offered to those who want to be informed. The ICT potential encourages innovation in approaching teaching, learning and assessment and thus becomes an essential solution for the problems of the traditional educational environment.

The informatics revolution accompanies the cultural and technological revolution and facilitates the entry of modernity into a new phase (geomodernity). The educational process is deeply affected by the challenges of the digital age, and educational governance needs to be increasingly understood as digital educational governance. In recent years, digital technologies have been playing an increasing role in managing educational data and in organizing online classrooms and courses (e.g. Tapsott, 2009; Williamson, 2015; Elliot, 2017; Burns & Gottschalk, 2019).

Virtual education is an alternative to traditional educational environments. If in the past virtual education included distance learning, in the second decade of the twentieth century the concept expanded to online learning. The main positive aspects of virtual classroom training refer to: the elimination of geographical barriers, the possibility of recording teaching-learning-evaluation sessions, a more rigorous organization and faster transfer of a large volume of knowledge, the nuance of interactivity, ensuring closeness and flexibility, avoiding non-restriction, the existence of low costs, increasing the attractiveness of activities by accessing and using new technologies that are considered more attractive to learners.

Identifying the goals of a significant educational reform (independent learning, individualized learning, interactive learning, interdisciplinary

learning and intuitive learning), D. Barr says that the resources available through technology now include electronic databases with current information and independent research tools. These databases contain hyperlinks that allow interactive exploration and learning, in which inquiry, feedback and collaboration play important roles (Barr, 1990, pp. 84-86). Connectionist pedagogy emphasizes social presence and social capital by creating and supporting student networks: "In network contexts, members participate as they define real learning needs, filter these for relevance, and contribute in order to hone their knowledge creation and retrieval skills" (Anderson & Dron, 2011).

The sum of multiple literacies (e.g. information literacy, technology literacy, multimedia literacy), digital literacy makes the transition from print culture to digital culture. The digitally literate person interacts with technologies and knows how to search, select, evaluate information, exchange with colleagues, always using different web resources and tools. The digital competency is one of the eight categories of key competencies and refers to the safe and critical use of the entire range of digital technologies for information, communication and solving basic problems in all aspects of life.

The European digital competency framework for citizens identifies the key components of the digital competency (Carretero, Vuorikari & Punie, 2017, p. 21):

1. Competence area 1: Information and data literacy (1.1. Browsing, searching, filtering data, information and digital content; 1.2. Evaluating data, information and digital content; 1.3. Managing data, information and digital content);
2. Competence area 2: Communication and collaboration (2.1. Interacting through digital technologies; 2.2. Sharing through digital technologies; 2.3. Engaging in citizenship through digital technologies; 2.4. Collaborating through digital technologies; 2.5. Netiquette; 2.6. Managing digital identity);
3. Competence area 3: Digital content creation (3.1. Developing digital content; 3.2. Integrating and re-elaborating digital content; 3.3. Copyright and licences; 3.4. Programming);
4. Competence area 4: Safety (4.1. Protecting devices; 4.2. Protecting personal data and privacy; 4.3. Protecting health and well-being; 4.4. Protecting the environment)
5. Competence area 5: Problem solving (5.1. Solving technical problems; 5.2. Identifying needs and technological responses; 5.3. Creatively using digital technologies; 5.4. Identifying digital competence gaps).

The expectations of the society and the educated have changed quite a lot in recent years, and the digital environment favours the formation of new skills for students. We consider that the educational software available in the virtual environment provides the necessary means for an authentic education, in accordance with the demands of the information society. It is found that „the Net Generation uses digital technology in a very different way than boomers do. (...) Net Geners are transforming the Internet from a place where you mainly find information to a place where you share information, collaborate on projects of mutual interest, and create new ways to solve some of our most pressing problems. (...) In this way, the Net Generation is democratizing the creation of content, and this new paradigm of communication will have a revolutionary impact on everything it touches – from music and movies, to political life, business, and education” (Tapscott, 2009, p. 57).

## ***2.2. The entrepreneurial education***

Built on individual activity, entrepreneurship education plays an important role in social development. With its focus on the term of entrepreneurship, it aims at planning and making changes, at the efficient use of resources, at developing human networks, at making rational decisions, at rewarding initiators for the newly created value. It is considered that "a special kind of human skill is called entrepreneurial ability – that rare talent required to dream up a new product or finding a better way to produce an existing one. The entrepreneur tries to discover and act on profitable opportunities by hiring resources and assuming the risk of business success or failure" (McEachern, 1997, pp. 2-3).

A recent approach, with implications in the educational field, too, is the creation of charitable organizations, which are designed to support and support themselves, to provide social assistance (social entrepreneurship). Unlike economic entrepreneurs, social entrepreneurs focus on the social mission and the impact of it. Increasing the importance of the economic dimension of the company and reconsidering the creative act of the productive activity demands the need to train young people in market economic practices, by which they learn how to take risks, how to speculate on the opportunities to make the best decision, to have availability in developing business and establish partnership relationships in order to improve the quality of life. In our attempt to teach young people how to deal with complex relationships, we need a better connection of the curriculum to current and future socio-economic problems.

Within the most prestigious universities in the world (MIT, Stanford University, University of Cambridge), at the initiative of a group of

emerging leaders, there has been developed in recent years, an entrepreneurial agenda which contains, among others, ideas on how to manage a transformation process and how to lead to a model with entrepreneurial characteristics. The most common models of entrepreneurship implementation and capitalization in universities are the following (Graham, 2014):

a) *Model A* ("bottom up"): it is driven by the community, triggered by the desire to stimulate regional/ national growth (thus creating jobs for graduates, research opportunities and wider university support paths), taken over and developed by students and entrepreneurs from the regional economy (the investment is focused on the regional capacity and not the institutional one); this model seems to be more strongly associated with external financing, often related to the government (with many activities operating outside the university itself, the model may encounter difficulties when the university tries to regulate and institutionalize its entrepreneurial profile).

a) *Model B* ("top to bottom"): it is run by the university, which works through established university structures and it is triggered by the desire to make income from university research; often based on the established university research assets, this model offers a robust and fully institutionalized approach (however, such a model risks to marginalize the entrepreneurship determined by students and graduates, and the integration with the regional entrepreneurial community is often very limited).

A. Gibb (2012) and M. I. Salem (2014) describe the entrepreneurial universities as entities that offer environments, cultures, practices and opportunities suitable for encouraging and embracing the entrepreneurship of students and graduates, as well as creating synergy between the activities already existing in the institution. According to tradition, universities are not entrepreneurial, but they can become nurseries for new companies and for different related activities. In America, entrepreneurship education has been introduced in the University since 1947 (Harvard), but it did not become a force in business schools before 1970 (Kuratko, 2005, p. 581). In China, many universities have their own "nurseries" for students who want to start entrepreneurship. "The entrepreneurship education content of Chinese universities is mainly made up of entrepreneurship courses and entrepreneurial practice activities. With regard to the entrepreneurship course, it does not draw much attention in entrepreneurship education and its course setup remains at preliminary stage, lacking systematization and standardization. Many universities and colleges are keen on entrepreneurial activities and practice, whereas entrepreneurship course setup is restricted to employment guidance and career planning" (Yanhong&Yibin, 2012, p. 2). Entrepreneurial education has started to spread into more and more countries



of the European Union. In some educational systems, entrepreneurial education represents a systematic effort, but it is necessary to combine efforts to implement the specific contents and strategies into the school curriculum. In Germany, the relationship between the University and industry is not a new phenomenon, and the influence is mutual. On the one hand, companies can have access not only to top technologies, but also to the training of students and teachers (...). On the other hand, universities can increase their financial resources and effectively ensure the connection with the practice, capitalizing in practice what the students have learned (Chakrabarti & Rice, 2003, pp. 3-11).

In recent years there has been a need to include entrepreneurship education in university programs, especially for those with an economic profile. Quality education and practical training (entrepreneurial training) are crucial ingredients for the efficiency of economy in the knowledge-based society. School organizations are the ones that produce learning and also the ones that learn. They learn to adapt to changes, to structure their curriculum according to social requirements, to prepare for sustainable development. The most important way to teach entrepreneurship is to involve students in projects and practical activities, in which real experience is gained and entrepreneurial skills are formed.

**Table 1.** Entrepreneurial competencies

<i>General competencies</i>	<i>Specific competencies</i>
1. The implementation of innovations	1.1. Stimulating creativity 1.2. Using technology 1.3. Valorising the context
2. Risk taking	2.1. Appreciation from different perspectives 2.2. Using errors to understand the process 2.3. Assuming responsibility in making specific decisions for different situations
3. The speculation of opportunities	3.1. Offering various points of representation, perspectives on learning content 3.2. Providing an experiential learning environment that can facilitate meaningful exploration
4. Proactive orientation	4.1. Exchanging experience 4.2. Using the Internet in its own activity

An overview of entrepreneurial competencies allows us to say that openness to innovation, curiosity to research and discover new things, permanent improvement of the instructive-educational activity by adapting it to the demands of the labour market are just some of the characteristics required in the 21st century.

### ***2.3. Intercultural education***

Intercultural education starts from the concept of culture, which represents an oriented, progressive process, subject to continuity and discontinuity, to changes in quantity and quality. Modern culture predisposes the individual to another way of relating and acquiring knowledge, the Aristotelian knowledge, based on certain data, leaving room for random knowledge.

The phrase multicultural education is sometimes criticized for not covering the significance of the democratic society and relates more to the static version of cultural understanding. But multicultural education is by definition expansive: it refers to all students, it is for all students, without distinction of linguistic, ethnic, religious, racial or class appurtenance. K. T. Henson addresses the issue of multiculturalism with reference to the attitudes of teachers and teaching-learning practices that support the academic and social success of members from all cultures: "Multiculturalism recognizes that each student has his or her own inheritance and the right to this inheritance. Multiculturalism recognizes that although there are different cultures and languages, there must be equal opportunities for success in the class of students, and teachers must make special efforts to accommodate members of diverse cultures" (Henson, 2004, p. 4).

Starting from the cultural heterogeneity of the school population and society, as a whole, on the basis of race, ethnicity, religion, gender, social class, etc., the educational activities proposed by the school must enhance the cultural diversity. Valuing diversity should be one of the goals of the current curriculum. By analogy with biodiversity, which is considered to be essential for the existence of life on earth in the long term, it can be argued that cultural diversity can be vital for the survival of humanity in the long term. Multiculturalism and cultural diversity will have an impact on the global society; that is why multicultural issues should be incorporated into study programs.

An ideological option in democratic societies, intercultural education "aims to develop an education for all in the spirit of recognizing the differences that exist within the same society and, less (or not at all), an education for different cultures, which would imply staticism and an isolation of the cultural groups" (Dasen, Perregaux & Rey, 1999, p. 15).

There are two types of interculturality: official and unofficial. The first type includes academic programs that are developed within the school and not only (it promotes recognition and respect for different cultures). Within the minority groups the goals of education coincide with those of the majority, but it is desirable for them to learn how to live in the middle of the majority society, without losing their cultural identity. The second type has the same purpose, but the working methods and their operators are different. Those who deal with unofficial education work in youth information centres, youth clubs, volunteer-based centres, etc.

The intercultural competency is the ability to successfully communicate with people from other cultures. This consists in producing cognitive, affective and behavioural changes and includes a series of specific knowledge, skills and attitudes:

a) Knowledge: knowledge about the culture of one's own country and other countries; knowledge about interaction in society, between people from different cultures; knowledge about different cultural practices;

b) Capacities: interpreting a document or event specific to another culture; operating with knowledge in certain cultural contexts; adapting to intercultural situations; solving conflicts generated by misunderstanding of facts, events relating with people from different cultures;

c) Attitudes: curiosity, tolerance, cooperation, flexibility, empathy, openness, self-help.

In a globalized and multicultural world, the intercultural competency has become quite a popular concept. Before training and developing in students intercultural competencies, teachers must meditate on their own pedagogical practice. The increase of globalization on an economic scale brings changes in all spheres of human life: personal, social, cultural. The traditional models of belonging break down and come together to form new expressions of culture. Therefore, intercultural education invites us to reflect on our efforts to understand the world we live in.

### **3. Material and methods**

The research took place between November 1st, 2019 – January 31st, 2020 at the University of Craiova. The research sample consists of a number of 67 students from the Faculty of Sciences (the Department of Mathematics – 27 students, the Department of Computer Science – 16 students, the Department of Chemistry – 13 students and the Department of Physics – 11 students). The students who participated in the research are in their second year and they are attending the courses of the Module for psychopedagogical training made available by the Department for the Teaching Staff Training.

The problems generated by the changes that occurred in this century influence the conception about the role and functions of education, but especially the ways in which the educational process is carried out and the types of educational content. The questions we started from in our investigative approach are the following:

- What are the current priorities in the field of education?
- What types of competencies are specific to the knowledge society?
- What are the current problems of education?
- What impediments are there in the process of education reform on a global level?

The purpose of this study is to highlight the main aspects of specific education at the beginning of the 21st century. The objectives of the research are:

O1: the presentation of methodical benchmarks seen as a foundation in the realization of the education specific to the knowledge society;

O2: the identification of certain key, transversal competencies, that are characteristic of the needs and requirements of the current society;

O3: the list of current priorities in the field of education;

O4: the specification of the strategies to be followed in forming key competencies;

O5: the registration of possible dangers, difficulties, vulnerabilities - variables that impede or delay the implementation of education reform measures.

The method we used is the questionnaire. It includes the following items:

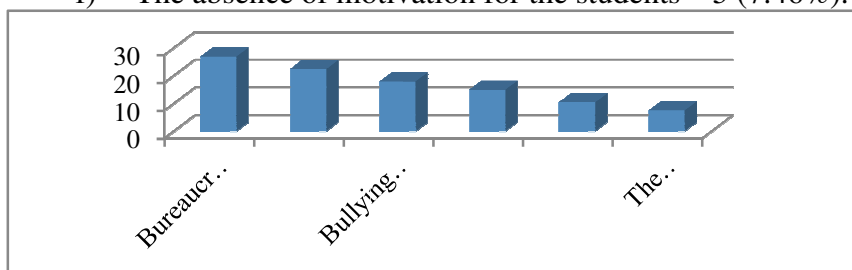
1. What are the major current issues in education? Choose one of these.
2. Which of the contents of education do you consider necessary to be emphasized?
  - a) Classical contents: intellectual education, moral education, aesthetic education, physical and sports education, technological education
  - b) Modern contents: intercultural education, digital education, entrepreneurial education
3. What strategies do you consider to be most important for training current competencies?
  - a) The strategies used in the construction of knowledge
  - b) The strategies that integrate, in a constructivist manner, the internal conditions of learning
  - c) The strategies that capitalize on the external learning environment
4. What are the main dangers or vulnerabilities that impede or delay the implementation of education reform measures? Choose one of these.
5. What proposals do you have to achieve a proficiency profile of the 21st century student?

The obtained answers were recorded, interpreted and presented in the subchapter of the research results. Based on them, we formulated the conclusions of our study and compared them to the theoretical aspects previously presented.

#### 4. Results

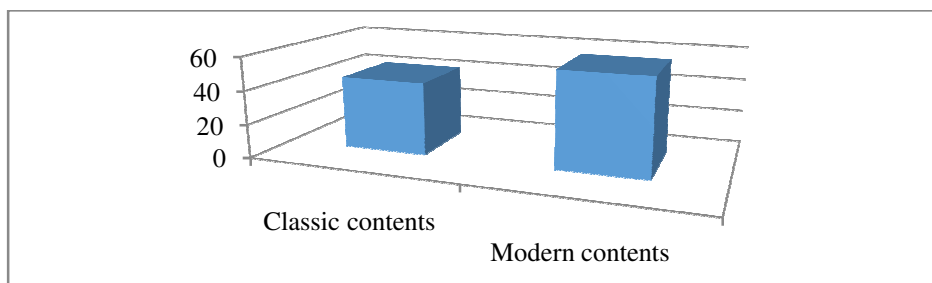
In item 1, the answers of the students were different. Among the most common are the following:

- a) Bureaucracy – 18 (26.87%);
- b) The lack of education funding – 15 (22.39%);
- c) Problems of discipline in the class of students (bullying in school) – 12 (17.91%);
- d) The lack of access to technology – 10 (14.93%);
- e) The teachers’ training (in the specialized discipline, in the field of psychology and pedagogy and from a methodical point of view) – 7 (10.44%);
- f) The absence of motivation for the students – 5 (7.46%).



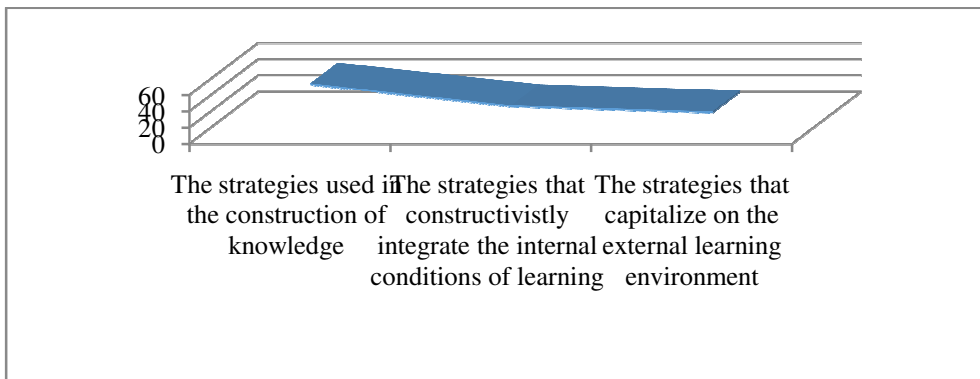
**Figure 1.** The recorded answers in relation to the current problems of education

The answers to item 2 highlight the contents that the students think should be emphasized: classic contents (29 students - 43.28%) and modern contents (38 students - 56.72%).



**Figure 2.** The choices of the students in relation to the contents of education

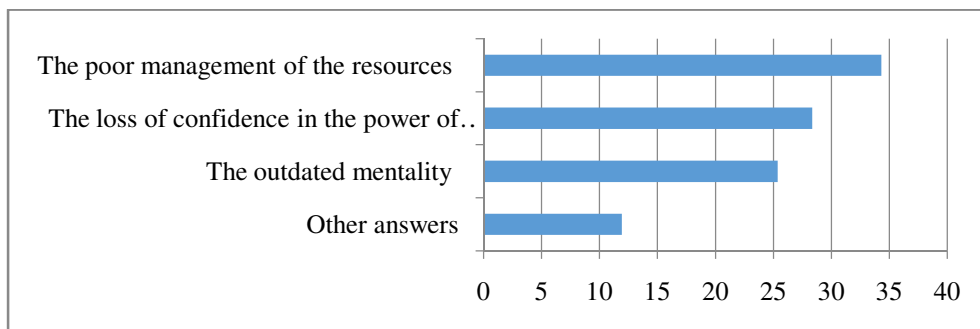
Item 3 aims to identify the types of educational strategies that students consider important for the process of training the competencies required in the knowledge society. Their choices are the following: the strategies used in the construction of knowledge – 36 students (53.73%), the strategies that constructivistically integrate the internal conditions of learning – 18 students (26.87%) and the strategies that capitalize on the external learning environment – 13 students (19.40%).



**Figure 3.** The options of the students in relation to the types of educational strategies

The answers given by the students to the question regarding the dangers/ vulnerabilities that prevent or delay the implementation of the education reform measures are hierarchized as follows:

- a) The poor management of the resources (material, technical, human, informational): 23 (34.33%);
- b) The loss of confidence in the power of education: 19 (28.36%);
- c) The outdated mentality (of human individuals – teachers, parents): 17 (25.37%);
- d) Other answers: 8 (11.94%).



**Figure 4.** The responses of the students to the item regarding the dangers or vulnerabilities

present in the implementation of the reform measures

In the last item we were interested in the proposals to make a proficiency profile of the 21st century student. These include:

- The ability to adapt to new and different situations, from different fields of knowledge or social life;
- The availability of giving time and energy to support the community and society as a whole;
- The desire for continuous learning and improvement;
- The ability to think critically, to question information, ideas, theories;
- The ability to work as a team, to collaborate;
- The ability to communicate openly with different people, from different backgrounds and cultures;
- The ability to creatively address problems that do not yet exist.

## **5. Discussions**

There are a number of problems facing education today. These include bureaucracy and the lack of funding or underfunding, as evidenced by the answers given to item 1 by the questioned students (49.26%). There is an interesting debate about what the representatives of management are doing and what they really should be doing in schools. It should be ensured that there is a quality material base, that all technical conditions are met and that the infrastructure works. Technology does not replace the fundamental aspects of education, but it only helps them to accomplish more easily, faster, in a personalized way, according to the needs of the students, the school, the community. This does not change the basic elements of education, but it is a new and current means of exploring, training and developing skills.

Item 2 balances the classical and modern contents. The latter are chosen in a higher percentage (56.72%) and include new content, specific to entrepreneurial education, digital education and intercultural education. Many students feel that what is learned in school should be related to industry and real social life. A better connection between the school and the industry can be achieved through entrepreneurial education. When real-life scenarios are brought into education, we can speak of authentic learning. Connecting students to concrete situations and real-life opportunities helps them become more interested, anchored in different situations and intercultural experiences (directly or through modern technology). The fact that 43.28% of the students surveyed opted for the classical contents shows that there is a balance between the contents and that the students think maturely and have an overview, understanding their importance. The particular contents of education join the new educations (included in the

education process in the second half of the last century) and it is based on the general contents of education.

The answers given to item 3 follow the students' options for the types of educational strategies. Out of the total number of students (67), 36 chose the strategies used to build knowledge. Over 53.73% give importance to the constructivist nature of understanding, the construction of the interpretations and arguments, the cognitive processing of information, the procedural facilities.

In item 4, the students were asked what are the dangers/ vulnerabilities that prevent or delay the implementation of the reform measures in education. The poor management of resources (34.33%) and the loss of confidence in the power of education (28.36%) are the most frequent answers, but students also reminded the out-dated mentality (11.94%), as a reflection of a society totally unprepared for the challenges of the 21st century. Reflecting on the complexity and ambiguities of real life is a challenge for both students and teachers, because education is a dynamic and adaptive system. The fact that it loses trust in its role is an alarm signal.

By analysing the answers given for item 5, we can establish the benchmarks of a proficiency profile of the 21st century students. The ability to adapt is important in a constantly changing world, and critical thinking and reflexivity help to produce innovations. In all fields of activity, creativity plays an important role, and communication, active participation, cooperation and support are elements of current professional competencies. The new technologies nuance the way people communicate with one another and reconfigure the picture of the competencies required by a new society. We need to think more as global citizens, teach students how to be responsible and learn more about the world they live in.

## **Conclusions**

Starting from different experiences and cultures, all interventions on the topic of education reach a common denominator. Education is the reflection of the society it is produced in, and the current context is new and challenging. Education for "today's world" means preparing young people for the age of technology and for the Internet.

Today, many educational systems around the world are still educating for the industrial society. We wonder if the specific skills of the 21st century are totally different from those of previous centuries. We believe that we should teach students to question all the information they receive, but not to doubt the power and beauty of human nature. One of the goals of education is to discover and understand both the outside and the inside world. Education must prepare for life, but also for integration into the socio-



professional life; therefore, it also has a social and economic purpose. From here, the role of training entrepreneurial skills, so necessary in a society that emphasizes innovation, results. Not less important is the cultural purpose, because education teaches us about our own culture (values, traditions, customs), about how to communicate with people from different cultures and how to bring together different experiences that can enrich us.

Education must develop students as human beings – stimulate creativity, generate joy in learning, maintain student curiosity and arouse interest in discovery and problem solving. In this way, children will be able to grow healthy, develop socio-emotionally, they will communicate openly and efficiently in an increasingly complex and sophisticated world of networks (human and digital).

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# **THE RELATIONSHIP BETWEEN PSYCHOLOGICAL DISORDERS ASSOCIATED WITH SOCIAL MEDIA USE PERCEPTION AND FAKE PERCEIVED ONLINE PERSONA AWARENESS**

**Dana RAD, PhD,**

*Faculty of Educational Sciences, Psychology and Social Sciences, Aurel Vlaicu University of Arad,  
[dana@xhouse.ro](mailto:dana@xhouse.ro)*

**DEMETER PhD,**

*Faculty of Educational Sciences, Psychology and Social Sciences, Aurel Vlaicu University of Arad, [eddemeter@yahoo.com](mailto:eddemeter@yahoo.com)*

**Sonia IGNAT PhD,**

*Faculty of Educational Sciences, Psychology and Social Sciences, Aurel Vlaicu University of Arad,  
[soniabudean@yahoo.com](mailto:soniabudean@yahoo.com)*

**Gavril RAD PhD cand.,**

*Faculty of Educational Sciences, Psychology and Social Sciences, Aurel Vlaicu University of Arad,  
[radgavrilarad@gmail.com](mailto:radgavrilarad@gmail.com)*

**Adela REDEȘ PhD cand.,**

*, Faculty of Educational Sciences, Psychology and Social Sciences, Aurel Vlaicu University of Arad,  
[adela\\_redes@yahoo.com](mailto:adela_redes@yahoo.com)*

**Abstract:** *The digital identity, online identity or internet persona, is defined as a social identity, an actively constructed presentation of oneself that an individual creates in online communities and digital environments. Considering social identity theory as an explanatory framework, this paper brings evidence on the dynamic relationship between psychological disorders associated with social media use perception and fake perceived online persona awareness in cyberbullying. The concept of digital wellbeing refers to the overall wellbeing index generated by the interaction between humans with social digital environments, like social media platforms. Rethinking mental illness in the light of digital footprints and traces people leave*

*on social media platforms, encompasses the possibility that an event to become toxic and pathologic is exponentially higher in the digital realm than in the real life, as such developing a pathology associated with the usage of digital environment becomes exponentially higher. The question becomes is this new emerging digital pathology really a psychological pathology or just a response to a digital adversity situation/environment/person? Our research team has developed the projects Keeping youth safe from Cyberbullying and Hate's Journey, aiming to deeper understand the dynamics of different digital aggression aspects in online environments among youth, by creating an online questionnaire composed by single item research questions related to core concepts and perceptions about digital aggression motives and effects. The paper's focus is on analyzing the psychological disorders associated with social media use perception impact on fake perceived online persona awareness in cyberbullying and digital hate speech incidents, in 206 participants residents of Latvia in 24.8%, Romania 24.8%, Spain 24.8%, and Turkey 25.7%, with an age mean of  $m=30$  years, 39.8% males and 60.2% females. Data analysis results depict that when modelling the effect of psychological disorders associated with social media use perception on fake perceived online persona awareness in cyberbullying, the curvilinear model (19%) is more consistent than the linear model (15%), with both models showing statistical significance. Psychological conclusions and implications in regards to digital wellbeing perspective are discussed.*

**Key words:** *digital wellbeing; hate speech; mental health; psychological disorders; fake perceived online persona awareness; toxic digital environments and dynamic relationship.*

## **1. Introduction**

The digital identity, online identity or internet persona, is defined as a social identity, an actively constructed presentation of oneself that an individual creates in online communities and digital environments.

The authentic self-disclosure has been raising important issues that lead to the conclusion that the strategy of digital identity has become vital. With its implicit online community and many alter / egos characteristics, the digitized and networked status continuously encourages user-decisions on digital footprints. The true self holds unique psychological-ontological features inside online communities where the key concept is “whoever is not

available on the internet does not exist”. Users combine deliberate decisions with unconscious decisions, which move in the data flow. Responses to real time will not make it: the modern world has evolved exponentially. Social psychology, computer science and management education explore the creation of digital identities and the novel characteristics from egotism to personal brand identity (Andrejevic, M., 2007; Brems, C., Temmerman, M., Graham, T., and Broersma, M., 2016; Brooks, A. K., and Anumudu, C., 2016; Cederberg, C. D., 2017; Chen, C.-P., 2013; Eagar, T., and Dann, S., 2016; Evans, J. R., 2017; Gandini, A., 2016; Gioia, D. A., Hamilton, A. L., and Patvardhan, S. D., 2014; Harris, L., and Rae, A., 2011; Johnson, K. M., 2017). Decisions about in / visibility, boundaries between public / social relations and relationships clash with the self that has to redefine itself in a constantly shifting digital age over and over again in terms of a personal identity. Our aim is to illustrate current and potential trends related to the digital identity.

Considering social identity theory as an explanatory framework, this paper brings evidence on the dynamic relationship between psychological disorders associated with social media use perception and fake perceived online persona awareness in cyberbullying. The concept of digital wellbeing refers to the overall wellbeing index generated by the interaction between humans with social digital environments, like social media platforms. Rethinking mental illness in the light of digital footprints and traces people leave on social media platforms, encompasses the possibility that an event to become toxic and pathologic is exponentially higher in the digital realm than in the real life, as such developing a pathology associated with the usage of digital environment becomes exponentially higher. The question becomes is this new emerging digital pathology really a psychological pathology or just a response to a digital adversity situation/environment/person?

Rethink mental illness in the light of digital footprints and traces people leave on social media platforms. Here the possibility of an event to become toxic and pathologic is exponentially higher than in the real life, as such developing a pathology associated with the usage of digital environment becomes exponentially higher. The question becomes is this new emergent digital pathology really a psychological pathology or just a response to a digital adversity situation/environment/person. A pathological environment will normally create pathologies. People need to move away from digital pathological environments in order to maintain their mental health, and to sustain their digital wellbeing (Rad, D., & Demeter, E., 2019). Symptoms are an adaptive response that arose at some point for a good reason but is no longer serving them in the way they once needed it. This new behavior is conceptualized as digital emergent behavior.

The basic principle of digital emergent behavior is the one in which the simple digital behavior of the individual components creates a digital behavior that is much more complex than can be estimated of the system. These digital emergent properties are completely unpredictable, without precedent, the manifestation of digital emergent behavior representing a new phase of digital behavior evolution (Rad, D., & Demeter, E., 2020)

Pandemic creates huge psycho-social barriers and thus, owns the potential to develop disruptive digital emergent behavior especially in the vulnerable groups of individuals with low social media context awareness (Rad, D., Balas, V., Lile, R., Demeter, E., Dughi, T., Rad, G. 2020).

## **2. Research methodology**

Our research team has implemented the Erasmus+ funded projects Keeping youth safe from cyberbullying and Hate's Journey, with the aim of in-depth understanding of the dynamics of online hate speech among youth from Spain, Romania, Turkey and Latvia (Rad, D., et al. 2019; Rad, D., et al. 2019; Rad, D., et al. 2020; Rad, D., et al. 2020). Our research's present inquiry is the identification of the existent relationship between psychological disorders associated with social media use perception and fake perceived online persona awareness in digital hate speech incidents. In this regard, our team has designed an online questionnaire composed by descriptive data, and specific single item research questions.

Our hypothesis states that our two research variables: psychological disorders associated with social media use perception and fake perceived online persona awareness are in a curvilinear relationship. In order to test our curvilinear hypothesis, we have used SPSS' multiple linear regression analysis, based on multiple regression analysis for curvilinear effects, where fake perceived online persona awareness was the dependent variable and the independent variable psychological disorders associated with social media use perception.

## **3. Research participants**

The research sample was selected based on the opportunistic principle and is comprised of 206 participants from Latvia 24.8%, Romania 24.8%, Spain 24.8%, and Turkey 25.7%, with an age mean of  $m=30$  years, 39.8% males and 60.2% females. As for respondent's educational level, 3.9% absolved primary school, 1.9% have a professional diploma, 29.1% absolved high school, 32% have a Bachelor degree, 29.1% Master diploma and 3.9% have finished PhD. Regarding the professional status, 5.8% are unemployed, 43.7% are students, 1% volunteering and 49.5% employed.

An essential aspect of this research is the online time spent by respondents. 1% responded with never or hardly ever using internet, 8.7%

responded with every week, 20.4% responded with daily or almost daily, 46.6% responded with several time each day and 23.3% responded with almost all the time.

#### **4. Instruments**

For the purpose of this research, we have included in our online investigation the following single item research items:

- for psychological disorders associated with social media use perception (M=3.67, SD=1.24 assessment this research used a single item measure – Item 12. Please rate the following statement from 1 to 5 (1 stands for strong disagreement, 2 stands for disagreement, 3 stands for neutral, 4 stands for agreement and 5 stands for strong agreement), according to the level of you agreement: *Psychological disorders may accompany the use of Internet and digital environments.* 6.9% of participants declared strong disagreement, 11.6% disagreement, 21.3% neutral, 25.8% agreement, 33.1% strong agreement.

- for fake perceived online persona awareness (M=4.45, SD=1.13) assessment this research used a single item measure – Item 13. Please rate the following statement from 1 to 5 (1 stands for strong disagreement, 2 stands for disagreement, 3 stands for neutral, 4 stands for agreement and 5 stands for strong agreement), according to the level of you agreement: *Everybody should be paying attention to the online fake accounts.* 5.7% of participants declared strong disagreement, 4.3% disagreement, 4.3% neutral, 9.9% agreement, 74.8% strong agreement.

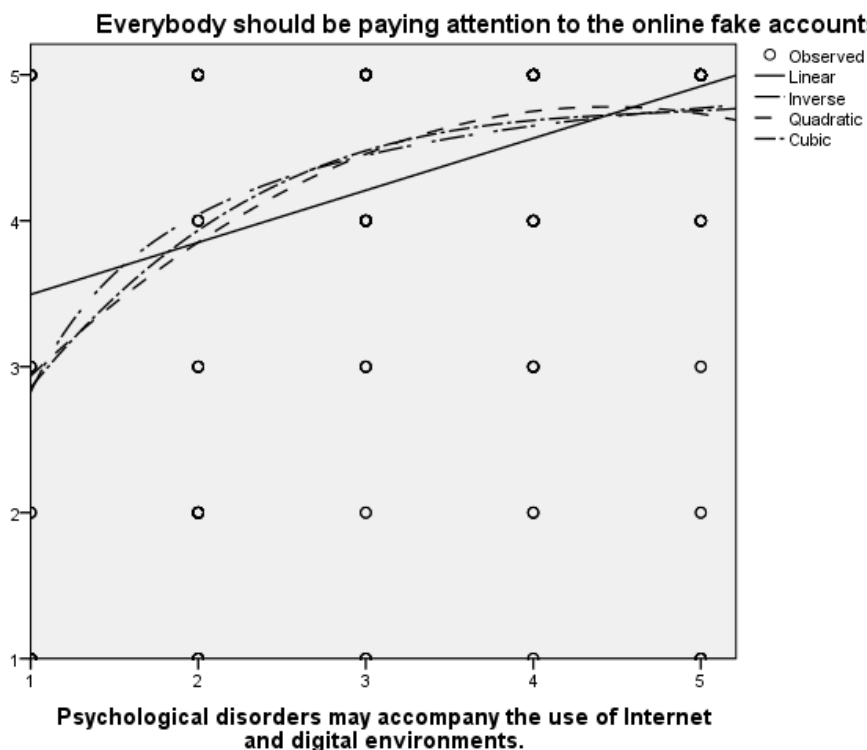
#### **5. Results**

For testing our hypothesis that states that between psychological disorders associated with social media use perception and fake perceived online persona awareness there is a curvilinear relationship, we have used a confirmatory factor analysis, based on multiple regression analysis for curvilinear effects. A curvilinear relationship can be defined as a relationship between two or more variables which can be graphically depicted by anything other than a straight line. A particular case of curvilinear relationships is the situation where two variables grow together until they reach a certain point (positive relationship) and then one of them increases while the other decreases (negative relationship) or vice-versa, the graphically representation of the function being an U or an inverted U shape (Rad, D., Dughi, T., Demeter, E., & Rad, G., 2019).

The curvilinear relationship is easily identified graphically by a Scatterplot, choosing additional representations of the regression line: Linear, Inverse, Cubic and Quadratic models, for depicting curvilinear effects. The Scatterplot diagram presented in Figure 1 indicates the curvilinear relationship between psychological disorders associated with



social media use perception on the horizontal axis and fake perceived online persona awareness, represented on the vertical axis. The sample consists of 206 participants.



**Figure 1** - Linear and quadratic curve estimation of psychological disorders associated with social media use perception and fake perceived online persona awareness

There is a very high correlation between psychological disorders associated with social media use perception ( $m=4.45$ ;  $SD=1.138$ ) and fake perceived online persona awareness ( $m=3.67$ ;  $SD=1.24$ ) of  $r=.390$  significant at a  $p<.01$ , which methodologically gives us incentives to compute the multiple linear regression analysis (Rad, D., Dughi, T., Demeter, E., & Rad, G., 2019).

In order to test our hypothesis, the present study proposes a hierarchical multiple regression analysis, the dependent variable being fake perceived online persona awareness, and the independent variable in step 1 psychological disorders associated with social media use perception, and in step 2 squared psychological disorders associated with social media use perception.

Table 2 presents the fitting of the two models, linear – Model 1 and curvilinear/ quadratic – Model 2. As we can see in Model 1 the model that

supposes linear relationship, fake perceived online persona awareness accounts for 15% of the variance in psychological disorders associated with social media use perception with an  $F= 89.080$  significant at a  $p<.01$ . In Model 2, the model that supposes curvilinear relationship, fake perceived online persona awareness accounts for 19% of the variance in psychological disorders associated with social media use perception with an  $F=60.201$  significant at a  $p<.01$ .

**Table 2.** The relationship between fake perceived online persona awareness and psychological disorders associated with social media use perception, model summary, ANOVA and coefficients

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change in R Square	F Change	df1	df2	Sig. Change
1	.390 <sup>a</sup>	.152	.150	1.050	.152	89.080	1	203	.000
2	.442 <sup>b</sup>	.195	.192	1.024	.043	26.722	1	202	.000

a. Predictors: (Constant), Psychological disorders associated with social media use perception

b. Predictors: (Constant), Psychological disorders associated with social media use perception, PDASMP sqrt

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	98.270	1	98.270	89.080	.000 <sup>b</sup>
	Residual	549.378	202	1.103		
	Total	647.648	203			
2	Regression	126.301	2	63.150	60.201	.000 <sup>c</sup>
	Residual	521.347	202	1.049		
	Total	647.648	203			

a. Dependent Variable: Fake perceived online persona awareness

b. Predictors: (Constant), Psychological disorders associated with social media use perception

c. Predictors: (Constant), Psychological disorders associated with social media use perception, PDASMP sqrt

### Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	
	B	Std. Error				
1	(Constant)	3.138		21.417	.000	
	Psychological disorders associated with social media use perception.	.357	.038	.390	9.438	.000
2	(Constant)	1.711		5.502	.000	
	Psychological disorders associated with social media use perception	1.382	.202	1.509	6.851	.000
	PDASMP sqrt	-.156	.030	-1.139	-5.169	.000

a. Dependent Variable: Fake perceived online persona awareness.

All standardized coefficients of Beta ( $\beta = .390$ ;  $\beta = 1.509$  and  $\beta = -1.139$ ) are significant at  $p < .01$  which gives a high consistency to our both models. Changing Beta coefficient's sign from + to - means that the effect is growing in the opposite direction, which demonstrates that the relationship between the two variables: psychological disorders associated with social media use perception and fake perceived online persona awareness is not linear, but curvilinear. The additional incremental predictive capacity of 4 percent, added by including the squared psychological disorders associated with social media use perception variable which is accounting for the band in the regression line, indicates that there is a curvilinear relationship between psychological disorders associated with social media use perception and fake perceived online persona awareness.

This curvilinear relationship demonstrates that extreme aspects, extremely reduced and extremely high levels of psychological disorders associated with social media use perception, significantly influences the fake perceived online persona awareness. Normal levels of psychological

disorders associated with social media use perception triggers an accepted level of fake perceived online persona awareness, meaning that the process of online persona perception functions in an adaptive manner. Thus, a very high level of psychological disorders associated with social media use perception and a very low level of psychological disorders associated with social media use perception play an important role in the process of fake perceived online persona awareness, acting like a buffering effect.

## **6. Conclusions and implications**

The present study investigated if psychological disorders associated with social media use perception and fake perceived online persona awareness are in a curvilinear relationship. The obtained results confirm the proposed hypothesis, meaning that extreme aspects, extremely reduced and extremely high levels of psychological disorders associated with social media use perception, significantly influences the fake perceived online persona awareness. Normal levels of psychological disorders associated with social media use perception triggers an accepted level of fake perceived online persona awareness, meaning that the process of online persona perception functions in an adaptive manner.

This inference gives us methodological reasons to believe that between the two concepts either moderation or mediation interaction processes occur, offering incentive for emergent digital behavior. In a further research we will investigate the role of social media context awareness, online time spent and other variables over the relationship between psychological disorders associated with social media use perception and fake perceived online persona awareness.

As a central conclusion of this research, we have to acknowledge that a digital adversity situation/environment/person will led to audience's manifestation of a digital emergent behavior or misbehavior.

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# DIFFERENCES IN THE ATTITUDE TOWARDS READING AFTER ONE YEAR OF MIXED- CLASSIC AND ON-LINE TEACHING DURING COVID-19. A CASE STUDY BASED ON A PRIMARY CLASSROOM

Rucsandra HOSSU, Ph.D. Candidate,  
Faculty of Educational Sciences, Psychology and Social Sciences,  
"Aurel Vlaicu" University of Arad,  
[ruxy\\_hossu@yahoo.com](mailto:ruxy_hossu@yahoo.com)

**Abstract:** *Reading is influenced by a series of factors that depend both on the reader, as well as on the text or on the background. In regard to the students, the attitude towards reading is an affective-motivational variable, which mobilizes the energy resources towards the reading activity. On the other hand, the manner through which the text is presented or the context of the subject of Romanian language is taught may be the connectors of the formation of a positive attitude towards reading. The aim of this study is to investigate the effect of a mixed-classic and online teaching year on the attitude towards reading in the case of a primary class. The scores before and after the mixed teaching have indicated a constant attitude towards reading, but also a significant increase in the attitude towards academic reading as compared to the recreational one, after the online period. There are provided suggestions of instructional design that include the digitalization of the teaching strategies.*

**Key-words:** *reading attitude; school performance; primary school; COVID-19*

## I. INTRODUCTION

The finality of the Romanian educational system is that of shaping students with a whole, harmonious and free development, so that they adapt and they are able to face the challenges they might face in their professional, social and personal life. This educational goal is transposed, to a more reduced scale, in the development of the eight core competences set at European level. The skills have operational value, correlate to the performance and can be measured on the base of certain performance standards (Chiş, 2005). The component triad of the competences consists of knowledge, skills and attitudes. The operationalization of these three

elements depends on the curricular area or on the school subjects falling under that particular field.

The competence for the mother tongue is the first one of the eight to be mentioned in the European documents. Although the classification does not include the hierarchy of the competences as well, we nonetheless bear in mind the fact that having knowledge of the mother tongue and being able to operate with it, is a basic condition for the formation of the other educational competences. Although he might have knowledge and skills in a certain field, it is essential that the student manifests a positive attitude towards the school subjects as well. The continuation and deepening of a school subject in superior classes also depends on the attitude towards that particular subject, as well as after the completion of compulsory education, at academic level and even non-formal, in day-to-day life.

In primary classes, the mother tongue competence is acquired in the preparatory class, the first grade and the second grade within the discipline *Romanian Communication*, whereas in the third and fourth grade within the discipline named *Romanian language and literature*. Both subjects target four general competences built around the receiving/expression and the oral/written axes. The order of their appropriation respects the developmental characteristics of the children: receiving the oral message – expression of the oral message – receiving the written message – expression of the written message. Although it may seem that these competences are structured in a hierarchical mode, the acquisition of a competence being conditioned by the appropriation of the previous one, the learning contents are tackled in an integrated manner in school practice, one activity having the ability to target the development of more types of particular competences.

With reference to the assessment of the mother tongue competence (Romanian language), the students are graded with marks corresponding to the four levels of acquisition of the basic competence: (1).very good; (2).good; (3).sufficient; (4).insufficient. The assessments consist of written and oral parts, targeting both oral-written and receiving-expression components. At a national level, the assessment tests target the written component specifically, particularly the competence of receiving the written message. The focus on the receiving of the written texts is determined by the international framework, more precisely by the presence of functional illiteracy. It was noticed, for example, as a result of the international assessments, that almost half of the Romanian students do not comprehend what they are reading, and thus cannot use the information of a text they read in day-to-day life.

Related to the functional-communicative model, reading is not developed independently, but in relation to the listening and written and oral expression processes. The two subjects bear different names, the distinctive

element being the use of the term *communication* for the 0, 1st and 2nd grades, and that of *literature* for the 3rd and 4th grades. From the terminology analysis of the two names, there results a focus on the communicative function of the Romanian language in the case of small children, and on communication and the analysis of both literary and non-literary texts in the case of bigger children. The focus on one of these elements might influence the attitude of the students towards this subject as well. The analysis of the texts presupposes a higher level of difficulty in the processing of the linguistic information, fact which makes reading appear rather like an academic task instead of a recreational one.

The relation between attitude and behaviour is intensely studied, particularly in the field of social psychology. Constructs such as social representations, cognitions or social emotions are deemed to be an interpretive model of the social world and a filter through which the environmental information is sifted. Nevertheless, the direction of the attitude-behaviour course is not clarified, empirical studies emphasizing that in the case of a cognitive dissonance, the subjects modify their attitude so that it matches the behaviour, thus reducing the lack of harmony between thought, emotion and action.

The interest regarding the relation between the attitude towards reading, the reading performance and the gender of the subjects is several decades old. With reference to the gender, it appears that girls manifest, generally, a more positive attitude towards reading (Nonte, et al., 20180). In a case study based on a survey, Askov & Fischbach (1973) noticed a significantly positive relation between the attitude towards reading and the comprehension of it, but not with the decoding of the read words. Furthermore, girls have declared that they have a more positive attitude than the boys. With regard to the stabilisation of the attitude, the authors have noticed that the scholar level is not related to the attitude, the average grades being relatively similar to the children from the 1st and 3rd grades, that is if comprehension as a moderating factor is excluded. More recently, McGeown & Johnston (2009) have noticed that the ability to read, which was measured with standardized tests, correlates positively with the attitude towards reading ( $p < 0.010$ ) in the case of 10 years old students.

The attitude towards reading appears to be modifying in time, and that in the negative sense. In a transversal type of study, Nootens, et. al (2019) have measured the attitude towards reading in children of the 5th to the 8th grade from Canada. The results have highlighted a stabilisation of the attitude over the course of two years of school, grades 5-6 and 7-8, but a change of attitude as the result of the transition from the elementary level (5-6) to the middle one (7-8). Both boys and girls have shown an attitude less



favorable in middle school, both in academic reading and the recreational one.

With regard to the relation between attitude and teaching in class, the empirical studies have emphasized that the attitude towards academic reading is related to the teaching methods, but also to the mode through which teachers connect the recreational reading to the academic one (Early, 2011). Lockwood (2012) has demonstrated, in a study conducted over the period of two years, that students from primary grades whose teachers also used teaching strategies that facilitated the development of a positive attitude towards reading have presented a higher level of the attitude towards reading. Recreational reading, instead, appears to be influenced mostly by factors that belong to environment of the family, such as the number of available books, and less by variables linked to the educational environment, such as the existence of school libraries (Nonte, et al., 20180).

To conclude, the attitude towards reading is multi-componential, its predictors varying according to the type of the reading activity (recreational versus academic), the gender of the subjects (girls versus boys), but also the environment (academic or extracurricular). Moreover, the stabilisation in time of the attitude towards reading tends to falter once with the transition to a higher education, being in relation to the performance of the reading tests.

## **II. RESEARCH QUESTIONS:**

The relation between attitude and performance is one of reciprocity. Good performance in a field may be associated with a positive attitude towards the task. In a similar manner, a positive attitude may mobilise the motivational and energy resources for action, determining the rise of the performance.

The attitudes are formed in time, as a result of experiences. It has been demonstrated, for instance, through the phenomenon of cognitive dissonance, that the subjects can change their initial attitude towards a phenomenon to reestablish the cognitive balance, if faced with certain operating mobilities. The studies have highlighted that the students' attitude towards reading, both the academic and the recreational one, modifies in time. This fact depends on both personal variables (such as interest or cognitive resources) and background variables (such as the teaching activity). The academic year 2019-2020 was marked by a major change in regard to the teaching strategy, namely the COVID-19 pandemic, which caused the transition from the teaching in class to the online teaching. In this situation, we are asking ourselves to what extent was this new challenge associated with a change in the attitude towards reading. Additionally, research has revealed an association between the attitude towards reading and the ability to read, measured by standardized tests, and less with the

academic results in the discipline of the mother tongue. Consequently, we have formulated the following research questions:

- Is there a correlation between the attitude towards reading and the academic results in the discipline of the mother tongue in the case of primary-class children?
- Is there a change of level in the attitude towards reading after an academic year taught in a mixed-classic and online manner?

### **III. METHODOLOGY**

This study is a case study of a longitudinal type, with the measurement of the dependent variable (VD=attitude towards reading) before (the end of the 2nd grade) and after (the beginning of the 4th grade) the interference of the independent variable (VI= mixed teaching: classic and online).

#### **3.1. Subjects**

Within this study has participated a class of students (N=17 students), from which 11 were boys and 6 were girls. In the pre-test phase the students were in the 2nd grade, whereas in the post-test phase, they were in the 4th grade. The students' school of origin is a neighbourhood one, from the county of Arad, which is considered to be of a medium level, as compared to schools situated in more central spots.

#### **3.2. Tools**

##### *a. The attitude towards reading*

The attitude towards reading was measured using a public-domain tool, namely *The Elementary Reading Attitude Survey* (ERAS), whose authors are McKenna & Kear (1990). The tool contains 20 questions that measure two aspects of reading: recreational reading (10 items) and academic reading (10 items). Recreational reading includes items related to extracurricular reading activities and the pleasure of reading in leisure time. Academic reading refers to the attitude towards reading in the school environment. Each question is followed by four scenarios, in which a cartoon character is: very happy, a little happy, a little upset, and very upset. Students can answer each question by circling the emotional expression that best suits them. In the present study, the cartoon character was replaced with emoticons that express the emotions described above. An example of a question and answer item is the following:

*How do you feel when you read a book on a rainy Saturday?*



The answers were rated on a Likert scale, with scores between 1 and 4, the higher score indicating a more positive attitude. Each student can have three scores. The overall individual score can vary between 20 and 80 and represents the general attitude towards reading. The scores on the two subscales, the recreational and academic reading can be situated between 10 and 40.

The authors reported good psychometric qualities of the general attitude and of the two subscales, the coefficients of internal consistency ranging from .74 to .89 (McKenna & Kear, 1990). In the present study, the alpha coefficients were as follows: .90 for the recreational attitude, .83 for the academic attitude and .91 for the general attitude toward reading.

The administration of the questionnaire was done in groups. The experimenter gave the instructions, providing additional explanations if requested. The average time to administer the instrument was 15 minutes.

#### *b. Academic results in the Romanian language.*

The academic results in the Romanian language were retrieved from the grade book. The yearly average grade was taken into consideration, grade which can vary from Very good to Insufficient. These grades have been changed into scores, as it follows: Very good=4, Good=3, Sufficient=2, Insufficient=1. According to the teacher, the students have been evaluated through different curricular tests, oral and written.

### **3.3. The procedure**

The original purpose of this study has been that of evaluating the stabilisation in time of the attitude towards reading. The time of COVID-19 had not been anticipated, the online teaching being a variable that occurred during the investigative procedure.

The ERAS scale was applied twice: in June 2019, when the students were at the end of the 2nd grade, and in September 2020, when the students were at the beginning of the 4th grade. The academic results have been retrieved from the grade book of the academic years of 2018-2019 and 2019-2020.

The total number of students from the participating class was that of 24 in the 2nd grade (one student did not pass) and 24 in the 4th (there was a new student in the 3rd grade). Besides the two students that did not participate in the two evaluations, five of the students have been absent from

one of the evaluation phases, and their scores could not be included in the statistical processing.

The teacher of the class from which the students come has over 40 years of experience in teaching and the first teaching degree. The teaching of the Romanian language was an integrated and interactive one in the academic year of 2019-2020. During the online period, which started in March 2020, the courses have been held on a mobile app, but without the video interactions. The teacher used the auxiliary materials that the children previously owned during the teaching. The tasks that were to be done were announced daily, and the teacher would afterwards send personal feedback to the students. Since the situation did not allow for an assessment that would be comparable to the one from the first semester, there were maintained, generally, the grades from the first semester.

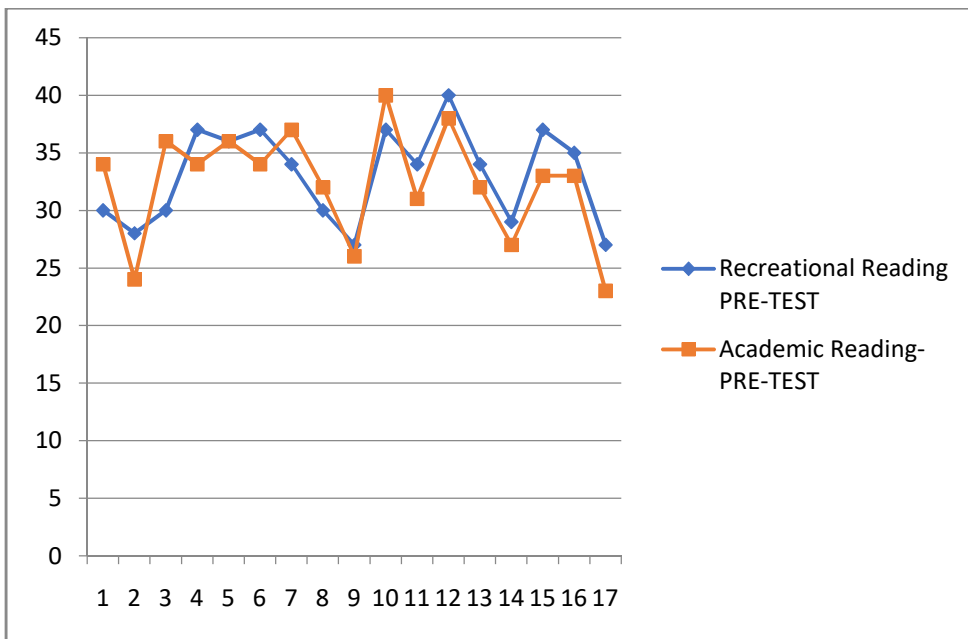
#### IV. RESULTS

##### a. Pre-test results

**Table 4.1.** Descriptive analysis for the attitude towards reading and Romanian Language school performance in pre-test

<b>PRE-TEST</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>SD</b>	<b>T test</b>
<b>Recreational reading</b>	27.00	40.00	33.05	4.09	t=.928, p>0.050
<b>Academic reading</b>	23.00	40.00	32.35	4.84	
<b>General attitude</b>	50.00	78.00	65.41	8.41	
<b>Romanian Language school performance</b>	1.00	4.00	3 (range)	.75	

As visible in Table 4.1 and Figure 4.1, there may be noticed an average and values of the attitude towards recreational reading ( $M=33.05$ ) which is higher than the academic one ( $M=32.35$ ), but this difference is not a significant one ( $t=.928$ ,  $p>0.050$ ). Additionally, the grades in Romanian language are at the ranking of 3, which indicates an average score of *Good* for the class.



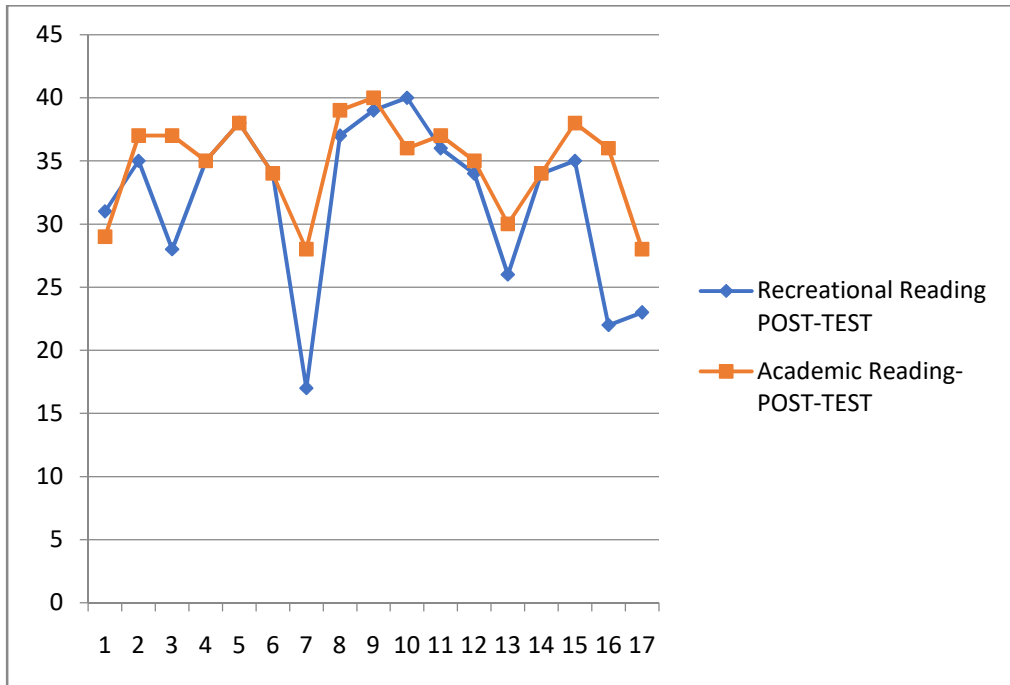
**Figure 4.1.** The scores for The attitude towards reading in pre-test (before mixed classic and online teaching)

**b. Post-test results**

**Table 4.2.** Descriptive analysis for the attitude towards reading and Romanian Language school performance in post-test

PRE-TEST	Min	Max	Mean	SD	T test
<b>Recreational reading</b>	17.00	40.00	32.00	6.55	t=-2.441, p<0.050
<b>Academic reading</b>	28.00	40.00	34.76	3.81	
<b>General attitude</b>	45.00	79.00	66.76	9.66	
<b>Romanian Language school performance</b>	1.00	4.00	3 (range )	.75	

As visible in Table 4.2 and Figure 4.2, there may be noticed an average and values of the attitude towards recreational reading (M=32.00) lower than the academic one (M=34.76), and this difference is a significant one (t=-2.441, p<0.050). Additionally, the scores in Romanian language have a ranking of 3, which indicates an average score of *Good* for the class.



**Figure 4.2.** The scores for the Attitude towards reading in post-test (after mixed classic and online teaching)

*c. Comparisons pre- and post-test*

**Table 4.3.** Differences at the level of the Attitude towards reading and Romanian Language school performance between the two evaluations

	<b>PRE-TEST</b>	<b>POST-TEST</b>	<b>T</b>	<b>P</b>
<b>Recreational reading</b>	33.05	32.00	.595	.560
<b>Academic reading</b>	32.35	34.76	-1.624	.124
<b>General attitude</b>	65.41	66.76	-.450	.659
<b>Romanian Language school performance</b>	3 (range)	3 (range)	-	-

To test whether the differences regarding the attitude towards reading between the two tests are statistically significant we used the T test for dependent samples. The distribution of the data for the three variables was

checked with the Kolmogorov-Smirnov test, which indicated a normal distribution of the scores in the two phases of the testing ( $p < 0.050$ ).

In Table 4.3 there may be noticed that there are no significant differences between the two evaluations in regard to the attitude towards reading, in none of the dimensions ( $p > 0.050$ ). Furthermore, the scholar performance in Romanian language was maintained on the same level in the post-test as well, namely *Good*.

To test the relation between attitude and the academic results we have made an analysis on correlation for the nonparametric tests (Spearman's rho).

**Table 4.4.** Correlation between Attitude towards reading and Romanian Language school performance in pre-test

	<b>Romanian Language school performance</b>	
	<b>Pre-test</b>	<b>Post-test</b>
<b>Recreational reading</b>	-.042	.343
<b>Academic reading</b>	-.091	.310
<b>General attitude</b>	.000	.158

From Table 4.4. it results that there is no significant correlation between the attitude towards reading and the academic results, the threshold of significance being  $> 0.050$  in all the correlational analysis. However, there may be noticed that, if in pre-test, the correlations were negative, in post-test they are positive, showing a concurrent increase of the two variables.

## **V. Conclusions**

The purpose of this study was to investigate the differences at the level of the attitude towards reading in the case of a primary class students, after a year of mixed, classic and online teaching during the period of COVID-19. In addition to this, there was raised the question regarding the extent to which the attitude towards reading is related to the academic results in Romanian language.

The results have shown a rather positive attitude towards reading, both at the end of the 2nd grade and the beginning of the 4th grade, the average being above 3, which corresponds to the feeling of "a little happy". At the end of the 2nd grade, the attitude towards recreational reading was slightly more favourable (although statistically insignificant), as compared to the academic one. At the beginning of the 4th grade, instead, the situation was reversed, the students declaring that they prefer the reading activities at

school, unlike those in their leisure time. The difference was statistically significant, which suggests that after the mixed-teaching period, the children have a more positive attitude towards reading the academic tasks, rather than recreational reading. These results may be due to the fact that during the COVID-19 period and during online teaching, the students have felt more relaxed in the interior of their own homes, and thus they started enjoying the given tasks. Another possibility might be that the help and involvement of the family members in the solving of the tasks have facilitated the development of a more favourable attitude towards the academic reading as well.

Furthermore, the analysis between the pre- and post-tests attitude has not indicated any significant difference, which makes us conclude that the attitude is stable at a certain academic level, as other researches have shown. Generally, the mixed teaching period did not cause significant differences after one year. Nonetheless, the increase in the attitude towards academic reading after the mixed year remains essential.

With reference to the relation between attitude and the academic performance, the results have not indicated a significant correlation in none of the moments of the testing. Furthermore, the relation was a negative one when the children were in the 2nd grade, which may be interpreted as the fact that the attitude is more emotionally impregnated in the case of primary grades, without necessarily having any connection with the performance of the class. In bigger grades, however, the attitude starts going in the same direction as the performance, poor results in Romanian language being associated with a more negative attitude towards reading.

This was a case study done on a single class of students. Naturally, the size and selection of the sample limits the generalization of the results to other people, being suggested a larger number of subjects coming from diverse populations.

At an educational level, the study draws the attention upon the children's need regarding academic teaching. The results appear to show that online teaching may be preferred by children instead of the classical one, at least in the case of reading. This is the reason why teachers should come up with a more digitalized educational design, one which relaxes the didactic relations from the class and which possibly may be associated with a higher academic motivation.

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<http://www.romaniaeducata.eu/>

## MONITORING SYSTEM OF THE QUALITY OF FUTURE TEACHERS' TRAINING WITH HELP OF GOOGLE CLOUD SERVICES

Tetiana BONDARENKO, Associate Professor,  
Iryna KHOTCHENKO, Associate Professor,  
Ukrainian Engineering-Pedagogics Academy  
Universytetska street, no 16, Kharkiv city, Ukraine, zip code; 61003

[bondarenko\\_tc@uipa.edu.ua](mailto:bondarenko_tc@uipa.edu.ua)

[irina.khotchenko@gmail.com](mailto:irina.khotchenko@gmail.com)

Olha AHIEIEVA, Director  
Lubotyn Professional Lyceum of Railway Transport  
Shevchenka street, no 130, Lubotyn city, Kharkiv region, Ukraine, zip  
code; 62433  
[lplztd@gmail.com](mailto:lplztd@gmail.com)

**Abstract:** *In this article offered the technology of using Google search engine cloud services to build a system for monitoring the quality of future teachers' training in sphere of higher education. The possibility of using the BYOD concept to test students' academic achievements is considered. The advantages of the proposed approach for monitoring the quality of future teachers' training in sphere of higher education are presented, in particular, it is noted that the use of Google search cloud services expands the scope of research in space and time, makes the monitoring procedure more flexible and systematic.*

**Keywords:** *monitoring of quality; future teachers' training; sphere of higher education; cloud services.*

### **Introduction**

As evidenced by many years of experience, the achievement of required level of future teachers' training in the sphere of higher education is possible only under constant and systematic monitoring of all components that affect the quality of education. In this regard, monitoring can provide invaluable assistance in ensuring the quality of vocational training, as a process of continuous monitoring in order to form an information base that focuses on assessing status, development forecast and management of the object of monitoring.

Analysis of the peculiarities of future teachers' training (Protsenko, 2015) showed that the specifics teachers' training in higher education is characterized by extreme complexity and large amount of general and professional knowledge, duration of training and multilevel nature of training. To ensure the proper quality of future teachers' training in the sphere of higher education, it is necessary to coordinate many components.

Continuous improvement of information and communication technologies opens new ways to solve theoretical and especially practical issues of forming systems for monitoring the quality of training. In this regard, fundamentally new opportunities in the scale and depth of research appear with the introduction of cloud technologies to monitoring the quality of future teachers' training in the sphere higher education.

### **Analysis of recent research and publications**

Monitoring is increasingly used in educational systems. Pedagogical aspects of the problem of conducting monitoring research and assessing the quality of education are presented in the works of Ukrainian and foreign scientists (Galitsin, 2000; Mayorov, 2005; Prikhodko, 2007; Bilyk, 2007; Ndungu, Beatrice W., 2015). Analysis of the experience of using information technology, for example, for monitoring and environmental protection shows a significant impact on the effectiveness of monitoring research. However, in the works of scientists in the field of education much less attention is paid to the technology of monitoring research, which provides the ability to obtain, process, analyze and disseminate a variety of information needed for effective management in educational institutions.

Scientist M. G. Farrel in his research describes the information technology for monitoring the quality of educational institutions and proposes an automated system for its implementation (Farell, 2009). Unfortunately, the usage of the latest information and communication technologies in monitoring research of the quality of education and, in particular, the usage of cloud technologies have left out of the attention teachers in the sphere of higher education.

### **The origin of the problem**

At the beginning of the emergence of monitoring as a method of scientific study of phenomena and processes, to organize observations with purpose to predict possible scenario of further development, such as ecological systems in the future (observation of natural phenomena and weather forecasting) to establish a fact or compare with normative or desirable indicators.

The effectiveness of monitoring, as a process of continuous supervision in order to form an information base that focuses on assessing

the status, development forecast and management of the monitored object, largely depends on the technologies used to collect data. Continuous improvement of information and communication technologies opens new ways to solve theoretical and especially practical issues of forming systems for monitoring the quality of training.

As for monitoring the quality of future teachers' training, as mentioned above, it is multidimensional and distributed in space and time. To proceed the training we need tools that will allow to cover a large scope and ensure controllability of the process. Today, cloud technology fully meets such requirements.

The main idea of cloud technologies (access to cloud resources anywhere and anytime) covers as well as possible the needs of monitoring in the field of education, because work of collecting information (questionnaires, surveys, diagnostics, control, collaboration with documents, etc.), its storage, processing and provision to the subjects of monitoring can be effectively performed by using cloud services.

Cloud technology, as evidenced by real facts (Ray J. Rafaels, 2015), is a challenge of time. According to the research of well-known consulting company, almost 700 million companies in the world will use cloud technologies in the nearest future.

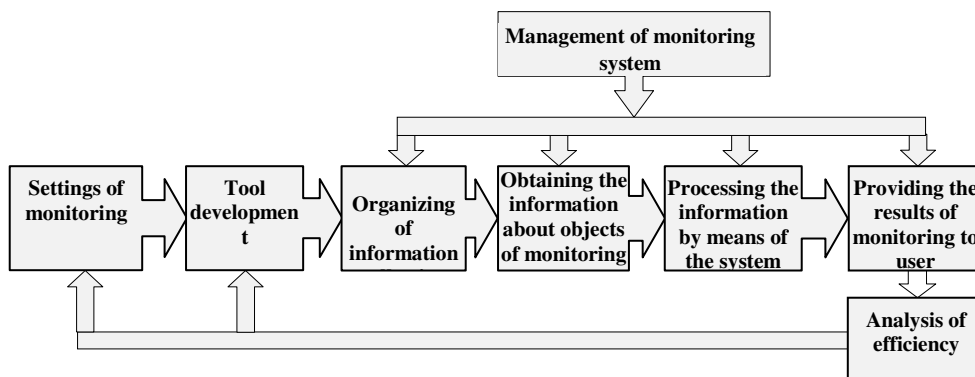
**The purpose of the article** is to describe the system of monitoring the quality of the quality of future teachers' training in sphere of higher education, which was developed at the Ukrainian Engineering–Pedagogics Academy (UEPA) based on the use of cloud services of the Google search engine.

#### **Presentation of the main material and substantiation of the obtained results.**

The structure of the system of monitoring the quality of future teachers' training in sphere of higher education, which was developed at UEPA, is presented at Figure 1.

Let's have a look at the main stages of operation of this system. The study of monitoring is presented in a number of stages. Each of the stages of monitoring research has its own tasks, which are often solved sequentially, and sometimes simultaneously. In scientific resources (Borovkova, 2004; Galitsin, 2000) is considered the possibility of carrying out monitoring researches in three stages. However, the most common approach to monitoring research consist of four stages: preparation for research; collection of information; processing of the received data; quantitative and qualitative analysis of information.

**Figure 1.** The structure of the monitoring system of quality of future teachers' training in sphere of higher education



The organization and monitoring of the quality of future teachers' training in sphere of higher education, has specific features, which, as noted above, are related to the scale of research and technology of implementation. The proposed scheme of organization and conduct of monitoring research (Figure 1) has a number of specific features, which we will consider below.

First of all, due to the significant amount of work, the stage of preparation of the study should be divided into two stages: the actual stage of preparation and the stage of development of tools. Most researchers consider the initial stage of monitoring research as a stage of preparation, while tacitly assuming its one-time implementation (Galitsin, 2000).

In our opinion, this stage is more appropriate to describe as a stage of adjusting the parameters of research, which involves its periodic implementation based on the results of fixed periods of system operation. At this stage, the goals and objectives of research, areas of research and functions of the system, evaluation criteria and indicators, research methods, deadlines for submission of information, responsible performers are determined.

The allocation of tool development as a separate stage is explained by the fact that the usage of quality tools largely determines the success of monitoring research. The quality of the tools is a factor that is controlled during the research in a fairly wide range. During the monitoring of the quality of future teachers' training in sphere of higher education, the main methods of data collection are observation, survey, testing and the method of expert evaluations, the requirements for particular tool are formulated by taking into account the characteristics of a particular form of survey. At the same time, the general methodological requirements for the tools, such as validity, reliability, usability, compliance with target settings, correctness of

statistical procedures, standardization, approbation, etc. (Mayorov, 2005), remain unchanged.

A system of visual monitoring of the quality of classes, which uses a method of data collection such as observation, is described in collection of articles "Problems of Engineering and Pedagogics Education" (Bondarenko, 2015).

It is important to study the data collection, testing, and expert's assessment technology using Google's cloud services.

In the process of developing the system, we have to consider the fact that monitoring is one of the ways to improve the efficiency and quality of the functioning of the educational institution. The monitoring system should assist in solving this problem, and should not create problems with collection, processing and analysis of information about the object of monitoring. The organizing of the monitoring system and the technologies that determine the process of its functioning directly affect its efficiency.

In this regard, in the process of developing the structure of the information collection system, to solve monitoring problems were chosen such technologies, which on the one hand, minimize financial and time costs, and on the other hand, ensure usability of the system and quality of its operation.

In our opinion, the best solution for the implementation of the phase of operation of the system (organizing of information collection, obtaining the information about objects of monitoring, processing the information by means of the system) and the phase of supporting of its application (management of monitoring system) is the use of Google cloud services. The following arguments can be used in order to support this choice: a comprehensive integrated solution to the problem of creating, operating and supporting the application of the monitoring system through the usage of various interconnected services of the Google search engine.

The system for visual monitoring of the quality of classes, which uses such data collection method as observation, is described in research work (Bondarenko, 2015). We will consider data collection, testing, and expert analysis technology using Google cloud services.

Upon development of the system, it should be kept in mind that monitoring is one of the ways to improve the efficiency and quality of the functioning of the educational institution. The monitoring system should assist in solving this task rather than create problems in collection, processing, and analysis of information about the object of monitoring. The organization of the monitoring system and the technologies that determine the process of its functioning directly affect its efficiency.

Therefore, when developing the structure of the information collection system, technologies were chosen to solve monitoring problems,

which on the one hand minimize financial and time costs, and on the other hand ensure the easy and high-quality operation.

We consider that the use of Google cloud service is the best solution for the implementation of the system operation stage (organization of information collection, obtaining information about objects of monitoring, processing of information by the system) and the stage of supporting its application (monitoring system management). This choice has the following advantages:

- a comprehensive integrated solution to the problem of creating, operating, and supporting the application of the monitoring system through the use of various interconnected services of Google search engine;
- all Google services allow to perform the necessary operations from any mobile device in any place where the Internet is accessible.
- additional benefits of Google include stability and ease of use of services. Google users work in the same familiar interface on any device in all operating systems and browsers. Google also supports offline mode. Gmail, Calendar, and Docs are accessible even without an Internet connection. Users can view, edit, and create content offline. All edits are synchronized upon re-connection to the Internet;
- an important advantage of Google is the free use of most services.

The authors of work (Bondarenko, 2015) consider that minimum hardware requirements, support for all operating systems and client programs used by students and educational institutions, work with services using any mobile device that supports Internet interaction are the major advantages of Google cloud services. In this term, all services meet the basic requirements of the international standard of software quality model ISO/IEC 9126: functionality, reliability, usability, efficiency, maintainability, portability (ISO/IEC 25010:2011).

Given that the main part of the information in the system of monitoring the quality of professional training of future teachers is collected in the form of questionnaires, test results, and interviews, it is advisable to use the DocsGoogle service form to solve problems of mailing, filling, and collecting completed documents. This form is a series of questions with different answers. Its construction includes entering a question, selecting, and determining the appropriate type of answer, saving the completed form in the results database in the Google Drive cloud storage.

You can place up to eight types of different questions in the form (one from the list, several from the list, etc.). The experience in the use of Google forms has shown that this set of question types is sufficient to create a variety of forms, questionnaires, and achievement tests for monitoring of training quality.

To send the form to the respondent, use the option *Send this form by e-mail*. In the advanced settings, you can choose the *Embed* option, which provides the code for embedding the form in the site of the monitoring system. The *edit Confirmation* option allows you to enter a message that is issued to the user when the *Send* button is clicked. The publication of the *Summary of Answers* will give the respondent the opportunity to see the main results at the current time.

Monitoring data are stored and processed in the so-called cloud, which is, from the user's point of view, one large virtual server. A significant advantage of cloud storage for creating a monitoring system is the ability to share user access to files stored there. The data are stored on a remote network resource that can be accessed from any computer or mobile device connected to the Internet. This preserves the ability for access authorization and control over data editing or viewing. This allows the manager of the network monitoring system to distribute access rights among individual resources of the system and monitor the activities of system users. Let's consider the use of cloud services for each functional stage of the system.

At the stage of information processing by means of the monitoring system, the data are transferred to Google Spreadsheet after sending the form. The table appears in the DocsGoogle file manager; its name is taken from the name of the form plus the word "response". *Timestamp of each entry* column of each record is added to the table, which is also the "index" of the data set. By default, the information is sorted by this field, so we get a chronological list of all records. When processing data, the spreadsheet allows easy sorting information by any column without breaking the entries.

Using the *Show Summary of Answers* tool, we will get a tab with a chart for each question form. In addition, next to the diagram, the results will be presented in numbers and percentages. The table includes a set of functions (similar to an Excel table) for statistical data processing. If desired, the table can be exported for processing in MS Excel.

At the stage of presenting the monitoring results, shared user access to files stored on Google Drive is used for mailing monitoring results to respondents.

Another component of the monitoring system, which is critical in the effective operation of the system, is the management subsystem. Given that monitoring is *continuous* observation over the condition of the object, the management of the monitoring system is necessary for planning and coordination of all work related to monitoring.

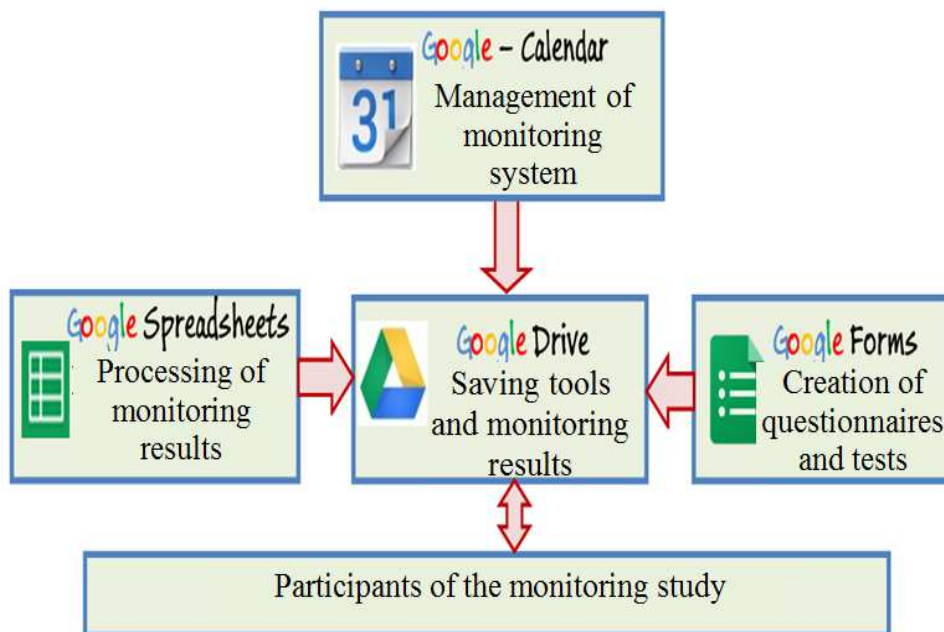
The management subsystem of the monitoring system is organized using the Google Calendar cloud service. It helps to make the schedule of the works associated with the solution of monitoring problems. Using the calendar, you can send reminders about events via SMS and e-mail.



GoogleSites cloud service is used to combine all the considered elements into a single system. With its help you can organize chat rooms (discussion of monitoring results and related issues); place forms, questionnaires, and tests for collection of information; organize joint work on data collection and processing; keep records of filling the information base of the monitoring system, conduct online surveys and online questionnaires, set time for an online discussion of monitoring results.

Figure 2 shows the cloud services of the Google search engine in the structure of the system of monitoring the quality of future teachers' training in the sphere of higher education.

**Figure 2.** Cloud services of the Google search engine in the structure of the system for monitoring the quality of professional training of future university teachers



Another option for using Google search cloud services in the structure of the monitoring system is computer testing of students' academic achievements based on BYOD (Bring Your Own Device) concept (Heshmaty, 2016) using the own mobile devices of the participants of the monitoring study.

The process of testing academic achievements based on Google search engine services using the BYOD concept includes the following steps:

- taking tests;
- development of a test in the form of a Google form;
- registration of test participants;

- creating a Google Calendar with test management events and providing test participants with access to the created calendar;
- connection of mobile devices of test participants to the created Google-Calendar;
- passing the test by participants;
- processing of test results in the Google spreadsheets.

The development of the test in the form of a Google form allows using eight possible types of questions that provide verification of knowledge of almost all learned material.

If you have a significant number of tests in the discipline, it is convenient to manage test events using the Google Calendar cloud service. You can use Google Calendar on your computer, phone, or tablet. All new events and changes are automatically synchronized in all versions of Google Calendar. Reminders are sent by email or SMS.

The received link on the mobile device opens the created form and the test participant consistently answers the test questions contained in it. After filling out the form, the student saves the test result in the cloud storage in a Google spreadsheet by clicking the *Send* button. The answers received through the form can be viewed in four ways:

- in the form of summary;
- in the form of answers from individual users;
- in table form;
- in CSV-file (in English: Comma – Separated Values – values separated by commas) – a text format designed to represent tabular data.

Only if the proposed cloud technologies are used, monitoring study of the quality of professional training of future university teachers allows covering vocational education institutions, secondary education institutions as well as higher education institutions. These technologies allow sending questionnaires of experts to participants of the monitoring study, holding various surveys, presentation of study results, etc.

### **Conclusion**

Peculiarities of future teachers' training in sphere of higher education require the creation of a branched and well spreaded system of monitoring research. The experience of the Ukrainian of Engineering-Pedagogics Academy has shown that in solving this problem it is advisable to use cloud technologies to monitor the quality of future teachers' training in based on Google search engine services.

This approach in creating a system for monitoring the quality of future teachers' training in sphere of higher education has a number of advantages:

- first, it is a comprehensive support of the monitoring system from the moment of creation of appropriate survey forms and storage of results in the cloud storage till processing the results of monitoring and management of the system based on the usage of Google-Calendar;
- secondly, the ability to combine all the elements into a single system based on the usage of the GoogleSites cloud service; the use of the BYOD concept in the field of cloud technologies allows to remove the issue of providing research participants with computer equipment and to conduct expert surveys and testing of student's achievement at any time and in any place where an Internet connection is available;
- expanding the boundaries of research, involving different educational institutions and a significant number of experts based on the use of cloud technologies allows to improve the efficiency and quality of monitoring the level of training of future teachers' in sphere of higher education, monitoring with this approach becomes more flexible and systematic;

Another significant advantage of the proposed approach is the ability to create a budget monitoring system through the free usage of free of charge Google services.

Prospects for further research. In the future, it is planned to expand the list of Google search engine's cloud services for purpose of monitoring research of the quality of training of future teachers' in sphere of higher education. For example, it is planned to use the Google Meet service to conduct focus groups and discuss the results of monitoring research.

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# TEACHERS' PERCEPTION OF THE IMPORTANCE OF MUSIC IN SCHOOL LEARNING

**Daniela Carmen POPA, Ph.D.,  
„Lucian Blaga” University from Sibiu**

**Abstract:** *My personal experience determined me to focus on this issue, starting from the fact that I noticed a poor training of teachers in the field of music. This research aims to analyze the perception of teachers, especially those working in preschool and primary education, on the importance of music and how they use music as a support in school learning.*

**Keywords:** *music support; emotion; learning process; educational activity; development.*

## 1. Introduction

Music arouses emotion, music can bring peace, music is joy, and children's joy depends on how much music the educator offers in class. Specialists in the field consider that music is very important in education and especially in children's development. Music can make learning easy and fun.

Music can bring *"slowing down thinking, calming anxiety, improving concentration, developing the pleasure of learning, educating emotion"* says Augusto CURY.

Consistent use of ambient music during school activities:

- promotes musical and emotional education;
- creates the pleasure of learning during the "less friendly" classes;
- calms thinking, improves concentration and assimilation of information.

According to the pedagogue and musicologist Ion Gagim (2003), musical intelligence effectively influences the general intelligence of man. By creating in the classroom educational contexts that facilitate the development of musical intelligence, the development of general intelligence is ensured.

According to Seldin (2016) it has been shown that there is a direct link between music and the development of areas of the brain associated with mathematics and pattern recognition. Hence the appreciation that music is a sung mathematics

We often hear expressions such as "he is a very talented student of music" and yet are considered "smart" those who get very good results in scientific disciplines. There are pedagogical beliefs that hinder the optimal development of those with rhythmic musical intelligence. Howard Gardner, author of *The Theory of Multiple Intelligences*, believes that those with rhythmic musical intelligence like sounds, like to sing, like to use music and rhythm, make sounds, react to sounds, sing, appreciate, create and to evaluate music and learn with the help of music, learn by associating sounds.

Well-trained teachers in the field of music and at the same time in the field of psycho-pedagogy, would manage to develop in the classroom, an educational environment that ensures the optimal development of those with musical talent.

If learning is proposed in an environment devoid of emotional involvement, it is very clear that it will not be achieved; the transmission of information does not generate anything in the student, except the waste of time and effort.

Ambient music helps math, chemistry, languages or other subjects to no longer be arid, but to take on an emotional dimension.

It can be used to bring the class to an appropriate learning tone, when the class is agitated, bored or in a state of unwillingness to learn or can be a support in the interdisciplinary approach to learning.

Music can be the link, the support for the interdisciplinary approach to learning, the current direction of education, especially for the preschool and primary level.

Interdisciplinary learning involves bridges between disciplines, by using the conceptual and methodological devices of several disciplines used in interconnections to examine a topic or problem but specially to develop integrated transversal and interdisciplinary skills. Music can be the bridge. This type of study allows the student to learn by making connections between ideas and concepts from different disciplinary boundaries. Students who learn in this way are able to apply the knowledge acquired in one discipline to another different discipline as a way to deepen the learning experience. For example, it is not too difficult to find a topic that crosses disciplinary boundaries in literature, art and history, or science and mathematics. Thematic study is a way to bring ideas together, resulting in more meaningful learning. This can happen, allowing students to choose their own subjects, and their learning is deepened when they reflect on the connections between what they learn in different disciplines.

The pedagogue Ion Gagim (2019), talks to us about the importance of music and at the same time raises a challenge for us. "Try to find a human activity, where, to a greater or lesser extent, music would not be invited as a 'partner'." We certainly won't find that activity.

Realizing how important music is in human life, as a omnipresent phenomenon, we must accept that it is at least as important in the education of children.

## 2. Description of the research

In the initial training of future teachers for primary and preschool education there are very few hours allocated to music training, which makes very few students want to do bachelor's theses, few teachers propose first grade works in music and in general , teachers avoid activities that involve singing, except for celebrations.

Starting from this observation, we conducted this research in which teachers from all over the country were interviewed using the questionnaire, online: 72 from the preschool level, 75 teachers from the primary level and 15 teachers from another specialty.

The questionnaire consisted of a set of ten questions, nine of which were multiple-choice and one open-ended, which addressed teachers' perceptions of the importance of music in education in general in the development of emotions and intellectual development, as well as and how they use music as a support or environment in school learning activities.

## 3. Results obtained and interpretation of results

Following the research, we obtained the following graphs and interpretations:

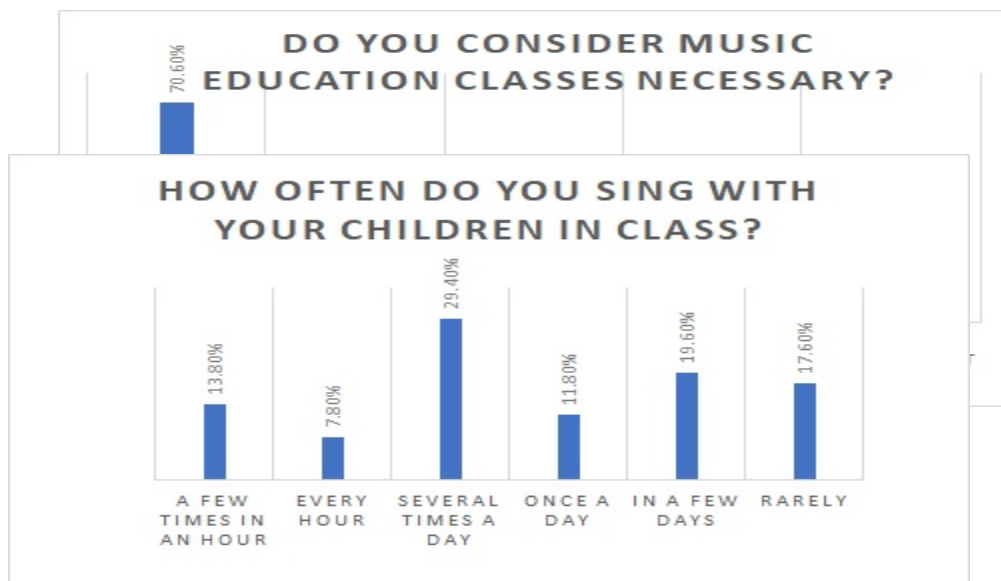


Fig 1. How necessary is music education?

70.60% of the interviewed teachers consider that music is very necessary in the education of children, but there are also teachers, who even at a conceptual level are not very convinced of this.

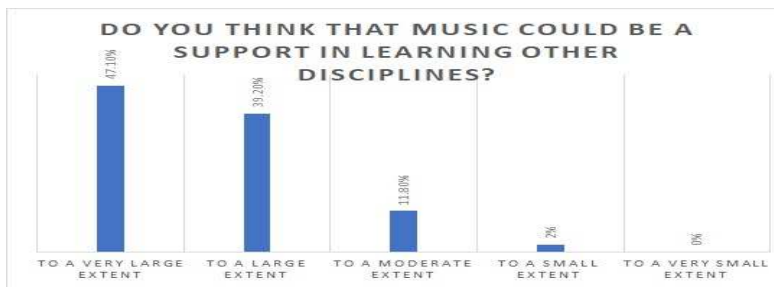
*Fig 2. How often do you sing with your children in class?*

The results were, however, the expected, but slightly contradictory, compared to the answers to question 5 (Give some examples of situations / activities in which you used music.) In the sense that 62.7% of teachers surveyed answered that they have musical activities at least once a day, of which 50.9% even more on the same day, but in question 5, most mentioned only celebrations and trips.



*Fig. 3 Do you only sing in music lessons?*

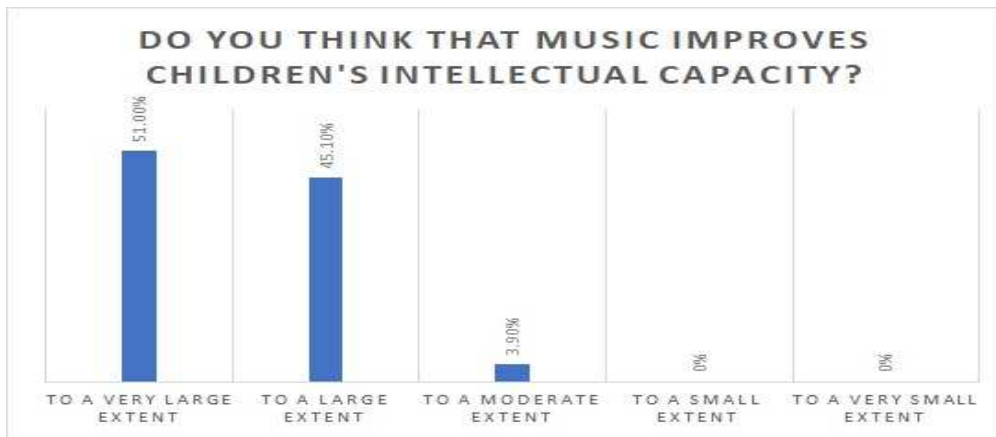
To the question, if they sing only in music class, 92.2% answered that they use music outside of music education classes, but to the next question which was a complementary question and they had to give examples of other activities in which they used music, most gave as examples extracurricular activities (trips, celebrations) games and transitions for preschoolers or ambient music during classes in other disciplines. It is obvious that these were not the activities that we consider as a support in learning. When we say support music in learning, we expect it to be an active element, a means that is part of the educational act, not an additive, an element that also exists around the student.



*Fig 4. Do you think that music could be a support in learning other disciplines?*

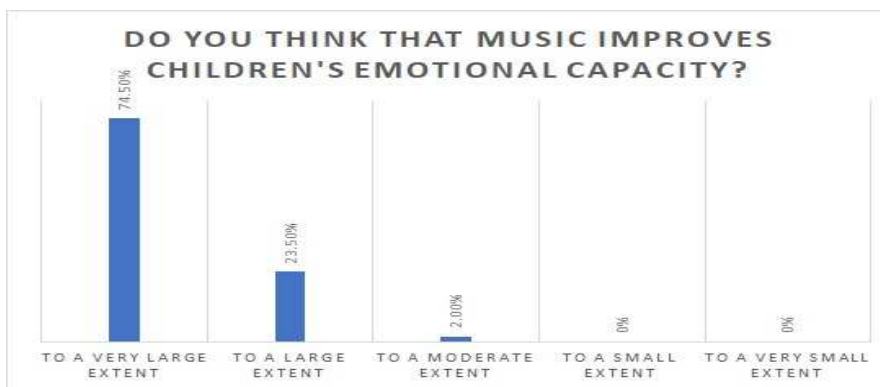


Among the teachers who answered the questionnaire, 86.3% are largely and very convinced that music could be a support in learning other disciplines. The question that arises at the moment is: if most believe that music could be a support in learning why there are so few teachers who actually use it.



*Fig 5. Do you think that music improves children's intellectual capacity?*

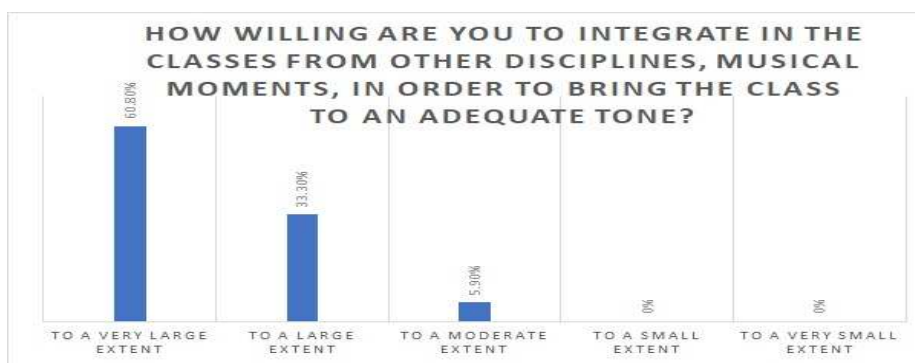
In the proportion of 96.1% of teachers, they consider to a large and very large extent that music improves the intellectual capacity of children. Alfred A. Tomatis laid the foundations of great research called The Mozart Effect that supports this idea. Instrumental music is recommended, not music with text, which requires extra brain and draws attention



*Fig 6. Do you think that music improves children's emotional capacity?*

to the message. Music can work wonders if used frequently. We come back with the same question: if most people think that music improves children's intellectual capacity, why are so few teachers really using it?

98% of the teachers who answered the questionnaire consider to a large and very large extent that music improves emotional capacity, which is very beneficial for children. An emotionally



*Fig 7. How willing are you to integrate in the classes from other disciplines, musical moments, in order to bring the class to an adequate tone?*

balanced student is certainly prone to learning. We come back with the same question: if most people think that music improves children's emotional capacity, why are so few teachers really using it.

To the question How willing are you to integrate in the classes from other disciplines, musical moments, in order to bring the class to an adequate tone, 94.1% of teachers answered that they are willing to a large and very large extent and yet out of the 162 teachers, only 3 mentioned that they use music for this purpose.

#### **4. Conclusions and perspectives**

There is enough research and we are convinced of the effects of music on students, both intellectually and emotionally, but research has shown that music is relatively little used in school learning, as a link in interdisciplinary learning or as an activity that activate the intellect, the activity meant to create emotion, good mood, as an activity to ensure an adequate tone for learning, in the conditions in which the class became bored, agitated, unprepared for learning.

Both the personal observations and the result of the research we conducted confirm that teachers are not sufficiently prepared to perform intense musical practices around children, to achieve an environment in which music is used in school learning.

We try to find ways to intervention and compensation some aspects related to educational policies, respectively the small number of hours in the curriculum of the specialization Pedagogy of Primary and Preschool Education, for the musical training of future teachers and the tendency to be removed from the framework of primary education musical activities.

In the department of the university where I work, we see and have found the following ways of intervention for training in the field of music, so that teachers can coexist constructively with music; ambient music in the learning environment and support music in learning.

They can be introduced in the curriculum, from the specialization Pedagogy of Primary and Preschool Education, as optional subjects: Rhythm and movement, Instrumental music, Music theory, Choral music, Music and integrated learning

As extra-curricular activities we organized student conferences and lectures for teachers in pre-university education, in which we held workshops on music. During the PIPP National Conference, Teachers build the future and the Educational Alternatives Conference. Another kind of education, we conducted the workshop "Keep up the rhythm" and Music Workshop, which aimed to approach music as a medium and support in learning, in any of the disciplines.

The results were musical moments in the true sense of the word, on different topics, approached in other disciplines, the delight of teachers present with each moment spent in the activity but also the fact that they discovered how easy it is for students to learn with music.

Maria Montessori argued that "success depends on the existence of an intense musical practice around children, a musical environment (s.a.) that can develop a" musical sense "and" intelligence. "(Montessori, 1977).

In order to make intense music practice possible around children, it is necessary for teachers to be trained to know and feel music, to believe in its power and then to take it to their classes.

We believe that if teachers take music with them to class, through the hidden curriculum, they can create an environment in which the child is immersed and in which learning occurs on its own, without specific goals, without effort and special time. Living in an environment soaked with music, the child will form habits and he will live through music.

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## DEVELOPMENT OF CRITICAL THINKING THROUGH ONLINE ACTIVITIES

Carmen Maria CHISIU, Ph.D.,  
„Lucian Blaga” University from Sibiu  
[carmenmaria.chisiu@ulbsibiu.ro](mailto:carmenmaria.chisiu@ulbsibiu.ro)

**Abstract:** *The present research capitalizes the activity carried out within the project Development and implementation of innovative motivational and didactic tools for the inclusive school in Sibiu, the module Development of critical thinking. The course started with face-to-face training activities. The pandemic caused the entire training activity to be reoriented and carried out through ONLINE activity. The research presented involved 71 teachers, in three working groups, from several schools. Each of the three groups spent 13-hour ONLINE activity, in which both learning sequences and applications, psycho-pedagogical reflections and sequences of continuous evaluation were proceeded. The course itself pursued, permanently, two purposes: to cover the contents related to Critical Thinking (the role of critical thinking in achieving learning, benefits of critical thinking, ways of development, problems faced by teachers) and to practise methods of thinking development critical, so that, by transfer, the teachers can lead them in the activities specific to the subject they teach. In addition, the development of ONLINE activities has generated a third goal: familiarizing teachers with work tools, using google forms, for specific methods of critical thinking. The research results have confirmed the formative value and the beneficial impact of the practical applicative character of the carried out activities.*

**Keywords:** *critical thinking; ONLINE activity; interactivity; responsibility; methods; techniques.*

### 1. Introduction

Critical thinking involves "taking ideas, examining their implications, subjecting them to constructive skepticism, balancing them with opposing views, building systems of arguments to support them, and taking a stand on these structures." (Steele, J., Meredith, K., Temple, C., 1998).

Critical thinking is an essential quality in both personal and professional life; it facilitates the transmission of one's own ideas and the

understanding of the ideas of others, making communication more productive, it accelerates the assimilation of new information and the derivation of its consequences. These skills are essential in daily life and in any field of activity. It is a clear, rational and free thinking, it is not based on the accumulation of information, but on the development of the ability to process information, it triggers complex cognitive processes, which begin with the accumulation of information and end with decision making, it is a way to approach and solve problems, based on convincing, coherent, logical, rational arguments.

Critical thinking involves the manifestation of a succession of abilities:

- to identify, understand and make logical connections between own ideas and arguments;
- to detect reasoning errors in arguments and presentations;
- to understand the relevance and importance of some ideas;
- to identify the context and implications of an argument or an idea;
- to identify, build and understand the justifications behind opinions, arguments or beliefs;
- to build new arguments and ideas based on those previously accumulated;
- to distinguish between facts, opinions and value and non-value judgments;
- to solve problems with a high degree of difficulty.

A student who possesses these abilities can solve math problems much easier, can understand much better any text or argument from any subject. Along with creativity, critical thinking is crucial in innovation, research and development.

The development of critical thinking brings benefits not only to trained individuals, but also to the society to which they belong. Critical thinking heals a society of prejudice and passivity.

When we aim to develop critical thinking, it is needed to consider the necessary effort and time. We need time to explore previous ideas, beliefs and experiences, to form new opinions and to express points of view. In order to develop critical thinking, it is necessary to tell students what we expect from them, what we appreciate most, applying other methods and giving them a different kind of feedback.

It is also necessary to accept diversity - once students feel free to express their own point of view and give up the belief that there is only one correct answer, the diversity of opinions and ideas appears.

Critical thinking can only be formed through involvement. Involvement is essential.

In the activity that promotes the development of critical thinking, the actors are: students and teachers, in a permanent interactivity.

Thus, students:

- expresses their own points of view regarding a problem;
- exchange ideas with others;
- argue;
  - ask and ask themselves questions in order to understand things, to realize the meaning of ideas;
- cooperate in solving problems and learning tasks.
- Teacher:
  - organizes and directs learning, he/she orchestrates and directs it;
  - facilitates and moderates the learning activity;
  - helps students understand and explain things;
    - accepts and stimulates the expression of different points of view about a problem;
  - is a learning partner;
  - promotes learning through collaboration and cooperation.

Learning occurs through the use of one's own experience, with an emphasis on the development of thinking through confrontation with others, and assessment emphasizes the measurement and appreciation of abilities.

The future belongs to those who interpret information critically and discover the truth on their own. Critical thinkers are more unlikely to be manipulated and more confident in their beliefs. Knowledge is valuable when it is useful. And what we know determines what we can learn.

We must understand that "Critical Thinking" is a result and not a subject to study. That is why it is important to teach students to answer the most important question: "Why?" in every subject they study at school and in every organised extracurricular activity.

Before starting the lesson, it is recommended that the teacher should reflect on some aspects and answer some questions (Steele, Meredith, Temple1997):

Table 1. Aspect for reflection and anticipatory questions

<b>Aspects for reflection</b>	<b>Anticipatory questions</b>
Motivation	Why is this activity valuable? How does it relate to what I have taught (do students already know what will I teach further?) What opportunities to practice critical thinking does this activity offer?

Objectives	What knowledge and meanings will be explored or passed on? What will students be able to do with them?
Prerequisites	What does a student need to know and be able to do already in order to learn what I propose to them?
Evaluation	What evidence will there be that the student have learned what I proposed to him?
Resources and time management	How will resources and time be managed for the various activities?

Critical thinking development methods are promoted in a four-stage teaching-learning framework (E-A-R-E):

- evocation;
- achieving meaning;
- reflection
- extension.

Table 2. Stages of the framework for the development of critical thinking

<b>Stages of the framework for the development of critical thinking</b>	<b>Anticipatory questions</b>
1. EVOCATION, when students are asked to remember what they know or think they know about the topic to be addressed.	How will students be led to formulate questions and goals for learning preparation? How will they come to examine their previous knowledge in order to bring to their working memory what is needed as the anchors for the learning we propose?
2. REALIZING THE MEANING, when students make contact with the new contents.	How will the content be explored by students? How will they monitor their understanding of this content, for its integration into the already existing knowledge system?
3. REFLECTION, when students truly acquire new knowledge, expressing it in their own words.	How will students use the meaning of the lesson? How will they be directed to seek additional information, answers to remaining questions, and solutions to the remaining ambiguities? What conclusions should be reached by the end of the lesson? To what extent can the issues raised be resolved?
After the lesson, the teacher must be concerned about the way in which the	



new acquisitions will be capitalized in the educational and daily context.	
4.EXTENSION, when they are helped to use new acquisitions in living contexts.	What else can be learned from this lesson? What should students do with new acquisitions after the lesson is over?

## 2. Description of the research

The module Development of Critical Thinking was a component part of the training course within the project Development and Implementation of Innovative Motivational and Didactic Tools for the Inclusive School in Sibiu, which started with face-to-face training activity. The pandemic caused the entire training activity to be reoriented and carried out through ONLINE activity. Three working groups participated in the research presented, representing 71 teachers from several schools. Each of the three groups spent 13 hours, ONLINE activity, in which both learning sequences and applications, psycho-pedagogical reflections and continuous assessment sequences took place.

The course itself pursued, permanently, two purposes: reading the contents related to Critical Thinking (the role of critical thinking in achieving learning, benefits of critical thinking, ways of development, problems faced by teachers) and learning and using development methods of critical thinking: Carousel, Gallery tour, Mosaic, I know / I want to know / I learned, Reflective journal, Interactive Grading System for Streamlining Thinking and Reading (IGSSTR), so that, by transfer, teachers can lead them in activities specific to the discipline they teach. The psycho-pedagogical reflection exercises and the applications, made for each method learned, had the role of clarifying, through interactive activity, the possible ambiguities.

In addition, the development of ONLINE activities has generated a third goal: familiarizing teachers with techniques and tools, using Google forms, for specific methods of critical thinking: I know / I want to know / I have learned, with the theme Critical Thinking (Appendix 1), IGSSTR, with the theme, Learning in 6 steps (Annex 2), Quintet, with the theme Continuous evaluation (Annex 3), Reflective journal, with the theme Dialogue evaluation (Annex 4).

Each workshop ended with an assessment of the degree of satisfaction, the news found and the questions that still exist. The next workshop began with a reflection on previous assessments and answers to questions.

After completing the course, teachers completed a questionnaire, consisting of 6 questions, regarding the degree of usefulness, applicability of learning, and recommendations for increasing efficiency.

During the 13 hours, some methods of developing critical thinking were used to learn didactic contents. Others were only explained and topics were

identified, in different disciplines, for which they can be used. Among these methods were: I know / I want to know / I learned, Reflective diary, Interactive Grading System for Streamlining Reading and Thinking, Carousel, Gallery tour, Quintet, Mosaic and techniques including: Analysis of small group workload and Mutual reading. Next, we make an analytical presentation and present the format from google drive, so that it can be used by those interested.

**2.1. The Methods used**

***I know / I want to know / I learned*** is a method through which the student, with the support of a colleague and under the guidance of the teacher, learns how to learn.

The purpose of this method is to learn.

Description of the method

1. The theme of the activity is announced.
2. Students draws a table as follows:

I know/I think I know	I want to know	I learned

3. Working groups are formed, of four or five students each.
4. Through individual activity, for a few minutes, students will write in the first column everything they know or think they know about the topic to be discussed.
5. Then, for a few more minutes, they will ask questions about things they are not sure about and want to know about the topic. Help the students who are unable to work on their own to ask at least one question.
6. In the groups formed, by mutual reading, the students will present the ideas and the written questions.
7. You can use as a support for learning the lesson from the textbook, a working sheet prepared by you, a film, a lecture or an experiment.
8. Help those who need remediation to find the answers to the questions asked and to highlight the interesting or important information found in the text, film, experiment, which they will pass in the section I LEARNED.
9. Through frontal activity, discuss in order to answer unanswered questions.
10. At the end of the lesson, fill in the column I LEARNED with the information found by the students, and they fill in the column with what they are missing, so that they will go home with the lesson plan.

## Method I know/I want to know/I have learned - Critical thinking

In activity 2 of this workshop I suggest you to use the method I know / I want to know / I have learned.  
steps:

- 5 Minutes complete the section I know
- 5 Minutes competition section I want to know
- During the presentation, complete the section I learned.

Send the form only at the end, after we finish the frontal discussion.

Email address \*

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Name and surname \*

Long-answer text

What do I know or think I know about critical thinking? \*

Long-answer text

What do I want to know about critical thinking? \*

Long-answer text

What I learned about critical thinking? \*

Long-answer text

Fig 1. Representation of the method I know / I want to know / I learned in google forms

*The Reflective journal* is a method by which readers establish a close connection between the text and their own curiosity and experience. This journal is especially useful in situations where students have to read longer texts, outside the classroom, introductory texts in the study of a learning unit, a chapter or a subject. The purpose of this method is to prepare students for learning. The method has its psycho-pedagogical foundation in experiential psychology, according to which we become more willing to make an effort for learning if we find ourselves, we connect through our own experience to the material to be used for learning.

Method description:

1. Students are divided into groups of four.
2. Each splits a page in half, drawing a vertical line in the middle.
3. On the left they will write passages, ideas that particularly impressed them, that surprised them. On the right they will comment on that passage or idea.
4. They are given some helpful questions. It is not mandatory to answer all the questions.  
“Why did they write it down?”  
"What made them think?"  
„Why do they find it interesting? / Why did it intrigue them?”  
After they finish interpreting, they read in the small group what they wrote.
5. After completing, do the group reading in groups of 4, each reading to the others their personal interpretation.
6. Those who want can read for the whole class the selected idea and the interpretation they made.
7. The teacher makes his own comments.

**Reflective journal Dialogue evaluation**

Dialogued evaluation  
It is seen as an integral part of the process of development, change, learning and involves reflection. It focuses on dialogue, on qualitative appreciation rather than on quantitative appreciation. a control process that acts from outside the learning process. It starts from the idea that everyone is unique, having their own work style, different ways of perception, thinking and action. Negotiation and consensus are important elements, and the teacher discusses the results with the students and makes recommendations for improving learning. The role of the evaluator is that of an internal facilitator of the learning process rather than a neutral observer. It facilitates learning and evaluation, starting from the premise that evaluation fulfills functions of improvement, correction, motivation rather than sanctioning and speculating on mistakes.

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Name and surname \*

Long-answer text

Choose an idea from the worksheet. The evaluation continues. Dialogued evaluation \*

Long-answer text

Long-answer text

Fig 2. Representation of the method Reflectiv journal

***IGSSTR (Interactive Grading System for Streamlining Reading and Thinking)*** is a way of coding the text, which allows the reader to actively and pragmatically read a certain content.

The purpose of this method is to learn.

Description of the method

1. Students receive a text, which can be from the textbook or on working sheets.
2. While reading, students mark ideas in the text, using the following notations:
  - (√) for the knowledge they already know and find in the text;
  - (+) for the new information, which they did not know;
  - (?) for uncertain, confusing information, for which they need further explanation;

(-) for information that contradicts what they knew, that creates cognitive dissonance.

3. Through independent activity, students list the essential ideas in a table, dividing them into four categories:

√	+	?	-

4. Students discuss ideas in pairs or small groups.

5. In a frontal activity they discuss the ideas marked with (?) and (-), to ensure understanding and clarification of uncertainties.

**Interactive Grading System for Streamlining Reading and Thinking – Continuous evaluation**

Read the following text carefully. Select the essential ideas, which you write down below, according to 4 categories:

- known ideas (√)
- the new ideas, the ones you have found out now (+).
- ideas that need further explanation (?)
- ideas that contradict what you knew (-).

Ways to perform continuous evaluation, for the development of critical thinking

1. The three-step interview. Starting from questions like: What did I learn today? How can I use what I learned today? Students develop answers individually, then interview in pairs, with each pair presenting the answers to the neighboring pair. It ends with a frontal activity, answering questions.
2. Five-minute essay. On the worksheets, each student makes a short essay, using the knowledge acquired.
3. Develop a quintet about the key concept of the lesson.
4. Give me the last word! Students work in groups of 5-6. Each student writes on the front of a worksheet an idea that he thought was the most important, from the lesson and a comment on that idea on the other side of the worksheet. The worksheets are transferred between colleagues in the group, who have the task of reading and commenting on ideas already written. The worksheets rotate until they reach the one who initiated them, who reads the comments of colleagues and makes a summary, draws a conclusion. The last word belongs to the one who wrote the original idea.
5. Formulation of sentences with the essential content. Individually, students formulate a statement in which they use essential content learned. If the class is large, you can work by dividing the class into groups. At the end, ideas are formulated in frontal activity (Chişiu, 2016).

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Name and surname \*

Long-answer text

1. Known ideas. (√) \*

Long-answer text

2. New Ideas that you have now learned. (+) \*

Long-answer text

3. Ideas that are not clear to you, for which you need an explanation. (?) \*

Long-answer text

4. Ideas that contradict what you knew. (-) \*

Long-answer text

Fig 3. Representation of the method *Interactive Grading System for Streamlining Reading and Thinking*

*The gallery tour* involves the interactive and deeply formative evaluation of the products made by groups of students, products that can be lists, graphic organizers, tables, diagrams, charts, etc.

The method can be used for the purpose of learning or for fixing knowledge. If used as a learning method, students receive: a working sheet, the lesson from the textbook, they can watch a film, a PPT presentation, a laboratory experiment or a virtual one. If it is used for the purpose of fixation, it is assumed that the learning took place in the previous classes and the students have the necessary knowledge. Advise them to use notes or a manual if they need to clarify certain ideas.

#### Description of the method

1. In groups of three/four/five, depending on the class, students first work on a problem (with various approaches), which can be materialized in a poster, which can be: a graphic an organizer, a table, a diagram, a chart.
2. Posters are displayed on the classroom walls.
3. At the teacher's signal, the groups go around the classroom to read, examine, and discuss each poster made by colleagues in the other groups.
4. In front of each poster, after the group discussion, a representative puts the question mark where they think they did not understand or something is wrong and completes with at least one idea, to increase its quality.
5. The groups go round until they reach the front of their poster.
6. Examine their poster and discuss what is added by colleagues and existing question marks.
7. A representative of each group expresses opinions on the ideas completed and the ambiguities reported, giving the necessary explanations.
8. Through frontal activity, starting from the ideas expressed, have a discussion with the whole class.

In the online training, each group received a link, which leads to a google doc, to connect and create their own activities to identify concrete educational situations through which the critical thinking of students can be developed. The groups then connected to the links of the other groups to assess the validity of the ideas written by colleagues and to make additions to new educational situations.

*The carousel* is a method that stimulates the finding through cooperation of several ideas or alternatives to solve, to approach a problem. The purpose for which this method is used is to fix or update the previously acquired knowledge.

#### Description of the method

1. The topic is announced.

2. Divide the class into groups of 4-5 students.
3. Posters are placed on the walls of the classroom, recommended in equal numbers with the number of work groups.
4. On each poster appears a question, a problem, a topic to be solved (which accepts several answers / points of view, at least as many working groups as there are).
5. In groups, students go through each poster. They read the existing answers and complete another answer. A representative writes the answer on the poster.
6. At the teacher's signal, the groups move to the next poster.
7. Each problem / question, at the end, will have a number of answers, at least equal to the number of participating groups.
8. Through frontal activity, each problem is discussed, in turn, correcting, arguing and prioritizing the answers.

In online training, every problem situation needs to be solved: What is critical thinking? Why is critical thinking useful? What are the benefits of having students develop critical thinking? and so. They received a link that leads to a google doc. In a certain order, the groups entered one by one and completed the list with at least one answer. Passages were made to each link, until each group contributed answers to each problem.

**Mosaic** is a method of mutual learning. The purpose of this method is to learn.

#### Description of the method

1. The class is divided into "mother groups", each group consisting of as many students as there are parts of the material to be taught.
2. All those who have no. 1 forms a group of "experts 1", all those who have no. 2 form the group of "experts 2" and so on. Each group of experts receives a different part of the material to be learned.
3. Each group of experts learns, in collaboration with colleagues, the section they got. They read and study the material together, repeating so that they could feel able to teach it to their colleagues. I can read the material individually and then discuss or you can recommend that one should read and the other listen and together analyze, discuss, understand, repeat each one until learning. Through this technique, we come to the aid of those students who face functional illiteracy. The teacher will intervene whenever asked for help or notice that he needs help.
4. After the learning has taken place, each one returns to the "mother group" (the initial group) and teaches the others what he/she has learned.
5. In the "mother group" the learning of each paragraph is done, either by repeating the taught material, or by questions and answers.



6. Through frontal activity, the whole learned content is fixed.

The mosaic method could not be used, only explained, in the online activity. This is because the trainer did not know the participants in the course and it was difficult to configure and reconfigure the groups. The method can be used, provided that the teacher knows participants and they are accustomed, from the classroom, with the method.

**2.2.1. The Techniques used**

**Analysis of small group workload** When workload involves individual work, especially for a problem that is more difficult to understand or is more complex (it has many data, it involves multiple connections, it has more operations) we recommend that after the explanation for the better understanding of the task and the problem solving, the pupils discuss at a small group level to identify the keywords, to clarify the steps, the steps, the issues that can raise problems and only then to start individual work.

**Mutual reading** is a pedagogical concept that designates a work technique that can be used in school learning after each sequence of independent activity, with the aim of:

- a. to share with colleagues from the small group the way of solving individually;
- b. to express, at the level of the small group, the way of solving a problem, his own opinion, a personal opinion;
- c. a first assessment of the learning outcomes by confronting the solutions, opinions, opinions of others.

**3. Interpretation of results**

The questions and answers were as follows:

1. To what extent do you consider it possible to develop critical thinking in your classes?

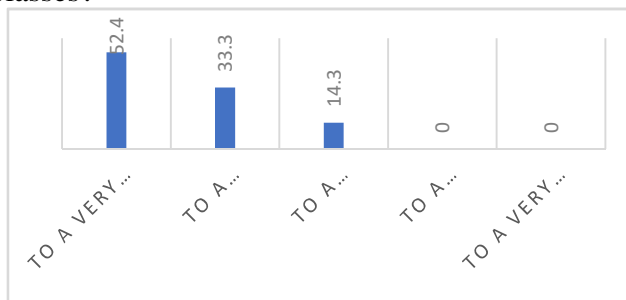


Fig 4. All the teachers participating in the course appreciate that they can develop critical thinking in the activities they carry out in class, 85.7% to a large and very large extent and 14.3% to a moderate extent.

2. To what extent are these activities useful you for the class activity?

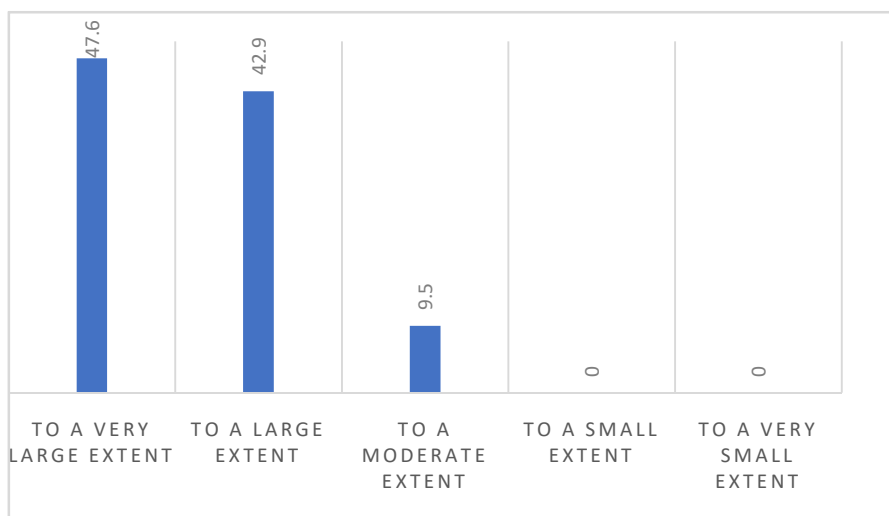


Fig 5. All participating teachers appreciate that they can use the activities carried out in the course. 90.5% to a large and very large extent and 9.5% to a moderate extent.

3. Which of these techniques can you use in the classes you work on?

Reciprocal reading, for interevaluation

Group discussions to clarify the task of individual activity

Skill in 6 steps

Reading the study text by a group member to support those with functional illiteracy

Techniques for performing continuous evaluation

Fig 6. Among the techniques practiced in the workshops, most of the teachers: 90.5% consider that they can use the discussion, in group, to clarify the task of the individual activity, followed by, 66.7%, the technique of reading the study text by a member of group to provide support to functional and equally illiterate people, 57.1% mutual reading, for interevaluation and continuous assessment techniques. 42% of teachers consider that they can use the skill in 6 steps. I consider these opinions to be justified, starting from the different degree of applicability of the techniques, in different school subjects.

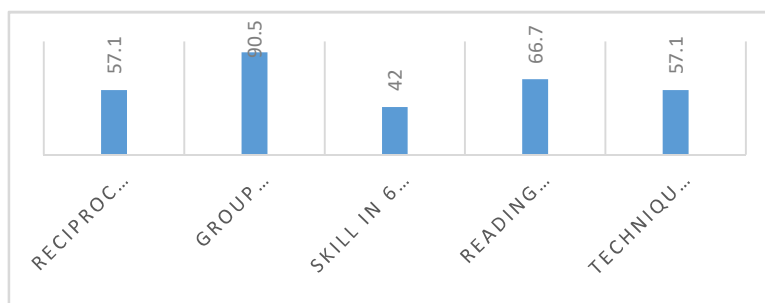


Fig.6.

4. Which of these methods can you use in the classes you work on?

I know / I want to know / I learned

The reflective diary

Carousel

Gallery tour

Interactive grading system for efficient thinking and reading IGSSTR

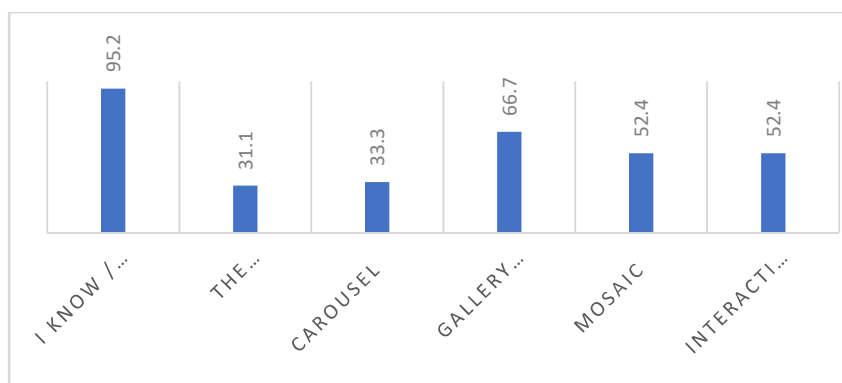


Fig 7. Among the methods used in the workshops, most of the teachers: 95.2% consider that they can use the method I know / I want to know / I learned, followed by, 66.7%, the method Gallery tour, 52.4%, in equally, the Mosaic method and the Interactive scoring system for the efficiency of reading and thinking, 33.3% consider that they can use the Carousel method and 31.1% the Reflective Journal method.

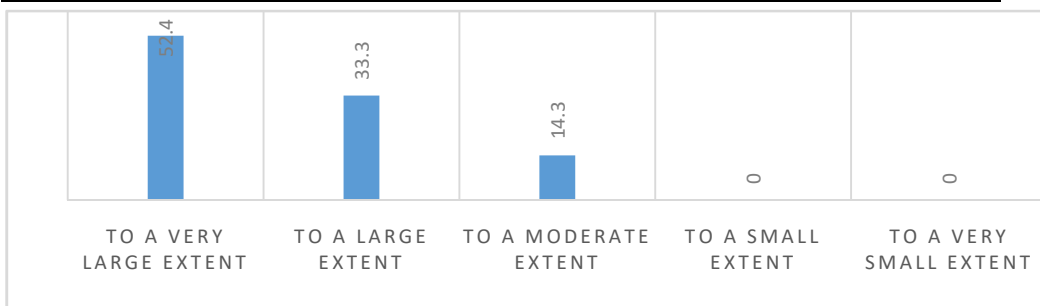


Fig 8. All participating teachers consider that the experience of the course Developing Critical Thinking Online, the tools used help them in carrying out their own online activities: 85.7% to a large and very large extent and 14.3% to a moderate extent.

The preference for some methods (those aimed at learning) may be explained by the fact that teachers consider the main purpose of school activity learning and less reflection, interpreting messages or fixing knowledge.

5. To what extent do you think that the experience of the course Developing Critical Thinking Online, the tools used will help you in carrying out your own online activities?

6. What do you appreciate about the Critical Thinking Development course?

- Practical applicative character
- The usefulness of information
- The atmosphere during the activities
- The usefulness of methods
- Interactivity during the course
- Examples of good practice
- Psychopedagogical reflections
- Explanations received

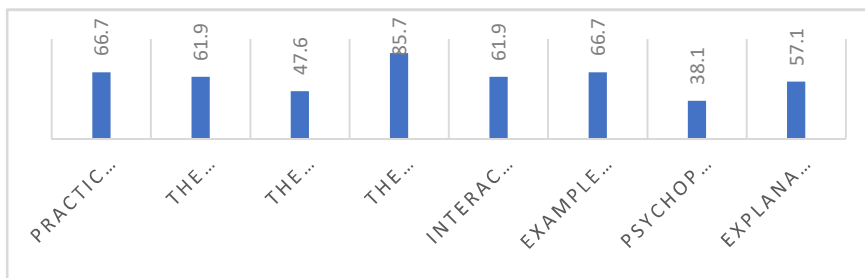


Fig 9. For the workshops, most of the trainees: 85.7% appreciate the usefulness of the methods, equally: 66.7% practical applicability feature and example of good practice, also: 61.9% usefulness of information and interactivity of the course time, 57, 1% Explanations received, 47.6% Atmosphere during the course and 38.1% Psycho-pedagogical reflections.

#### 4. Conclusions

The research leads to some conclusions. The development of critical thinking is something that teachers in the pre-university system consider very useful. The way in which the course was held was an opportunity to develop from a professional point of view, both for face-to-face and online school activities. The trainees appreciate mostly the usefulness of methods and information, I know/I want to know/I learned method and the method Reading the study text by a group member to support those with functional illiteracy. The training activities represent an opportunity to develop the psycho-pedagogical knowledge but also to develop the skill to use some techniques and working methods in school teaching.

Teachers consider that the transfer of tools, methods and techniques is applicable even in online teaching.

The information received, the tools used, the practical applicative character, the examples of good practices, the interaction during the course, the possibility to capitalize on their experience, made the training, although online, to be considered pleasant and at the same time effective. The only recommendation was to allocate several hours to the module.

Although the emotional part remains completely uncovered, we believe that online training activities and online courses, in general, can meet the expectations of students in the conditions in which they are interactive, have a practical applicative character and target aspects of interest to participants.

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# LEARNER IN THE CONTEXT OF THINKING SKILLS- REALITIES AND CHALLENGES FROM CLASSROOM

**Cristina TRIPON, PhD.**

**Teacher Training and Social Sciences Department**

**Politehnica University of Bucharest**

**[cristina.tripon@upb.ro](mailto:cristina.tripon@upb.ro)**

**Abstract:** *Education must to prepare for successful lives as adult citizens. In order to achieve that huge challenge, schools need to have clarity about their roles, about the patterns of future needs, about the teachers needs to selling the learning and making it irresistible. One of the most common criticisms aimed at young learners new to the workplace is that they lack initiative. They cannot solve problems for themselves and constantly need to be told what to do. So, the important job of schools is to ensure that children feel that they are responsible for their development and that it is they who have the power to control their own lives. The majority of children who struggle within the system do so because of an inability to understand their own feelings and a fundamental lack of self-worth. The main objective of the research was to identify the degree of autonomy of the adolescent students from the studied high school classes. At the same time, the aim was to ascertain to what extent the teachers contribute to the construction and stimulation of the autonomy of the students, by studying the term of autonomy from the perspective of the image that the students and teachers have.*

**Keywords:** *autonomy; critical thinking; 21st century skills.*

## **1. Introduction**

A solid education must be built on the twin patterns of knowing how to learn and knowing how to think clearly, independently about the information with which word involves. Today`s young learners will be working at jobs that even been invented and this is a challenge for over the teachers, if they will prepare the future adults for their remaining 50+ years.

Education must to prepare for successful lives as adult citizens. In order to achieve that huge challenge, schools need to have clarity about their

roles, about the patterns of future needs, about the teachers needs to selling the learning and making it irresistible.

One of the most common criticisms aimed at young learners new to the workplace is that they lack initiative. They cannot solve problems for themselves and constantly need to be told what to do. So, the important job of schools is to ensure that children feel that they are responsible for their development and that it is they who have the power to control their own lives. The majority of children who struggle within the system do so because of an inability to understand their own feelings and a fundamental lack of self-worth.

The main objective of the research was to identify the degree of autonomy of the adolescent students from the studied high school classes. At the same time, the aim was to ascertain to what extent the teachers contribute to the construction and stimulation of the autonomy of the students, by studying the term of autonomy from the perspective of the image that the students and teachers have.

## **2. The autonomy skills in the context of 21st century skills**

The existing literature of definitions created for the semnification of 21st century skills include a great number of studies, but there is no single approach to the one terminologies associated with the 21st century skills. The Partnership for 21st Century Learning(P21- Framework for 21st Century Learning) include the 4C in the competencies- Critical thinking, Communication, Collaboration and Creativity, Wagner et al.(2006) and also Stenberg and Subotnik(2006) refers to the 3Rs as skills sets- Reasoning ('analytical, critical thinking and problem-solving skills'); Resilience ('life skills such as flexibility, adaptability and self-reliance'); and Responsibility. To the other hand, Prensky(2012) and Care et.al.(2019) calls them the 3Ps- Passion (including character), Problem solving (including communication) and Producing what is required with creativity and skill'.

Regarding this literature, there is a relatively clear set of skills that are included in the semnification of 21st century skills, consolidated into five key skills: communication skills, collaborative skills, individual learning approaches, individual autonomy, ICT and digital skills (Voogt&Roblin, 2012; Scott, 2015; Chalkiadaki, 2018).

Scott (2015) refers to the 21st century skills like "the knowledge, skills and attitudes necessary to be competitive in the 21st century workforce, participate appropriately in an increasingly diverse society". The author separate them in four categories: learning to know, learning to do, learning to be, learning to live together(details in Diagram no1).



*Diagram no. 1. 21st century skills (Scott ,2015)*

<b>Learning to know</b>	<b>Core subjects (Grammar, Reading or Language Arts; World Languages; Art; Mathematics; Economics; Science; Geography; History; and Government and Civics, with a balance between education in technical and natural science subjects and culture and humanities) and four themes: global awareness; financial, economic, business and entrepreneurial literacy; civic literacy; and health literacy.</b>
<b>Learning to do</b>	critical thinking, problem solving, communication and collaboration, creativity and innovation, information, media and technology literacy, information, communication and technology (ICT) literacy,
<b>Learning to be</b>	social and cross-cultural skills, personal responsibility, self-regulation and initiative, sense-making skills, metacognitive skills, entrepreneurial thinking skills, learning-to-learn and habits of lifelong learning
<b>Learning to live together</b>	seek and value diversity, teamwork and interconnectedness, civic and digital citizenship, global competence, intercultural competence.

According to the Chalkiadaki (2018)the skills that are included in 21st century needs are: creativity, divergent thinking, critical thinking, team working, work autonomy, developed cognitive and interpersonal skills, social and civic competences, responsible national and global citizenship, consciousness of interdependence, acceptance and understanding of diversity, recognition and development of personal attributes, interactive use of tools, communication in mother tongue and foreign languages, mathematical and science competence, digital competence, sense of initiative and entrepreneurship, accountability, leadership, cultural awareness and expression, physical wellbeing (details in diagram no2).

*Diagram no. 2. 21<sup>st</sup> century skills (Chalkiadaki, 2018).*

<b>Personal skills</b>	<b>1.Self-development and autonomy (self-management, self-organisation, self-regulation, self-direction, self-reflection, independent thought, autonomous acting, ability to form and conduct life plans and projects and to defend/assert rights, emotional intelligence);</b> <b>2.Creativity (curiosity, imagination, playfulness,</b>
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**creative production, co-creativity,innovation);**

**3.Problem-solving and critical thinking (in authentic learning environments, analytical thinking, analysis and evaluation of evidence, ability to provide solutions in given challenges, higher-order thinking, sound reasoning, informed decision-making, innovation); and**

**4.‘Presence in the globalised environment’ (adaptability, agility, managing complexity, risk-taking).**

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**Social skills**

1.Communication and collaboration (oral and written communication, team-work, open-mindedness, conflict management);

2.Cultural awareness and global awareness (ability to appreciate the value of the varied cultures and to intentionally construct cross-cultural relationships and networks); and

3.Leadership (self-motivation, initiative taking, entrepreneurship, leading by influence).

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**Information and knowledge**

1.Learning (self-reflection, self-assessment, self-improvement, metacognition, e-learning, self-directed learning, independent learning, knowledge construction, social and collaborative learning, intellectual risks);

2.Information management (information literacy, data access and analysis, managing multiple streams of simultaneous information, applying knowledge to new situations, creating new knowledge, content knowledge).

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**Digital literacy**

Rolleston (2018) suggest that, in the context of globalization and increasing competition by upskilling and the current needs of workforce, the demand for 21st century skills can be particularly challenging. The same author believes that only 20% of currently jobs require non-routine skills, associated with the 21st century skills, but, in the future, these issues is about to change.

Dewan and Sarkar (2017) considered the 21st century skills like a solution to the problem regarding to the deficiency in preparing future workers and slow economic growth. Most countries agree on the need for

inclusion these skills in their education curricula, but Jaberianet al. (2018) thinks that this is not enough and is necessary to get solutions for monitoring these implementation projects.

In support of this perception discussed, it is important to say that the autonomy skills are presented in all categories, attributed on 21st century skills, by a significant author. However, the learner autonomy skills are correlated to the self-management, self-organisation, self-regulation, self-direction, self-reflection, independent thought, autonomous acting, ability to form and conduct life plans and projects and to defend/assert rights, emotional intelligence or personal responsibility, self-regulation and initiative, independent learning, knowledge construction.

### ***2.1. Autonomy and critical thinking skills***

During the last decade, autonomy concept is interpreted in various ways and terms such as self-direction, self-improvement, self-learning, independence, autonomous acting and others. Brindley (1990) define autonomy as the degree of responsibility learners to take action about their development.

According to Veugelers(2011) autonomy is not isolated individuality, is an interactive process between others under social relationships. Learning autonomy as helping learners understand the process of learning both inside and outside the classroom, that they have a role in their own learning, allows understanding their needs in order to set goals and decide what they should learn and how they should learn it

From the point of view of Paiva (2006), the concept of autonomy is related to a socio-cognitive system, that include the individual`s mental states and processes but also an political, social and economic criteria” Autonomous learners take advantage of the linguistic affordances in their environment and act by engaging themselves in second language social practices”. Murphy (2011) offered a variety factors that autonomy depends, such as learning context or learner characteristics.

Wenden (1998) is giving a number of main characteristics of an autonomous learner: have insights into their learning styles and strategies; take an active approach to the learning task at hand; are willing to take risks, to communicate to the others regarding to their ideas, are attend to form as well as to content, are reject hypotheses and rules that do not apply to the problems involved, have a tolerant and outgoing approach.

Considering these concepts of the term of autonomy, we will continue to use the term of autonomy with the sense of situation of a subject who has free will of his own, who has the possibility to realize and construct universally independent learning, within the moral values of the base. We

consider that this definition can be adapted more easily to the concrete situations that appear in the educational process.

Critical thinking, as a part of 21 century skills, involves managing each steps that learners makes in his journey of learning. Facione(1990) spread about that critical thinkers refer to a person who have a common curiosity, have an independence to verify all the reasons of the arguments, have flexibility in thinking and an openness of thoughts and its focused in decision making, in examination the forms of conscious influence.

Simon and Kaplan (1989) suggests that critical thinking involves logical inferences, Stahl and Stahl (1991) said that learners needs to develop cohesive and logical reasoning patterns and Moore and Parker (1994) revealed the importance of determination to accept, reject or suspend judgment. Critical thinking involves evaluating the thinking process, that also can and should be an autonomous evaluation of factors considered in making a decision. Autonomy, as a part of critical thinking skills, is essentially to indulge learners more deeply and more thoughtful in education.

The article refers to the work of Pemberton and Nix(2012) proved the relation that critical thinking and autonomy seem to be linked to each other, “criticality and learner autonomy are both widely seen as desirable educational goals, and often understood as independent or even mutually indispensable attributes”. In a different paper, Raya & Vieira(2007) and Little(1991) reports autonomy (and self-sufficiency) as an ability part of critical thinking skills and it seems that teachers are an important factor in learners progress to become autonomous critical thinkers.

An extensive body of literature exists about the effects of teacher’s activities regarding to the learner’s autonomy. As noted in a report, Bagheri and Aeen(2011) said that “a common argument for justifying learner autonomy... is that autonomous learners become highly motivated and the autonomy leads to better and more effective work...an extremely motivated learner is more initiative and creative in learning; consequently, they will make the classroom instruction more useful”.

Chaffee (1992) mentions that autonomy, in relation with critical thinking, can be the most important argument to help learners to make “more intelligent decisions” and think about critical ideas about the world.

Autonomy, as a part of critical thinking skills, is essentially to indulge learners more deeply and more thoughtful in education. In a specific way, when we talk about the autonomy of adolescents,we cannot mention that it is considered a transition to adulthood and it’s responsibilities. The situation of critical thinking, as Noom, Dekovic&Meeus (2001) said, includes stages of cognitive autonomy such as evaluative thinking, voicing opinions, comparative validation, decision-making, self-assessment.

There are numerous studies that reflect the importance factor of teacher in motivating learners to engage in different activities. In one of this studies, Ryan and Deci (2009) believes that supporting learners in learning process, overtime, can create a good manner to develop enthusiasm in learning and achieve more and more skills, for a sustainable education. Like those authors, Christenson et al.(2012) underlines this subject on the idea that being an enthusiastic teacher and create a continuous challenging learning associated with motivation. There are solid evidence which are being discussed by others researchers, like Hattie(2012), Skinner and Belmont(1993).

### **3. Research methodology**

#### ***3.1. Research objectives***

The main objective of the research was to identify the degree of autonomy of the adolescent students from the studied high school classes. At the same time, the aim was to ascertain to what extent the teachers contribute to the construction and stimulation of the autonomy of the students, by studying the term of autonomy from the perspective of the image that the students and teachers have. Thus, the research hypotheses aimed at:

- I1: Students have a high degree of autonomy;
- I2: The specialization studied by the student influences their degree of autonomy;
- I3: Teachers perceive the autonomous student as "the student - problem";
- I4: The students consider that the autonomous student is the one who has "total freedom";
- I5: Teachers and students do not recognize autonomy as a characteristic of the adolescent student.

#### ***3.2. Research sample***

The research involved a total of 205 subjects, of which 162 high school students and 43 teachers, from a high school located in an urban area, from Romania.

Of the 162 students, 95 of them are female - which means 58.6%, and the remaining 67 are male (ie 41.4%). The distribution of subjects by gender is represented in the Graph no. 1. Distribution of subjects by gender:

*Graph no. 1. Distribution of subjects by gender*

		<b>Frequ ency</b>	<b>Perce nt</b>	<b>Valid Perce nt</b>	<b>Cumulative Percent</b>
<b>Valid</b>	male	67	41,4	41,4	41,4
	female	95	58,6	58,6	100,0
	Total	162	100,0	100,0	

Also, 47 of the students (29%) are in the 10th grade, 33 students (20.4%) are in the 9th grade, and 82 (50.6%) are in the 12th grade. This distribution is graphically represented as follows:

*Graph no. 2. Distribution of subjects by grade*

		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid Grade	9th	47	29.0	29.0	29.0
	10th Grade	33	20.4	20.4	49.4
	11th Grade	82	50.6	50.6	100.0
	Total	162	100.0	100.0	

At the same time, 78 of students (48%) study in the specialty sciences, 50 students (30.9%) in the socio-human profile, and 34 of students (21%)- in the technical profile. The graphical representation of this distribution is:

*Graph no. 3. Distribution of subjects by school profile*

School profile		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Science	78	48,1	48,1	48,1
	Social science	50	30,9	30,9	79,0
	Technical	34	21,0	21,0	100,0
	Total	162	100,0	100,0	

### ***3.3. Research plan and instruments***

Given that the main objective of the present research is to analyse the development of the students' autonomy, as part of the critical thinking competence, the concepts used will be described. Of course, we cannot discuss the development of student autonomy, without taking into account the factors involved (the degree of autonomy of the teachers, the educational relations established between teacher-students, the type of activities carried out from the perspective of the involvement of the students and others).

In order to present the results of the research carried out, it is important to describe the significance of the concepts used. For the autonomous student we can specify the following characteristics: he is not afraid to express his point of view, he argues logically and coherently, he is passionately involved in the new situations that have emerged in the school, he has initiative, he trusts his own abilities and assumes responsibility for his actions. It is not influenced by the value judgments of others, but it does not challenge the rules that regulate the order in school and in class.

We can distinguish the conformist student as the one who conforms to the orders and regulations, is accustomed to the routine and therefore does not get involved in the new situations in the school. He has no self-confidence, is constantly doubting his abilities and is easily influenced by the judgments of others.

Both quantitative and qualitative methods were used to carry out the research. Two types of questionnaires were applied, one for students and the other for teachers, in order to identify and validate the data obtained.

The questionnaire for students and teachers analyses their characteristics, from the perspective of autonomy versus conformity. The research tool used is made up of 20 items, 10 of which correspond to the characteristics of the autonomous students, while another 10 items are characteristic of the conformist students. The respondents analyse the extent to which they find themselves in the described behaviours, appreciating them on a scale from low to very high intensity (1-4).

The interview used focused on the idea of identifying the meaning of autonomy, both for the teacher and for the students, asking the respondents to name characteristics of the independent students and situations in which these behaviours / characteristics can be identified in the educational practice.

The questionnaires were applied with the permission of the high school management, for four days. The ones for the students were applied personally, at the beginning of the class, with the teacher's consent. In the case of the teachers, they were distributed and then collected by the deputy director and the high school counsellor.

Overall, it is worth emphasizing the cooperation of the subjects (students and teachers). However, there were some teachers who resisted and refused to cooperate, as well as teachers who did not return the questionnaires.

#### 4. Research results

Starting from the assumptions already stated, it was sought to ascertain the extent to which they can be verified.

One of the objectives of the research was to find out what the distribution of the students, respectively of the teachers, on the dimensions corresponding to each population. The results of the frequency analysis on each dimension will be presented in the following.

In the case of students, on the autonomous dimension the distribution of the answers is found in Table no.1, their average at the corresponding items is 26.8, with a standard deviation of 3.39. The normal curve shows that most of the answers are distributed around the mean, which means that there is an approximately equal number of students with a low degree of autonomy and students with a very high degree of autonomy. Considering that the minimum score that could be obtained on this dimension was 10, and the maximum score could be 40, for the obtained data the minimum score is 18, and the maximum score is 36, with an average of 26.8, which it indicates to us that the respondents have a high degree of autonomy.

*Table no. 1. Descriptive statistics for autonomy dimension(learner)*

		Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid	18,00	1	,6	,6	,6
	19,00	1	,6	,6	1,2
	20,00	2	1,2	1,2	2,5



21,00	6	3,7	3,7	6,2
22,00	6	3,7	3,7	9,9
23,00	10	6,2	6,2	16,0
24,00	14	8,6	8,6	24,7
25,00	18	11,1	11,1	35,8
26,00	19	11,7	11,7	47,5
27,00	19	11,7	11,7	59,3
28,00	15	9,3	9,3	68,5
29,00	11	6,8	6,8	75,3
30,00	16	9,9	9,9	85,2
31,00	10	6,2	6,2	91,4
32,00	7	4,3	4,3	95,7
33,00	3	1,9	1,9	97,5
34,00	2	1,2	1,2	98,8
35,00	2	1,2	1,2	100,0
Total	162	100,0	100,0	

For the conformism dimension, the obtained results are found in Table no.2. The average of the obtained scores is 25.4, with a standard deviation of 3.44. The normal curve shows that most of the answers are distributed around the mean, which means that there is an approximately equal number of students with a low degree of conformity and a number of students having a very high degree of conformity. Given that the minimum score that could be obtained on this dimension is 10, and the maximum score could be 40, the results obtained on this dimension show the minimum score being 15, and the maximum score being 35, with an average of 25.4, which means that the degree of conformity of the students is lower than the degree of their autonomy.

*Table no. 2. Descriptive statistics for conformist dimension(learner)*

		<b>Frequenc y</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	16,00	2	1,2	1,2	1,2

17,00	1	,6	,6	1,9
18,00	1	,6	,6	2,5
20,00	5	3,1	3,1	5,6
21,00	11	6,8	6,8	12,3
22,00	12	7,4	7,4	19,8
23,00	19	11,7	11,7	31,5
24,00	16	9,9	9,9	41,4
25,00	15	9,3	9,3	50,6
26,00	24	14,8	14,8	65,4
27,00	15	9,3	9,3	74,7
28,00	11	6,8	6,8	81,5
29,00	12	7,4	7,4	88,9
30,00	6	3,7	3,7	92,6
31,00	4	2,5	2,5	95,1
32,00	4	2,5	2,5	97,5
33,00	2	1,2	1,2	98,8
34,00	2	1,2	1,2	100,0
Total	162	100,0	100,0	

In analysing the stated hypotheses, it was assumed that the specialization of the class where the students study influences their degree of autonomy. The ANOVA Onaway test was used to verify this hypothesis. The results are presented in Table no6 (Descriptive ANOVA), Table no7 (Post Hoc Tests autonomy) and Table no8 (Bonferroni Tests autonomy).

*Table no 6.Descriptive ANOVA autonomy*

Autonomy	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Science	78	27,1154	3,3959	,3845	26,3497	27,8810	20,00	35,00
Social-Science	50	27,3000	3,4715	,4909	26,3134	28,2866	19,00	35,00

Technical	34	25,5294	3,0175	,5175	24,4766	26,5823	18,00	31,00
Total	162	26,8395	3,3933	,2666	26,3130	27,3660	18,00	35,00

Table no 7. Post Hoc Tests autonomy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	74,895	2	37,448	3,347	,038
Within Groups	1778,932	159	11,188		
Total	1853,827	161			

Table no 8. Bonferroni Tests autonomy

		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Subject profile	Subject profile					
Science	Social-science	-,1846	,6060	1,000	-1,6508	1,2816
	Technical	1,5860	,6874	,067	-7,7219E-02	3,2492
Social-science	Science	,1846	,6060	1,000	-1,2816	1,6508
	Technical	1,7706	,7435	,055	-2,8429E-02	3,5696
Technical	Science	-1,5860	,6874	,067	-3,2492	7,722E-02

	Social- Science	-1,7706	,7435	,055	-3,5696	2,84 3E- 02
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From the analysis of these data results the value and significance of F:  $F(2,159) = 3.34$ ,  $p = 0.03$ . This means that there are differences in the degree of autonomy between specialists. This difference appears between the technical profile and the socio-human profile, in that the students from the socio-human profile are more autonomous than those from the technical profile. These are their values and meanings that result from interpreting the questionnaires completed by the students.

Another hypothesis that underpinned the research was that among the teachers, by which students and teachers are understood, a clear picture of what the student's autonomy means is not outlined. Moreover, autonomy is not identified among the characteristics of the adolescent student. In order to verify this hypothesis, the content analysis of the answers to the two open questions regarding the characteristics of the adolescent and autonomous student was proceeded.

From the analysis of the frequencies of the students' answers and the teachers answers, to the question that asked them to list three characteristics of the adolescent student, the following results were obtained:

*Table no 9.Characteristics of the adolescent student (teachers and students answers)*

	<b>Answers</b>	<b>Frequency</b>
Students answers	Freedom	46
	Impulsivity	15
	Curiosity	14
	Intelligence	11
	nonconformity	11
	Defective organization	8
Teachers answers	Curiosity	10
	superficiality	7
	Freedom	6
	nonconformity	5
	Personality	5

What is surprising at first glance is the low frequency of the feature in the first place. Out of 162 possible answers, "freedom" appeared only 46 times. Another "surprising" element is the large difference between the frequencies of the characteristic in the first place and that in the second

place. Given the decrease in frequencies, the rest of the features were not taken into account. Going further with the analysis it is observed that these traits identified even by the adolescent students do not bring anything new in terms of content. "Freedom", "impulsivity", "curiosity", "intelligence", "nonconformity" appear as unanimously recognized characteristics of this period. This may be due either to the ignorance of the correct meaning of this concept, or to the desire to attract attention, to exaggerate.

Another noteworthy element is the presence in large numbers of the opposite characteristics of the kind: responsible - irresponsible; conformity-nonconformity; rational - irrational; brave - cowardly; smoker - non-smoker; drunk - non-drunk. This is proof of the confusion students of this age face. These traits show off that tendency to look for identity, especially for teenagers. Each one tries to be unique and perceives itself differently from the others, just the opposite.

By comparing the frequencies with the number of subjects, the greater uniformity of the opinions is observed, compared to that of the students. Teachers place "curiosity" on the traits of the adolescent student in the first place. This feature appears in different shades: "scientific curiosity", "the desire to discover new things", "the desire to live new experiences". The second feature, which is a short distance from the first, is "superficiality". Its identification is related, with certainty, to the nature of the relationships between teachers and adolescent students, with the fact that the former prescribes tasks that the latter must fulfill. From the way these tasks are carried out, "superficiality" seems to have emerged as a trait of the adolescent student. Another observation is that the "personality" appears as a trait of the adolescent student, but no other details are made. We consider personality to be a concept broad enough to encompass all others before it.

Comparing the answers of the teachers with those of the students it is found that the teachers placed "curiosity" in the first place, while for the students it is only the third. The "freedom" placed by the students at the first place, the teachers consider it in the second place. "Nonconformity" is placed by the students in the fourth place, and by the teachers in the third place. Considering these results, it can be appreciated that there are characteristics recognized by teachers and students at the same time, because the importance given is different.

From the analysis of the frequencies of the students' answers and teachers answers to the second question regarding the characteristics of the autonomous student, the following results were obtained, like in Table no 10. Characteristics of the autonomous student (teachers and students answers).

*Table no 10.Characteristics of the autonomous student (teachers and students answers)*

	<b>Answers</b>	<b>Frequency</b>
Students answers	Freedom	48
	Responsibility	16
	Intelligence	15
	Decision power	14
Teachers answers	Freedom	11
	Intelligence	8
	Self-control	7
	Passion for knowledge	3

Again, it captures the low frequency of the feature in the first place (48). But it is observed that freedom appears in the first place both as a trait of the adolescent student and of the autonomous student. Indirectly, this means that students independently recognize a characteristic of the adolescent student. Also, there is the "frequency hopping", the second characteristic, "responsibility", defending 34 times less than freedom. Another feature identified as being common to the two categories of students (adolescents and the self-employed) is "intelligence". The "decision-making power" was also identified as a feature of the autonomous student.

And in this case, the opposite characteristics appeared: responsible - irresponsible; conformity-nonconformity; respected - disrespectful; desire for fun - lack of fun; to take into account the opinions of others - to disregard the opinions of others. The presence of these characteristics demonstrates either the age-specific confusion or the ignorance of the meaning of the concept of "autonomy".

It is observed that "freedom" appears on the first place as a feature of the autonomous student, in the opinion of the teachers. If it was placed second in importance between the characteristics of the adolescent student, it is now the first characteristic of the autonomous student. In fact, this is the only feature common to the two categories of students (adolescents and self-employed) identified by teachers. The "passion for knowledge" can be approximated with a hint of "curiosity", namely "scientific curiosity". The importance of the subjects of knowledge cannot be overlooked. The autonomous student is "intelligent" and "passionate about knowledge". On the whole, it cannot be said that teachers have identified the same traits for the adolescent and autonomous students.

Comparing the answers of the teachers with those of the students, it is observed that both categories of subjects placed "freedom" on the first place between the characteristics of the autonomous student. The "intelligence",

seen by students in the third place appears in the case of the teachers in the second place. It is again about identifying the same features that are given different importance.

As a conclusion of the content analysis, it can be said that students prove to have a more clearly outlined picture of what a teenage student is than teachers have. It also identifies more characteristics common to adolescent and autonomous students than teachers.

#### **4. Conclusion**

The research results proved to be different from the initial moment. A confirmed hypothesis is that the degree of autonomy is influenced by the profile. It has been proven that the students from the technical profile have a lower degree of autonomy than those from the socio-human profile, but not the students from the science profile.

Both specific hypotheses regarding the image that teachers and students have about autonomy have been rejected. The teachers do not see in the autonomous student a "student - problem", and the students do not understand by autonomy the lack of any rules.

What is described as the educational ideal of the Romanian school, the "formation of the self-named personality" (Law of National Education, 2011) has proved to be a controversial area of educational theory and practice. Student autonomy elicits reactions among practitioners. The teachers perceive the autonomy that it is good not to discuss, because the school is a court re-presenting the authority, so it cannot stimulate the autonomy. As if authority and autonomy are two terms, two realities that are mutually exclusive in the school space.

Whatever conditions and resources it would have, no matter how well it was conducted, without competent teachers it could never fulfil the mission with which the company was invested, that of training future adults.

In this context it is not an exaggeration to say that the school itself contributes to a small extent to the student's autonomy; the primary responsibility rests with the teacher. "The characteristics and the quality of the dialogue that establishes in the school work relationship with students, the characteristics of the climate that creates in the lesson, depend largely on the quality of teacher educational work. Love for children, empathy, spirit of equity, self-control power, classroom management, passion for the subject they teach and generally for knowledge, attractive activities in the lesson and the talent to arouse students' interest for co-giving , the ease of dealing with the unforeseen and not giving back in the face of difficulties, the ability to make a correct assessment of the students' performances are all so many qualities that ensure the efficiency of the education in the classroom"(Iancu, 2000, p. 68) and which we add, contributes to the building of the student's

autonomy. Permanently directing students' actions, not recognizing the teacher's own imperfections, not knowing the students' personality, their needs and interests are all reasons that inhibit their autonomy.

Contrary to the fears expressed by many teachers, the autonomy of the student does not suppress the teacher's authority. On the contrary, no one can become autonomous unless he has previously obeyed the rules of an authority. Autonomy does not mean the lack of rules, but the construction of a universe of its own within the existing rules.

Obviously, approaching such discussions requires competence from the teacher. In other words, building student autonomy is not possible if the teacher does not have the main role. That is why the continuous development of the teacher training programs is a necessity for the development of the society, for the restructuring of its values and for offering the most suitable contexts for children learning.

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## TEACHING AND ASSESSMENT FOCUSED ON LEARNING IN THE CONTEXT OF NEW CURRICULUM CONCEPTS

**Rodica Mariana NICULESCU, Ph.D.,**

University *Transilvania* of Brasov

**rodicanic@unitbv.ro**

**Abstract:** *This article answers where the fundamental needs of the educational reform in general and the curriculum reform, in particular. It belongs to the series of papers focused on the core concepts of the educational process while, all over the world, this process seems to be in an ongoing and never predictable reform, with common and differentiated aspects. This time, the paper approaches the teaching and evaluation as the two acts of the formal educational process that must be approached with a serious and effective focus on the learning process of the students. Firstly the paper presents the necessary distinctions among terms like educational process with its wide meaning and the formal educational process; the formal educational process and educational system. Then, the three actions of the formal educational process are analyzed: teaching, assessing and learning. The core aim is to argue why it is strongly necessary to focus both the teaching and the assessment actions on learning. This necessity is connected to future graduates' profiles. They will be put into the difficult situation to cope with a "flood" of information, received on an increasing number of communication channels, while more and more complex tasks coming from the real life are to be solved rapidly and efficiently.*

**Key words:** *education system; educational (education) process; teaching; learning; and assessing; instrumental competencies.*

## **1. Fashion in education versus genuine expertise**

This paper is part of a suite of theoretical approaches of the author to the main aspects of the reforms, approaches whose themes were born and are born from my concrete relationship with the school's people.

The correct perception of the complex phenomenon of educational reform and, in particular, of curricular reform are, in my opinion, an essential condition for the effective implementation of these reforms. The reality, carefully observed through its concrete manifestations in school life (shadowing activities in the classroom within mainstream and special education, methodical activities, training future teachers and specialists in education, etc.) together with the reading of many materials related to the reform (school policy, official documents, pedagogical publications, etc.) lead to a worrying conclusion. All these reflect a vocal cacophony (as Pinar W. said in 1975) when it is about the educational reform, curriculum reform, educational process with its core actions, etc. And this incongruity is present both when the reforms are critically or supportively presented. It becomes visible an unimaginable semantic dispersion of the meanings of many basic concepts, and a false understanding of what should be essential. Many misunderstandings are covered by words/terms that have become a kind of fashion. Their use often demonstrates a superficial understanding, often determined by the only wish to “speak according to the trend”, only pretending to believe in the statements. Other times, even erroneous understanding could occur. In education, once again, it is shown that everyone has expertise. And what is really sad is that few people appear as being concern about this situation.

## **2. System of education and process of education**

Why it became really important to know what meaning these two terms involve? It is fundamental for a very simple reason. They are to be found within a lot of official documents but while they are not precisely defined, their use is ambiguous and the readers decode the involved meanings according to each reader's previous cognitive experience. As long as the correct understanding of an official document can be fundamental for very important actions the understanding of each concept and of the relation between them becomes extremely significant.

Concepts like the *education system and educational (education) process* are two currently used terms but they hide extremely abstract concepts. The wide range of meanings involved by the use of these terms in different pages of pedagogical literature or the official educational politics documents too often is not enough taken into account. Unfortunately, the connection between the meanings of the two concepts is uncertain and often ambiguous if not even wrong.

Each country or sometimes each component of a federal state (see USA or Canada as only two examples) has a specific education system.

This approach has not the intention to present the numerous existent definitions of the two concepts. The aim is more to emphasize the existence of the core and constant aspects involved within them, aspects explicitly or implicitly presented.

Thus, the *education system* is generally seen as a specifically defined structure of institutions explicitly aiming to educate; they are hierarchically designed and host or/ and manage (including designing) the formal educational process.

The *formal educational process* consists in the educational ongoing influence, an influence designed, organized, implemented and assessed upon the children, students, and adults involved; it takes place inside of institutions with an educational priority focus ( the institutions belonging to the educational system).

Metaphorically speaking, the educational process is the *physiology* (the functionality) of the body's *anatomy*, represented by the educational system of a country. That is why the definition of the formal educational process as a "sub-system of the educational system" (as we can find it in a lot of pedagogical materials) appears, in my opinion, as a misunderstanding of the yin - yang rapport between the two aspects. Without a specific structure of an educational system, the process has not a place to function where. The educational system is the forest and the educational process is the forest's life. The forest's life is a synergic effect of each tree's lives, just like the process of education, at the educational system level, is the synergic effect of the real educational complex influence produced within each educational institution. (This is a metaphor with roots in the assessment papers produced by my students).

It is important to highlight the fact that the formal educational process is strongly supported by the non-formal educational process developed within institutions that function without a priority focus on education and by the informal education process produced as an effect of the interaction of the learner at any age with the real day to day life in all its hypostases. This inter-influence is significantly diversified for each human. It is intimately determined by everything surrounding the human being and by the internal subjective factors of the "learner".

### **3. Operational aspects of the formal educational process seen as a learning process**

The formal educational process acts through three core actions (Cristea S.,1998): teaching, learning and assessing. The connection among them is a specific one, the focus being represented by the action of learning

because teaching is done to facilitate the learning process of the learners and the assessment action aims to measure the results of the learning process but must be a learning situation itself.

In the same time, the results of the teaching action on students' learning process are an important source for the level of teacher's learning process itself.

The teaching action has also a significant number of definitions. Generally speaking, it expresses the” (<http://infed.org/mobi/what-is-teaching/>). The source considers this as a definition for the starters. In my opinion, it is more a definition of what understand every person in the hypostasis of a” teacher” when this one (parent, colleague, friend, specialist met occasionally, etc.) can provide for somebody else information or good practices, which attend the learner's needs for solving a life task. Yet, the concept of teaching represents mostly one of the three core actions/ operations involved in the formal educational process.

*The teaching process* involves communication: the flow of information from a source (represented in this context, primarily, by the teaching staff) towards the receivers (the students). The information is decoded in a unique way by each student. The student uses for this decoding his or her own already existing knowledge, and the new knowledge is assimilated within the pool of the old ones, determining an interesting process of accommodation to them. All these are steps of the learning process which is focused on a task, a request addressed by the school to be solved. (Fig. 1).

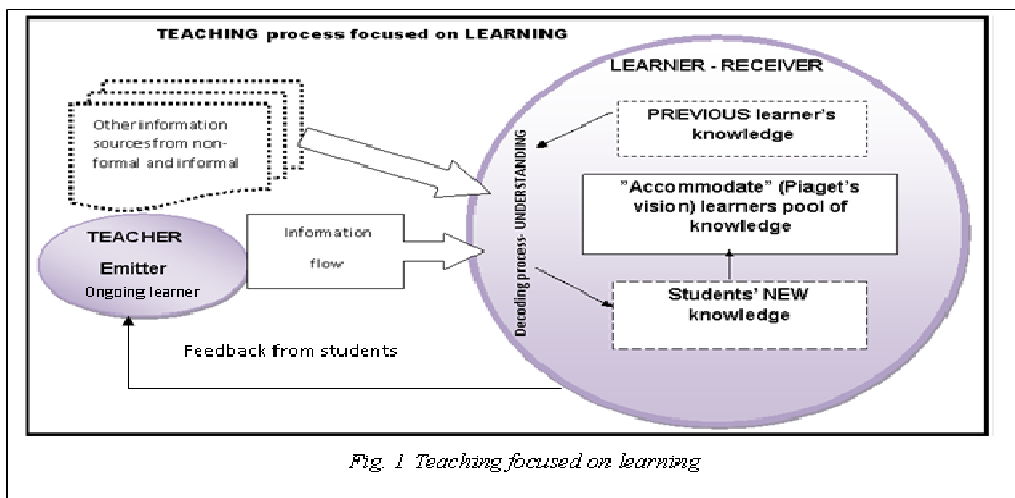


Fig. 1 Teaching focused on learning

The great secret of the effectiveness of the formal educational process consists of the adequacy of the school tasks to the genuine requests coming from the social, professional and other aspects of the real-life. (Fig. 2)

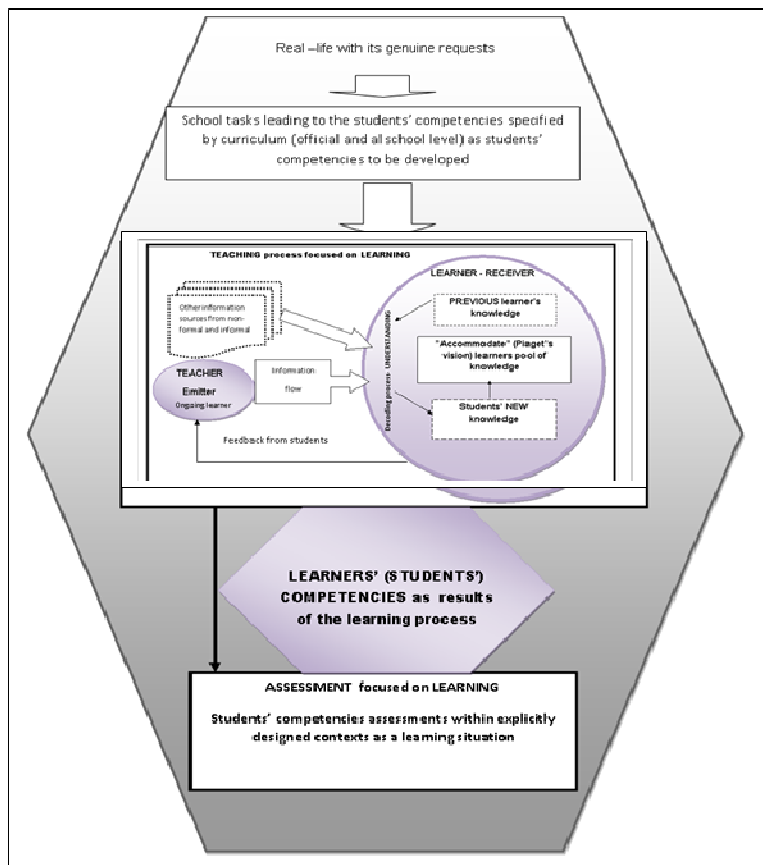


Fig. 2 Determinants of teaching process by the real-life as a condition of the educational process effectiveness

Unfortunately, this strong compatibility between the school learning tasks and real-life tasks is still a dream. This is happening in both types of educational systems with opposite philosophies. It is about the two core educational systems: one focused on knowledge and the other one focused on learning by doing.

The first philosophy of curriculum highlights as a core issue the role of knowledge understood more than stocked information even if sometimes, this truth is hidden somehow pharisaical under the banner of focusing everything on competencies. The secondly mentioned philosophy it is also about the educational systems where are considered as a priority the pragmatism and the focus on learning by doing.

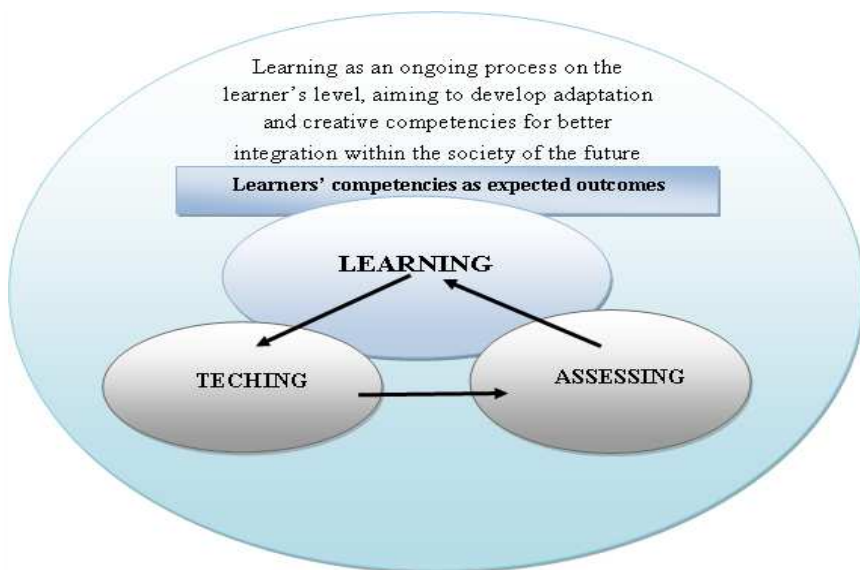
Knowledge and capacities (knowing and doing) are genuinely important but more important are their hypostases as tools put in the hands of live, concrete characters with positive attitudes, based on moral values. All these must be developed during the formal educational process, accordingly to the psychological resources of each age and using appropriate methods of

teaching and assessment for each age, aiming to create effective competences of students, capable to learn further, to develop themselves in a way to achieve all the future society requests.

The *teaching process* becomes very important but, somehow, in a different way than in the past. The teacher more than ever must become a kind of monitor of the students' information coming through a multitude of channels, even from a very early age. During early education, parents, and teachers, as partners in education, must do their best to put strong bases to what, I would call, instrumental competencies. These instrumental competencies generally expressed by speaking correctly phonetically and respecting the basics of the grammar, reading, writing, counting and using the fundamental mathematics operations, and, more recently, the fundamental use of the PC and other electronic devices necessary for information.

The *assessment process* as a core activity/ operation of the formal educational process must be convergent with the teaching process, both of them being connected in a functional way with the aims of this formal educational process. These aims are represented by the expected outcomes, designed at the very beginning of the process and expressed by the students' competencies to be developed.

The *learning as an ongoing process* on the learner's level, aims to develop adaptation and creative competencies for better integration within the society of the future. These competencies are the expected outcomes (general and specific) established by each national official curriculum, even if they are labeled in different ways. (Fig. 3).





Nowadays assessment issues are huge. First, it is extremely difficult to find compatibility between what is taught for a generation and the manner of being assessed the achievements of the same generation. The normal flow of the process within the curriculum implementation seems to be not entirely understood. A new curriculum is (or should be) designed as a whole, the three actions of the formal education process (teaching, assessing, and both focused on learning) being considered together. The implementation of a newly designed curriculum starts with the first year of the cohort and all the assessment moments involved by the new curriculum design must be applied only for the specific the students belonging to the cohort which is the subject of the reform. There were moments when the philosophy about the assessment of a new curriculum implemented at the beginning of high-school (the ninth grade in Romania) was applied to the students of the last year of the high school at the baccalaureate exam, students who passed the passed the grades of the high school, according to a different curricula philosophy. Again, unfortunately, the last decades of experience have demonstrated a low understanding of this truth.

Other concepts involved in the philosophy of assessment as an action/operation of the formal educational process have been misunderstood. A possible example could be the ~week of assessment~ introduced years ago with the specific aim to have a common time for applying the general assessment per levels. Without appropriate previous training, the teachers understood that only in that specific week they are allowed to assess. A consistent number of other examples can be found.

But what seems to be the most inappropriate aspect of assessment is the imbalance between *declaration and practice*. The declaration is that the assessment is focused on competencies, but the reality still exacerbates the assessment of knowledge (as memorized information). This is happening at least on the classroom level too often and often enough when it is about national evaluation at different levels.

#### **4. Conclusion**

The core aim of this paper is not to present results of some elaborated researches even if each debated aspect can be a subject for different researches. The aim is mostly to argue why it is strongly necessary to focus both the teaching and the assessment actions on learning. This necessity is connected to future graduates' profiles. They will be put into the difficult situation to cope with a "flood" of information, received on an increasing number of communication channels, while more and more complex tasks coming from the real life are to be solved as rapidly as possible.

As a teacher, deeply involved in the practical field, I don't assign exaggerated importance of the theoretical approaches neither in this article nor in the previous ones. I feel the need, however, to signal the role of clarity of theory as the basis for a rational, fluent, and effective practice.

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## IMPLICATIONS OF THE LEARNING ENVIRONMENT ON EDUCATIONAL PRACTICES IN EARLY EDUCATION

**Daniela Mihaela FLORESCU, Ph.D.,**  
**- Faculty of Psychology and Educational Sciences – „Transylvania”**  
**University, Brasov**  
**Daniela.florescu@utb.ro**

**Abstract:** *According to Albert Einstein, the environment is „everything that is not me”. His perspective on the concept of environment is broad and comprehensive and is applicable to educational contexts. In this vision, the environment designates the learning taken together with the whole physical, socio-cultural framework in which it takes place. The concept of learning environment, as stated in a report by the Organization for Economic Co-operation and Development (OECD) dedicated to this issue, is an „organic, holistic one that includes the learning processes and the contexts that host them; it is an ecosystem that integrates learning activity and outcomes.” (OECD, 2013, p. 22) Some clarifications are required for the clearer delimitation of the term stated above: The term speaks about the socio-educational space and not only about the physical one, although this limiting perception is very common. The concept also refers to classrooms, furniture, arrangement of walls and centers of interest, their ability to provide healthy learning contexts that respect the rules of hygiene and ergonomics, the possibilities of positive interaction. Without all this, based on the pyramid of needs in a kindergarten, it is difficult to build effective teaching approaches that facilitate the socialization and preparation of the child for school as part of the preparation for social life. In this sense, the concept does not only refer to „spaces”, „facilities”, „material base”, but also their integration in relevant activities in order to ensure the well-being of children and reach at the end of preschool the competence profile of the child ready for type learning school and the success of the later adult.*

**Keywords:** *learning environment; educational practices; early education; kindergarten.*

**Introduction.** That is why the physical learning environment is closely related to the learning environment - called by Loris Malaguzzi „the third teacher” - which implicitly and explicitly creates teaching options for teachers and children. Space makes tacit but visible statements, „space speaks”, as E.T. Hall, speaks in front of teachers and sometimes in their place. The same theory is supported by Maria Montessori whose philosophical essence in this consists in the idea that „the environment / space instructs”.

And according to ISSA, the learning environment greatly influences the cognitive, social, emotional and physical development of children. By creating a stimulating and safe physical and mental environment, the teacher encourages children's learning, through independent exploration and group play. The environment influences kindergarten practices and affects children's learning.

In the UK, responsible pedagogy is used to enable every child to demonstrate learning in the fullest sense. It depends on the use of information assessment to plan relevant and motivating learning experiences for each child. This approach to improving the learning environment is specific to all countries, but also to our country; however, there are major principles that can lead to the creation of more child-centered, efficient and innovative environments. The World Bank and its partners in the OECD Center for Effective Learning Environments have extensive experience in middle-income countries in reforming countries approaches to learning environments. The new pedagogy of the educational environment would propose substantial reconsiderations, made „with meaning and purpose”, not only to „decorate” classes, to organically introduce modern technologies in teaching, not just to add them artificially as „otherwise” options. And all this in order to activate the environments in order to ensure the formative experiences and for the preschoolers to feel good in kindergarten, to feel safe not only physically, but to feel „at home”.

### **Educational practices - learning in early education**

Research shows that teachers have the greatest influence at an early age on children's learning. If we want to optimize the results of our children, we must improve the teaching process by developing and supporting a professional teaching staff.

ISSA's pedagogical definition of the quality of teaching practices consists of seven main areas that „reflect ISSA's core beliefs about quality pedagogy and identify ways to aspire to excellence: 1. Interactions: Interactions between adults and children, as well as peer interactions, are of crucial importance for supporting and influencing children's physical, social, emotional and cognitive development; promoting their learning

continuously. The teacher's role is to provide children with opportunities to engage in interactions, to participate in knowledge-building and understanding-based processes, and to become self-confident and contributing and caring members of society.” (Dawn Tankersley, Ed.D — Lead Author: Sanja Brajkovic I Sanja Handzar I Queen Rimkiene Queen Sabaliauskiene I ZoricaTrikic I Tatjana Vonta, Ph.D, Putting knowledge into practice. A guide for educators on ISSA principles of quality pedagogy, P. 9).

The teacher for early education uses teaching strategies that facilitate a quality pedagogical process, is based on the belief that care, learning and cultivation form a coherent whole and that the well-being and commitment of each child are prerequisites for learning. Recognizing that learning occurs in different ways and in different situations, the teacher uses planned, diverse and meaningful teaching strategies that promote active learning.

It is important that our kindergartens are safe, healthy and optimally designed to contribute to learning. However, there are other key factors that determine how well children learn, how good their interactions with teachers are, mediated by the use of pedagogy. In this section, we discuss educational practices, the implications of pedagogy, the appearance of the institution and design.

Teachers professional practices include both classroom teaching practices and broader professional practices that shape the learning environment. Both types of practices have their roots in the philosophies of education and in the empirical research of educational effectiveness. The instructional quality is complex: there is no single optimal way of teaching, and teachers must continuously adapt their practices to meet the needs of the specific context, class and students. A combination of a constructivist and a more direct approach to training is needed. Classroom teaching practices can also be developed through professional development, as well as through constructive feedback and appreciation from the principal or colleagues, and have been shown to be associated with teacher beliefs.

In many educational institutions around the world, children are still traditionally taught using didactic pedagogy. Teachers are in front of the classroom, and children sit in rows in front of them. This is how many teachers have been taught to teach and can be an effective way to convey facts. Towards the other extreme, a 2013 OECD study on innovative learning environments (OECD 2013) was based on seven principles that should guide these learning environments (Dumont, Istance and Benavides 2010): recognizing children as key participants, encouraging their active commitment and the development in them of an understanding of their own student activity, „self-regulation”; building on the social nature of learning and actively encouraging group work and well-organized collaborative

learning; hiring learning professionals who are in line with children's motivations and the key role of emotions in success; children's particular sensitivity to individual differences, including the type and extent of their prior knowledge; developing programs that require hard work and challenge everyone, without overburdening them.

So, from a practical point of view, pedagogies can be seen to extend from a pure didactic model, through combined approaches, to child-centered learning models. The mixed approach typically involves table islands with four to six children along with a number of learning areas (Barrett et al., 2015), such as a reading corner and an area with sand and water. This approach supports occasional learning from the front, but normally allows children to work in groups or pairs and carry out self-directed activities in a learning area, as well as individual interventions by the teacher. Obviously, these different approaches require different space configurations (Güney and SELDA 2012), and this has been illustrated in the Russian Federation (Shmis, Kotnik and Ustinova 2014). Where a distinction is made between "institutional typologies" that reflect didactic approaches and are clearly more open and flexible to support more complex, child-centered pedagogies

Educational practices are also a subject of an immensity of information, culture and experience, which cannot necessarily be expressed in words. However, the experts present innovative ideas such as the realization of a special program by the Municipal Library of Graz, for children entitled "LABUKA - the island of books". LABUKA is a fun and adventurous learning environment for children. Trainers and educators help young learners in courses and workshops. Special holiday programs are also offered.

Then the Roald Dahl Museum and Story Center, is a museum and story center recognized in the UK as one of the most innovative projects in terms of learning activities and basic skills, and the activity within the project can be seen as a good example that sets high standards for the learning environment.

The ULISSES Program: Developing Information Literacy Skills in the Lisbon Municipal Library Network exists in Portugal. This program, designed to be used as a role model, aims to provide users with opportunities to develop information literacy skills in an informal environment. The development of basic ICT skills is one of the learning areas covered by the ULISSES Program.

### **The influence of the learning environment on early education practices**

The learning environment created decisively influences the cognitive, social, emotional and physical development of the child. By creating a safe

and stimulating physical, psychological and social environment that provides a variety of materials, tasks and situations appropriate to development, the educator encourages the child's learning activity through independent and group exploration, play, access to various resources and interaction with other children and adults.

When educators create an atmosphere in which children are free to express themselves, children have opportunities to represent their thinking, opinions in many ways, develop better self-understanding and greater empathy for others, develop independence, self -motivation and self-expression, can significantly integrate their experiences and can represent them, plan and work independently to create their own expressions, develop appreciation for music, dance and movement, plays, stories, visual arts, develop curiosity, skills problem solving and verbal and non-verbal expression of their experiences and feelings, develop feelings of pride and self-esteem, feel encouraged to freely share their thoughts and ideas with others.

The educator creates an environment that encourages the child to take appropriate risks for development and learning, and the classroom serves as an appropriate developmental learning environment that supports children's initiatives to explore, investigate, and develop. observe and experiment, allowing appropriate risk-taking within safe limits. Educators create an receptive intellectual, social, emotional and physical environment to promote each child's learning and development. This environment fosters self-esteem, self-concept and social competence by providing safe learning opportunities that differentiate learning activities so that all children have a strong chance of success and challenges at a level that matches their qualities. Differentiation promotes the possibility of each child to start the activity within his area of proximal development. This means that children can work at a level where they feel comfortable or competent and where they need only a little support to acquire these skills. When teachers specifically prepare the context for success and learning, children know that it is an environment built and made especially for them. I know everything is serious, as if the teacher were telling them, „I respect you as a learner.” (Dillon, 2016, p. 8).

International research has shown that there is a direct relationship between classroom culture and its intrinsic aspects: the learning environment in which the teacher treats all children respectfully, uses positive language with children, responds to children's needs, the teacher does not present gender prejudices and challenges gender stereotypes in class, has positive behavioral expectations; the environment in which the classes are bright, attractively arranged, properly ventilated, individualized, personalized and effective learning with the following practices:



- **Facilitating learning** (Teacher sets clear behavioral expectations for classroom activities and / or routines, recognizes positive behavior of children, Teacher redirects wrong behaviors and focuses on expected behavior rather than unwanted behavior, explicitly states what activity they will do children and the objective of the activity, explicitly states what activity the children will do and the objective of the activity, makes connections in the activity that refers to other knowledge of content or daily life of children, models by acting, assisting or thinking out loud);

- **Ensuring understanding** (Teacher uses questions, prompts or other strategies to determine children's level of understanding, monitors most children during independent / small group work, provides specific comments or prompts that help clarify children's misunderstandings, provides specific comments or requests which helps to identify children's successes, adjusts children's content);

- **Ensuring positive feedback** ((The teacher provides specific comments or prompts that help clarify children's misunderstandings, provides specific comments or requests that help identify children's successes, provides specific comments or requests that help identify children's successes);

- **Critical thinking** (Teacher gives thinking tasks, Children ask open-ended questions or do thinking tasks);

- **Autonomy** (The teacher offers children choices, offers children opportunities to take on roles in the activity, children participate voluntarily in the activity);

- **Perseverance** (Teacher recognizes children's efforts, has a positive attitude towards children's challenges, encourages children's ideas and creates projects based on them);

- **Formation of social and collaboration skills** (The teacher promotes children's collaboration through interaction between colleagues, promotes children's intra- or interpersonal skills, children collaborate with each other through peer interaction).

## RESEARCH ON THE IMPLICATIONS OF THE EDUCATIONAL ENVIRONMENT ON EDUCATIONAL PRACTICES IN EARLY EDUCATION

### Research objectives and hypotheses

#### General hypothesis:

- If there is a favorable learning environment, then educational practices can develop children's socio-emotional and cognitive skills in early education.

#### Specific hypotheses:

- We assume that practitioners can create a learning environment conducive to children's development;

- Teachers in preschool education use innovative educational practices in teaching activity favored by the learning environment created;

- We assume that the learning environment has a positive influence on educational practices

**Objectives:**

- Hierarchy of educational practices used by educators in activities;
- Identifying the main factors that influence the quality of educational practices for the overall development of children;
- Determining the influence of the learning environment on educational practices;

**Research sample:**

This research has a sample of 150 early childhood teachers. The research was carried out in kindergartens in urban and rural areas in Romania.

The data collection took place between 06.01.2020-30.04.2020.

**Methodology used:**

In the present research we chose the survey method. This is an interactive method and is based on the direct exchange of information between the researcher and the subjects of the investigation, through which data are collected regarding certain situations, phenomena and manifestations (T.Pălășan, 2011, page 53).

The tool of this method is the research questionnaire which: „Represents a technique and correspondingly, an investigation tool, consisting of a set of written questions and possibly graphic images, logically and psychologically ordered, which self-administration, determines from the investigated persons answers to be recorded in writing.” (S.Chelcea, 2001, p.177).

**Presentation of questionnaires**

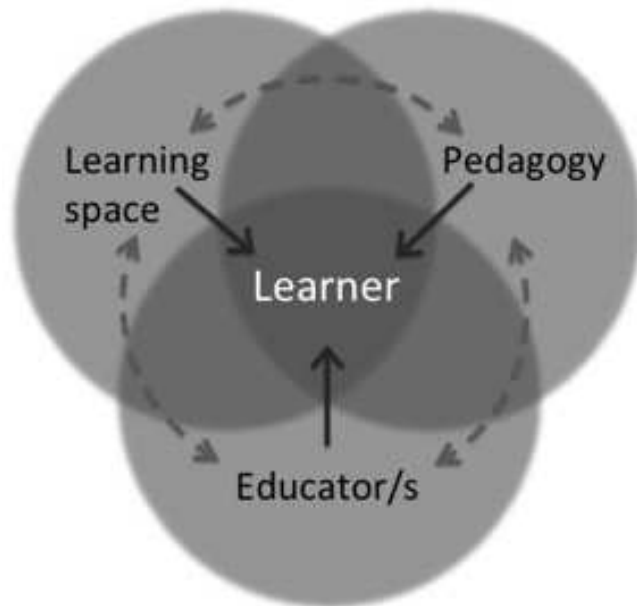
The purpose of the study was to determine whether the learning environment of preschoolers supports the emotional, social and physical needs of children, but also the influence it has on the quality educational practices used by teachers.

The present research was conducted based on two questionnaires, one of which aims to identify the relationship between physical environments / learning infrastructure, teachers' educational practices and children's outcomes, and the other aims to identify the main factors influencing the quality of teaching practices development. integral parts of children.

The first of the questionnaires mentioned is based on a neutral model for optimizing learning spaces called SIN and based on environmental and behavioral factors:

- Stimulation: complexity, color;
- Individualization: flexibility, ownership, connection;

- Naturalness: light, air quality, temperature, noise, connection with the natural environment.



#### **Naturalness: Air quality**

- Wide and varied openings are preferable, especially on the upper floors
  - Significant improvements in the learning process in conditions of a high level of air ventilation
    - The large volume of space can contribute to increasing the level of naturalness (Bako-Biro et al, 2011).
    - In institutions with several floors and few exits, the ventilation of the spaces becomes more difficult;
    - In kindergartens that have classes with triple functionality or that work in shifts, the use of spaces is made difficult by overcrowding and relatively short breaks, so the ventilation of the spaces is not efficient;
    - Some of the highest levels of CO<sub>2</sub> were recorded in classrooms where AC was on (possibly, teachers considered ventilation to be provided by AC);
    - There is a certain reluctance among teachers to open windows.
- There is clear evidence of the negative impact of poor air quality on visual memory and word recognition.

#### **I. Naturalness: Brightness**

- The glazed surface indicates an adequate level of natural light, but excessive use of blinds / flags significantly obstructed the light, a fact found in many classrooms;

- Artificial light used in many classrooms is insufficient and inadequate for activity.

- Classrooms facing east, southeast and south directly benefit from natural light during the morning

#### **Noise**

- In larger classrooms, the noise made by children was less concentrated, but teachers had to raise their voices to be heard.

#### **Temperature**

- In general, classrooms with a temperature of 18-20 degrees Celsius are optimal for children.

### **II. Another parameter is Individualization which comprises**

#### **Flexibility:**

- Separate spaces / areas attached to classrooms are adequate
- Exposing the materials on the walls proved to be beneficial
- Complex plans that include different learning spaces are beneficial, because they stimulate „learning through play”.

#### **Property:**

- The results showed the importance of a series of factors in two aspects: aspects related to the identification of children with their own class and those related to the sensitivity of the student.

- Materials made by children exposed on the walls;
- Customized elements;
- Well-designed furniture that allows the creation of a child-centered learning space;
- Comfortable, interesting and ergonomic benches and chairs and suitable for the age of the children.

### **III. Stimulation:**

The appropriate level of stimulation is non-linear in terms of the learning process - neither too stimulating nor very boring

#### **Complexity:** Stimulation level: Color

The second questionnaire addresses the main factors that influence the quality of teaching practices in order to form the socio-emotional and cognitive skills of children. The questions used in the questionnaire correspond to the Good Practices dimension and emphasize knowledge of the concept. From the questionnaire you can see how these practices are used and how important teachers are to strategies for improving practices in activities with preschoolers, but also to know the aspects that influence the quality of practices in early education, the role of teacher, creating a

beneficial, stimulating climate, observation the teacher's concern for better professional training.

### Data analysis and interpretation

After applying the questionnaires and centralizing the answers, the data were processed and interpreted statistically for each dimension and item separately. We present below the analysis and interpretation of the data obtained, supported and illustrated by relevant graphs.

The tables include the number of valid answers, the number of respondents (educators) who did not answer (Missing) and the average of the answers. It can also be said that after introducing all the items from the two questionnaires, the SPSS and Google Sheets program validated all respondents' answers, also having a maximum of answers ranging from 1 to 5, depending on the particularities of each question.

The educators who expressed themselves on the visual complexity of the classrooms in proportion of 88% stated that the classrooms have an average visual complexity, which means that the classrooms are not very crowded, and on the complexity of the materials and images from 96% of the rooms considered it optimal, and the remaining 1% too many and too few.

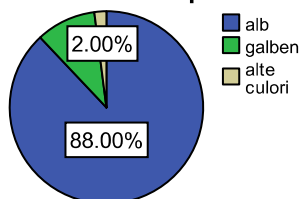
The existence of purposefully placed materials, at the children's visual level, was followed, and (92%) of the educators, consider that there are materials placed at the children's visual level, (8%), consider that there are no or do not have the materials placed in this way. .

Another item aimed at the existence of activity rooms as being arranged to support the involvement of children in the activity. Out of the total number of respondents (60%), there is a very large existence of such a special space (30%), they claim that such a space is largely organized that stimulates the involvement of preschoolers in activities.

Items concerning the classroom, in terms of height and the possibility of using materials for display, 94% of educators work in high classrooms, 6% work in low classrooms and also 94%, answered that in classrooms exposure materials are used.

For the Color parameter, it was found that the optimal use of colors is to color a "didactic wall" or a corner of the room and furniture with lighter colors.

Ce culoare au peretii?



Kindergartens in Romania, where the surveyed educators teach tend to be rather monochrome in proportion of 88%, but there are also kindergartens that have yellow walls, generally in light colors in proportion of 94%, but also strong colors, in proportion of 6%. All these values being represented by a sample of 50 educators from Romania.

The floors are not specially colored either, the educators stated this, in proportion of 84%, the existence of the colored floor is stated in a small number of classes, only 16% have a colored floor of the activity rooms.

### **The principle of Individualization**

#### **a. Flexibility**

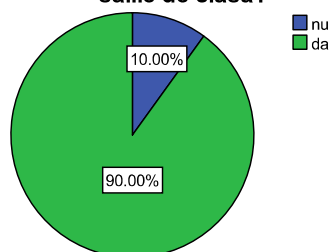
It is observed that out of the total of 150 educators who answered this question in proportion of 80%, they stated that the classrooms, where the activities with the preschoolers are carried out, are rectangular in shape. Next, 16% stated that the activity room is square, and the rest, 1% are „classic” or U-shaped. Thus, through the answers received it can be seen that the predominant form of groups, rooms in which the activities are rectangular, a rather advantageous shape for carrying out various activities with preschoolers.

In this study, the size of the classrooms was also taken into account, in order to know how much space there is, for the development in optimal conditions of the activities with the preschoolers. Thus, it benefits from standard halls, is 50 sqm, in proportion of 44%, from large halls between 70 and 80 sqm, works in proportion of 36%, and from very large halls, over 80 sqm, in proportion of 14% and from halls small, less than 50 sqm., in proportion of 6%. Also, depending on the size of the classroom and the number of children enrolled, the area (sqm) for each child is (typical area is 1.84 sqm / child) optimal in proportion of 74%, among educators believe that the area of the classroom, which they have is optimal, but (26% of educators say that the area they have available is small.

Then it can be said that the existing spaces in the classrooms allow children a wide variety of learning methods in proportion of 80%, according to the answers provided by educators, in this regard, but the remaining 20% say that they do not benefit from such ideal spaces.

The ideal spaces, which allow children a variety of ways to learn, often have „corners” for storing materials, both teaching and play. Of the sample presented, 90% benefit from material storage spaces. In addition, there are 10% of educators who do not benefit at all from such a space or these spaces may not be enough.

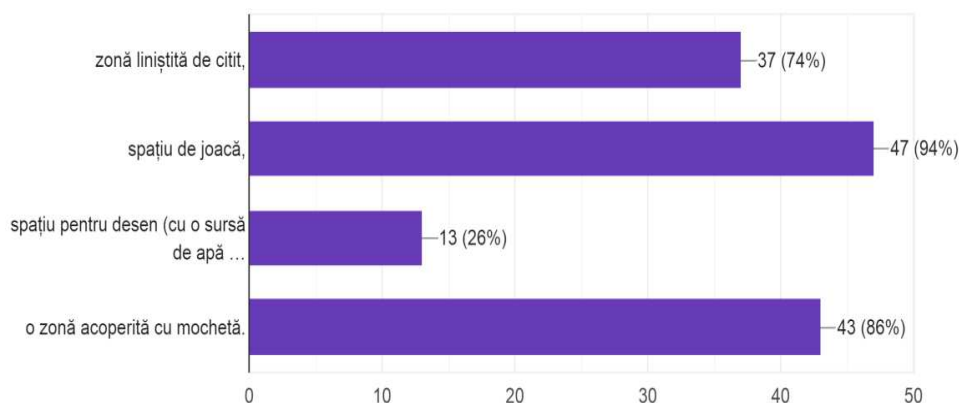
**Exista spatii de depozitare a materialelor de predare, de joc in salile de clasa?**



Next, the possibility of rearranging the tables for group work or other forms of organization in the classroom was addressed. Thus we found that there is this possibility in proportion of 100%. Also, if we have space and we can arrange children's meals, we may or may not have different areas / centers of interest in the classroom. Thus, following the results obtained in this respect, the educators benefit from an area covered with carpet in a proportion of 86%; of a playground, in proportion of 94%; a quiet reading area of 74%; of a space for art, with a water source, in proportion of 26%.

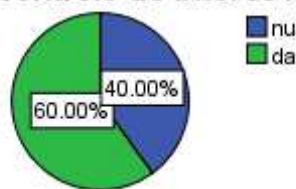
19. Sunt amenajate în clasă (Sunt posibile mai multe variante)

50 responses



The space is organized in favor of children, so the educators stated, in proportion of 60%, that they can arrange in the classroom all the centers of interest, for freely chosen activities, and the remaining 40%, can not arrange all these centers.

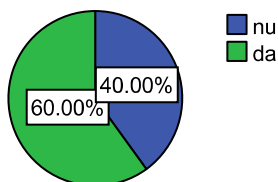
### In salile de clasa sunt amenajate toate centrele de interes?



The educators are responsible, because they chose to be able to arrange all the centers, except the „sand and water” center.

In the classrooms there is modular furniture, in others it is not. Thus, out of the total of 50 educators (60%) they gave an affirmative answer, and 40% gave a negative answer. Which means that in most rooms there is modular furniture.

### Aveti mobilier modular?



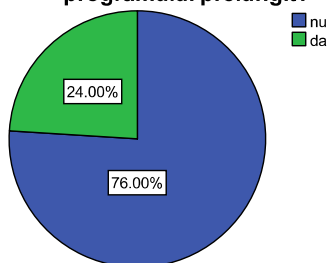
The presence of relaxation spaces in the classroom represents 60%, of the educators have or create this beneficial space, but there are also educators who do not have this space in proportion of 40%.

The existence of spaces for both relaxation and recreation and for carrying out various activities with preschoolers are particularly important. That is why the study aimed at the existence of recreation spaces, which would allow the realization of group activities. It can be seen that 58% of the educators gave an affirmative answer, and 42% answered in the negative and do not seem to have such spaces.

In 76%, there are no separate bedrooms from the classrooms in the case of the extended program, most of the classrooms having triple functionality. It can be said that there are separate bedrooms, only in 24% of cases.



**Exista dormitoare separate in cazul programului prelungit?**



The learning environment also refers to the physical environment in which the activities take place, so the educators were asked if they think that the classroom space is crowded. They provided answers as follows: 22% to a very small extent, 22% so and so, 22% to a large extent, 20% to a small extent and 14% to a very large extent. Most educators do not have problems with space or are not convinced (22% answered: „so and so”), how much space they should have and only 14% say that the space in the classroom is crowded.

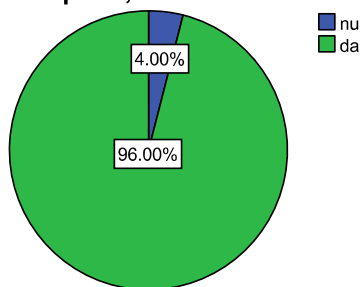
It is necessary to observe the existence of space outside the classroom. Thus it can be said that 28% of educators need more space outside the classroom to a large extent, 20% need very much, 22%, respectively 20% do not need more space.

**b. Property**

The property emphasizes the extent to which children feel belonging to the classroom, to the environment in which they work.

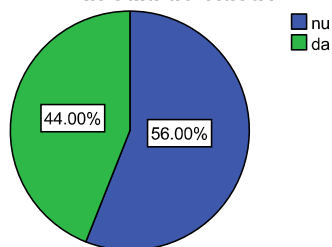
The educators state that there is furniture suitable for children, even in light colors, in proportion of 96%, except for the 4%, that there is a library for children in each classroom, so 88% of educators answered in the affirmative and 12% of educators gave a negative answer. Therefore, in most kindergartens, where the surveyed educators work, there are libraries for children.

**Exista mobilier adecvat varstei copiilor, in culori deschise?**



Another element is the „corner / didactic wall” painted in a warm color and highlighting certain activities / works, etc. 56% and 44% said they have such a wall in the classroom.

**Exista un perete sau un colt didactic vopsit intr-o culoare calda in sala de clasa?**



The elements presented can lead to the creation of children's life experiences. These experiences are found in the arrangement of the space according to the answers provided by the surveyed teachers. Thus, 40% of educators are not convinced of this, 22% consider that the arrangement of the space contributes to the formation of life experiences of children to a large extent, respectively 20% to a very large extent; 8 teachers challenge this idea.

Life experiences can also be formed by using sources relevant to all children, even those from other cultures: 36% are undecided, which means that there are not many such materials; 18% and 16% respectively gave a negative answer. To a large and very large extent, 18 (9 educators) and 12% (6 educators) responded respectively.

Arranging the educational space according to the project carried out with the group of children contributes to the development of children both cognitively and socio-emotionally. Teachers arrange the space according to the project they carry out, in proportion of 38%, and largely 30%; 20% arrange the space sometimes, and to a small and very small extent 6%, respectively 4%.

The walls are actively used to display children's work, because 76% of teachers answered in the affirmative and 24% said no.

The high level of display of works on the walls, the existence of age-appropriate furniture, the existence of specific libraries, the arrangement of the space according to each project, all lead to a high level of sense of ownership over the space from the perspective of each child.

## Connection Size

In Barrett et al. (2016), this factor correlates with the creation of small accessible libraries, some sensory walls on the halls of kindergartens. This dimension aims at connecting spaces. In fact, following the answers of teachers in preschool education, it can be said that 90% gave a negative answer, regarding the existence of a library in the kindergarten hall. Also, regarding the display of the rules of movement through and outside the classroom, in the common spaces of the kindergarten, according to the answers of the educators, there are 86% in their kindergartens.

With the arrangement of the space in a stimulating way, it helps to develop the children's autonomy, there is a strong agreement in large and very large measure, in proportion of 40%, respectively 60%.

## „Light” size

Good natural light is generally a positive feature of a classroom design, and artificial light must be of good quality and sufficient.

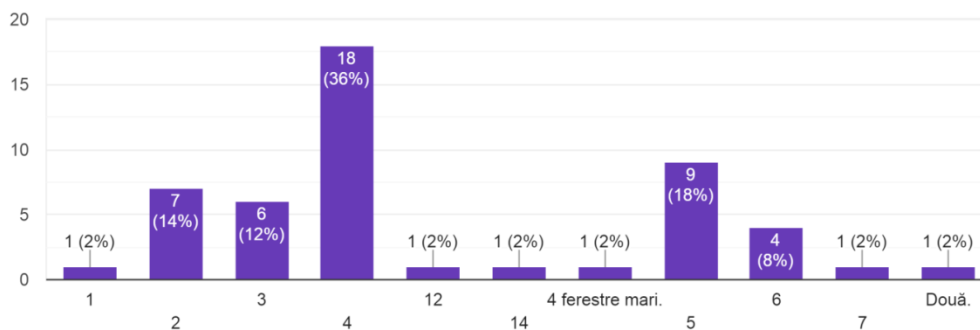
We focused here on the considerations of teachers in preschool education regarding the existence of classes with sufficient natural light. 98% answered that they work in bright classrooms, and 2% that they do not have enough natural light in the classroom.

In (56%) of the rooms there is additional natural light (it can be obtained by making small windows that allow light from the hallways or directly from the roof to enter the classroom), and 44% there is no such light source.

Natural light comes from windows, so it seems that kindergartens have 4 (36% of answers) and 5 (18% of answers) windows.

42. Câte ferestre are sala clasă?

50 responses

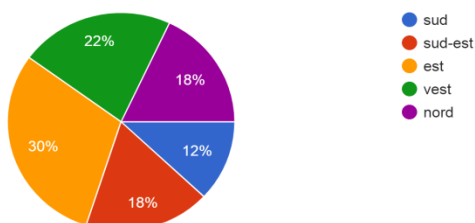


It was found that the size of the windows, through which light can enter the classroom, also matters a lot. 54% of the educators answered that the windows are suitable in size and 46% that they are large and the surface

of the windows represents 10% of the developed surface of the classroom - 94% gave an affirmative answer.

The orientation of the classrooms on coordinates aimed at obtaining as much natural light as possible, obtained through windows. 30% say that the classrooms are oriented towards the east, 22% say that the classrooms are oriented towards the west, and towards the southeast and north respectively 18% of the educators, 18% educators and 12% educators work in classrooms facing south. What is good to consider is that the rooms facing east, southeast and south directly benefit from natural sunlight during the morning.

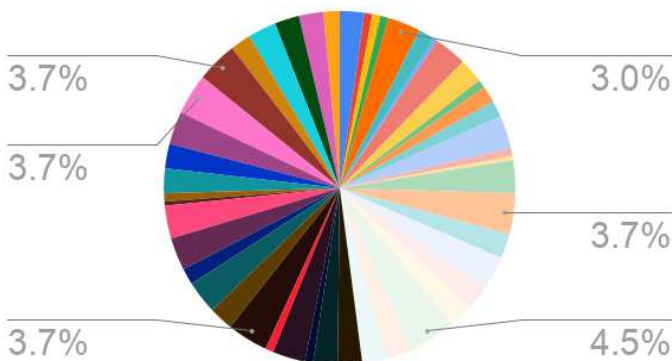
45. Spre ce direcție sunt orientate sălile de clasă?  
50 responses



The existence of artificial light sources is also important the place of their placement on the ceiling and the quality of lighting fixtures.

The educators gave a personal answer, about how many light sources they have in the classroom. Thus, the average is 4.5% and represents the existence of 12 light sources, 3.7% represents 10 light sources, 3% represents 8 light sources.

46. Câte surse de lumină se află în sala de clasă?



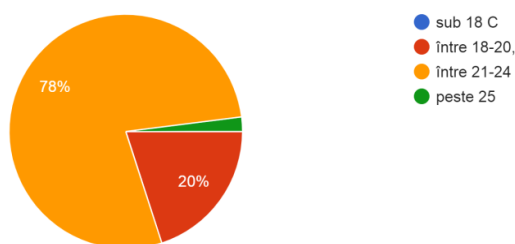
Regarding the place of placement of artificial light, 94% of educators have in the classroom artificial light at the level of the high ceiling and only 6% have artificial light in the classroom far below the level of the high ceiling. However, it seems that the light placed at a very high height tends to decrease the light intensity. And the teachers say that they have new lighting fixtures in a percentage of 54%, the remaining 46% do not have them.

### **Parameter: Air quality**

Good air quality is essential for the efficient functioning of the brain. We also monitored the frequency of classroom ventilation, which is not at all a suitable option, this being several times a day for 54%, however 40% of educators ventilate the classrooms after each activity, which is a very important habit for a good concentration of children in activities, and 6% of educators ventilate the rooms before the rest or relaxation period.

### **Temperature parameter**

In general, classrooms with a temperature of 18–20o C are optimal for children. To measure the temperature, 68% of teachers denied the existence of thermostats in each classroom or at each radiator, 32% said that there are thermostats in each classroom, or at each radiator. The average temperature in the classrooms in the cold / hot season is between 21-24oC, and this is confirmed by 78% of the educators; between 18-24oC in proportion of 20%, with variable above 25oC confirmed 2% of educators.



The quantity and quality of solar heat in the classroom is considered optimal by 78% of educators, it is considered high for 12% and low in proportion of 5% of educators.

### **Noise parameter**

Unwanted sound or noise can disrupt the learning process. It can come from outside, from other rooms of the kindergarten or from the classrooms where different activities take place.

72% of teachers say that the noise level is optimal for learning, 10% say that the noise level is high, and 18% have no problems with noise, its level is low.

It can be seen that, from the multitude of answers of the 50 educated respondents, we can present the sources of noise, which affect the development of activities. The highest values are represented by children 24%, they are considered the biggest source of noise in the classroom, next to it are external sources 4%, such as passing cars, building an attic, musical toys, a neon that probably does not work correspondingly, and even a desirable answer: „There is no source of noise in the classroom.”

It can be said that the noise coming from the classrooms is largely caused by the structure of the materials and finishes used. Acoustic panels are mounted on the ceiling (false ceiling) in the classrooms. The floors are quite well structured, 48% of the rooms have triple-layer laminate flooring, 44% have wood flooring, 8% have modular carpet.

Although these children hear clearly what the educator says in 98%, 2% consider that they cannot hear it clearly.

### **„Connections with the natural environment” parameter**

This connection exists when the classrooms and the kindergarten yard have trees / trees and various plants, mini-gardens, equipment that stimulates sensory development.

78% of teachers say that there is no exit from the classroom directly into the natural environment (yard, garden, park). Only 22% have direct access to the kindergarten yard or a park.

Only 4% of educators say they have learning spaces that offer additional learning opportunities, reading spaces, a living corner, a multimedia room, a room for personal development and even in the hallway of the kindergarten arrangements that represent a continuation of the learning environment arranged in class.

Playgrounds are arranged by age levels only in kindergartens where 56% of respondents work. 44% answered that they are happy that they have playgrounds or that they are not arranged by age.

Thus, it can be said that these differences are significant and not at all gratifying, because we want the positive and safe development of children, according to the particularities of age and in accordance with them.

Placement of playgrounds is important, but only 46% of educators responded that playgrounds are in the vicinity of classrooms.

Playgrounds organized by age and located on the ground floor, come in favor of small groups, but only half of the educators who have a small group also have the room on the ground floor.

The presented results provide a basis for developing a strategy for investment in preschool infrastructure, for an informed analysis that takes into account the particularities of the current situation in Romania and creating a learning environment conducive to learning and development of children and improving teaching practices used by teachers , from preschool education.

The following is the questionnaire, which focused in this research on the quality of teaching practices used by educators in the educational process.

This questionnaire presents 3 dimensions: The quality of teaching practices, The role of educators and their relationship with learners and Training.

### **Dimension Quality of teaching practices**

This dimension primarily presents educators' knowledge of what the phrase „good practices” means.

What do you think of when you hear the phrase „good practice”? Educators know the phrase. I obtained the most diverse answers: I am thinking of an efficient teaching, of new methods, strategies, projects and teaching materials, of modern, innovative methods, of continuous learning; „Useful practices”, „intervention”, „any materials, methods, applications that support and improve the education system”, „things useful for the education of the child”, „Active learning based on the use of active, active-participatory teaching methods and interactive”, „Education practices with positive results and positive feedback”, „Actions that lead to positive results”, „The best methods that a teacher can use in the learning process”, „arranging classrooms class to stimulate the child”, „intervention”, „1) identifying successful initiatives on important issues, 2) learning what works and what doesn't work in different contexts and 3) inspirational landmarks for decision making”, „Effective ways to which we can approach in the improvement of the educational act”, „Unique teaching methods to the liking of children, didactic materials, but also optimal learning strategies for the harmonious development of the preschool act its extrinsic motivation”, „Innovative ideas that can improve the quality of education”, „experimentation, exploration, play.”

Obtaining these answers it can be said that there is no correct answer, all the above mentioned are elements of the concept of good practices, which each teacher can adopt at a given time.

The description of the phrase „good practices”, from the perspective of the questioned staff, highlighted relevant answers, which indicate that educators know and can describe what a „good” teaching practice means, with positive effects on preschoolers' practice. answers: „A quality teaching practice

involves an organization of time, objectives and quality materials, as well as clarity and complexity of explanations. A good practice is „Efficient, clear with a well-defined purpose.” A good practice could be: „Exploration - involves the child's attempts and attempts to know and discover new things, it allows the conquest of the world around and stimulates motivation, is one of the fundamental actions of the child's development.”

„A good practice means what works well in kindergarten or on a larger scale. If you were to make a top 3, what examples would you choose? Please specify the field / problem to which it responds, the period of development”. The educators offered the most diverse answers, and the most relevant are :. The use of modern technology in teaching activities in kindergarten, followed by demonstration activities is a good practice that must be practiced, because it represents the future. The present, the context, also tells us.”

The teaching-learning-assessment process at preschool age has known new dimensions, the use of new technologies in education representing an extra experience gained by preschoolers, a specific closer connection with practice, because they act at the same time, which will lead them in the future to an efficient training in accordance with the requirements of an increasingly digitalized society. Knowing the fact that all activities in kindergarten are based on the game, this being the main form of organizing the instructive-educational process, we used modern strategies, respectively interactive toys.

„Starting from the fact that in preschool education, but also at other levels of education, the use of modern technology helps children to have a greater degree of concentration during activities, by increasing their stability and more effective engagement in teaching tasks, we designed a math activity in the middle group, using in one of the activity sequences, to ensure retention, an interactive bee-bot toy, which the preschoolers were very excited and interested in. Thus, during the mathematics activity with the preschoolers from the group we found that the learning of the contents was done in an actively participatory manner, the children being put in the situation to practice within this activity of consolidating the numbering within the limits 1-4, with with the help of the interactive toy „bee”, didactic tasks regarding the reporting of the number and the number to the quantity, by pressing the keys to move the toy from the number to the symbol that was represented by an image, corresponding to the quantity. (ex: the number 3 corresponds to the image with three tulips, the number 4 corresponds to the image with four ladybugs, etc.). The use of the interactive toy „bee” in the math activity, which had the role of an element of play, contributed to engaging children in playful tasks, problem solving, which immediately resulted in learning math in a fun, engaging way. and dynamic. This modern



means of education can be introduced in the education of preschool children in the activity of mathematics on consolidating the number and within the limits 1-10, with didactic tasks differentiated according to the purpose pursued.

The development of activities based on concrete action with objects, the use of modern technology, respectively interactive toys in the instructional-educational process arouses the interest of preschoolers in educational activities in general, stimulates their thinking, creativity, initiative, they experience positive emotions by engaging in pleasant tasks, which makes them participate with pleasure, joy and satisfaction of the pleasure of learning by easily settling on their faces.

„In order to meet the needs, current needs of children in today's society, we, the teachers, can design and carry out teaching activities, using interactive toys in most areas of experience and development. In language education activities, interactive toys can be used in certain sequences of the activity by performing didactic tasks of associating initial sound - word, identifying the singular and plural form of objects, by identifying the singular-plural image with the help of the interactive toy, in the formulation of sentences, based on the image that stops the „bee”, which was previously activated by pressing the scroll keys, but also in the integrated activities. Interactive toys are modern, attractive teaching aids, which we can successfully introduce in educational activities with preschool children in the group, stimulating the creativity of learners, initiative, thus encouraging didactic communication between teacher and children.”

It can be said that good practices can come from the multitude of factors that influence both children and teachers in the educational process, factors that determine the choice of the best ways to organize learning activities with schoolchildren. These practices can be obtained through personal experimentation or taken as a model, and to know the source from which these „good practices” come, which teachers use, we used the item: „What was the source of inspiration for these practices?”. From the answers obtained it can be said that most sources are represented by training courses, for example: training courses, Erasmus + projects, but also specific books, personal experience and sources of documentation. It follows that there is a wide range of resources for obtaining the most effective pedagogical practices. All of these practices have an impact on both parents and teachers. The surveyed educators consider as an impact of the educational practice on both parents and teachers, 16% “child-centered educational approach” and „children have acquired skills to manage emotions, to initiate social interactions and to and manage their own behaviors according to a set of rules; 16% also chose: „parental involvement” and „children have acquired skills to manage emotions, initiate social interactions and manage their own

behaviors according to a set of rules.” 12% chose all four response options: „child-centered educational approach”, „parental involvement”, „skills acquired through training activities”, „children acquired emotions management skills, initiate social interactions and to manage their own behaviors according to a set of rules;” The responses highlighted that practices have a significant impact on the child-centered educational approach, but also on the acquisition of skills „to manage emotions, initiate social interactions and manage their own behaviors according to a set of rules.” Most teachers were confronted with the non-involvement of parents in the activities carried out together: child-parent-educator, lack of materials for each child, „accommodating children with the new style”, „how to organize the learning environment”, but there are also 12 % of teachers surveyed who did not encounter difficulties. 68% of teachers reveal aspects that influence the quality of practices in early education consider that a relaxed, relaxed atmosphere is an aspect that influences the quality of practices, 66% of educators consider the clarity and complexity of explanations an aspect that influences 61.7% chose as aspect the interest of parents for the progress of children and for the quality of teachers' practices, 59.6% of educators chose to offer opportunities for participatory learning, 59.1% of educators highlighted the quality of teaching materials, 48.9% of educators chose to facilitate understanding subjects, concepts appealing to children's life experiences.

The aim was to take into account the space in which the activities are to be carried out, when choosing a quality practice. 68% of educators take into account the learning space, to a very large extent, 26% are concerned with the learning space, to a large extent, and 4% and 2% of the educators, respectively, do not take into account the allocated space.

But also what is accentuated, by the educators in the activity carried out in the group. Thus, it was found that 11 (22%) educators, out of 49 emphasize the development of new skills of children, 20 (40%) of educators focus on training and development of skills, practical skills of children, but also training, development of attitudes and children's behaviors, only 12% of educators emphasize the transmission / assimilation of information and knowledge to children and 32% emphasize interpersonal communication.

### **Dimension The role of the teacher and his relationship with students**

Within this dimension, it was studied what is the opinion of the educators regarding the role they fulfill, in the activity they carry out in class. 95.7% of educators chose the role of coach, 74.5% of educators chose the role of counselor, 42.6% chose the role of leader and 40.4% chose the role of supervisor, the role of external factor 8, 5%), 6.4%) the role of friend, second parent only an educator 2.1%

We also studied the positive behaviors and good practices that teachers develop and promote in their relationships with students during the daily program: educators chose empathy, respect and kindness, communication, cooperation, collaboration, understanding, spirit team, responsibility, independence, creativity, assimilation of new knowledge, playful spirit, fairness, constant feedback, development of new skills, stimulating children to complete the task correctly, positive-assertive language, critical thinking, permanent communication, emphasis on rules, play free, responsibility, fairness, understanding, managing emotions, respecting the person, the identity of each child, mutual help, courage, involvement, free expression.

„List the three most important strengths of your teaching activity, in terms of classroom management and educational practices:” For me the classroom atmosphere is: - cooperative - 63% totally agree, 30% are agree, and 2% educators disagree; -it is encouraging for 78%: totally agree - 20% agree; -is friendly for 78%) totally agree- 18%) agree and 2% educator disagree; „It is safe and relaxing” for 70% „allows children to share their opinions”, for 78% "allows children to learn”, 84% „expresses clear, positive behavioral expectations” for 68% and 2% of children do not -they expressed.

The affective attitude environment is directly related to educational practices and involves: „providing additional attention to children in need,” said 85.1%; „Understanding and emotional support for children” - 83%; „I encourage children's self-confidence” - 80.9%; „Use positive language” for 78.7%; 76.6% „provide permanent feedback and encourage children's autonomy and perseverance” - 68.1%; „I remove inappropriate behaviors and evaluate objectively”, answered a percentage of 51.1% of educators; „I stimulate critical thinking and pursue persistence in children's learning tasks”, in a percentage of 42.6%; „I discourage indifference and non-involvement”, 40% (19 educators). Thus, it can be said that most educators provide attention, understanding, emotional support and use positive language, encouraging children's self-confidence in classroom practice.

Teachers emphasize that classroom management is important in having effective educational practices and refers to a set of activities and behaviors of the teacher that aim to maintain an atmosphere of cooperation and emotional involvement of children in learning tasks. The priority way to improve vocational training is training focused on the development of practical psycho-pedagogical skills-59.6%) chose as a priority the training focused on the development of specialized practical skills, and 57.4%) chose as a priority training focused on enriching theoretical and practical information on the learning environment. Following the application of the two questionnaires, which aimed at both the learning environment and teaching practices, we found out what the implications are, each dimension. Also, the general hypothesis, which aimed at the existence of a favorable,

stimulating learning environment and good educational practices for the global, harmonious development of children at an early age is mostly confirmed, because preschool teachers use various educational practices, in the didactic activity favored by the created learning environment. The structure of the kindergartens, in the care of the surveyed teachers' activity, is optimal for learning, from the point of view. There are all the weaknesses on artificial brightness parameters, thermostat lip temperatures and air measurement arrangement and care space to provide greater learning opportunities, and the playground outside the classroom is not designed to be age-appropriate.

Teachers in preschool education use various educational practices in the teaching activity favored by the learning environment created. And the learning environment has a positive influence on teaching practices to a great extent, a statement provided by the results obtained by the responses of respondents in preschool education, which in organizing activities and choosing best practices take into account the learning environment created.

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## CHOOSING AN ACADEMIC PATH, A TRUE ACT OF RESPONSIBILITY

**Daciana LUPU, Ph. D.**

**Transilvania University of Brasov, România**

[dacianalupu@unitbv.ro](mailto:dacianalupu@unitbv.ro)

**Abstract:** *This paper aims to investigate the degree of satisfaction with the training offered by the academic path, the main reasons why young people choose a certain faculty and the impact of people with authority over young people, when it comes to choosing the academic path. The research group included 221 students ( 1st, 2nd, 3rd year of university study- undergraduate level). A very large number of students, 215 (97.3%) say they are satisfied with the professional skills formed by the study program they attend. A percentage of 50.7% students say they are satisfied, 25.8% are very satisfied and 20.8% are relatively satisfied. The main reason why young people turned to college were personal passions and inclinations (26.2% - 58 subjects), and most young people, almost half, said they made the choice on their own (41.18% - 91 subjects). Concerning those who influenced the young people in choosing the academic path, it was observed that: 32.58% - 72 subjects stated that "someone in the family (parents, grandparents, uncles, aunts)" were the people who had an influence on their decisionmaking.*

**Key words:** *students; competences; skills; degree of satisfaction; reasons involved in choosing the faculty; academic path; people who influenced the choice of the academic path.*

### 1. Introduction

The choice of college by the young people of Z generation is and will be one of the main problems of adolescence. When choosing the academic path a group of four major factors are to be considered: the reputation of the institution, personal development, accessibility and social pressure. Reputation refers mainly to the brand of the institution and its teachers; personal development captures career aspects and passions; accessibility



implies taxes and the pressure is represented by parents and the diploma to be obtained afterwards. (Golu&Gorbănescu, 2013).

## **2. Background**

Decisions that favors towards a particular Hong Kong youth university focus on infrastructure, prestige and culture (Ho, Tse, & Sum, 2020). The Job opportunities and the reputation of the institution are mentioned by other researchers, as the most important and also those represent the factors that managers should take into account, when trying to increase the competitive advantage of their institution (Henriques et al., 2018). The requirement of employability on the job market has led universities to make changes in their curricula (Jaradat, 2017). Aligning the early work experiences of future graduates with the opportunity to continuously ongoing the university studies, can have a positive impact on the confidence and professional development of graduates, which in turn, can lead to greater job satisfaction and retention on the job market (Evans et al., 2010). Factors related to professional stability and flexible schedule have influenced the career choices of medical students (Subait et al., 2017). The facilities offered at a high standard are perceived as having an important influence in the choice of the institution by the future students (Price, Matzdorf , Smith, &Agahi, 2003). The results of other research suggest that performance in the evaluation phase, courses at a private institution prestige, fear of debt can affect young people's decisions (Mangan, et al., 2010). The information provided by universities and the cost of the study package are factors that heavily weigh on the choices made by young people (Briggs & Wilson, 2007). In Ghana, the courses offered, the prestige of teachers, the library and the presence of the Internet, the flexible schedule of lectures and the recognition of qualifications by employers were the main factors influencing students' choices towards a university (Fosu&Poku, 2014).

We will begin our analysis taking into account the sources of satisfaction declared by young people when it comes to choosing their future academic path. If we refer to the three components of a university's image: affective, cognitive and the global image in correlation with the level of satisfaction, we see how the cognitive component of the image is an antecedent of the affective component (Azoury, Daou, & Khoury, 2014). The results of a Portuguese study confirms that a strategy focused on sustainable development (promoting a responsible university) influences the positive perceptions of future students, as a precedent for the educational services quality and their satisfaction (Santos et al., 2020). In Romania, a modern material base, many classrooms, cleaning the campus, fulfilling all commitments, correct communication of information, trust in the university programs are the elements with a visible contribution towards achieving

students satisfaction (Negricea, Edu, & Avram, 2014). In the UK, the quality of lectures and seminars, where direct contact between student and teacher is involved, it is considered to be the most important factor of satisfaction. This is followed by: the degree to which course elements are integrated as well as the usefulness of online materials (Sutherland, Warwick, & Anderson, 2019). Teacher's expertise is considered to be the most influential aspect among the factors that are taken into account in the decision to choose a university in Pakistan (Butt, Rehman, 2010). The image and reputation of the institution, academic program and teaching methods influence student satisfaction in Kuwait as well (El-Hilali, Al-Jaber, Hussein, 2015). For universities offering online courses it was found that: the strength of the relationship between social presence and satisfaction was moderated by the length of the course, discipline and the relationship between social presence and perceived learning was moderated by the duration of the course, discipline and the targeted audience. (Richardson, et.al. 2017).

We can take a look at students' sources of dissatisfaction towards universities and outline a clearer picture. Students are experiencing dissatisfaction towards the offer of study programs, the teaching process and the resources for scholarships (Desselle & Conklin, 2010). High-income jobs are important when it comes to students' expectations and career satisfaction. Most students in Turkey consider that the education provided to them is not enough either regarding their profession or to meet their future financial expectations (Zengin, Sen, & Solmaz, 2011). Students who do not attend the day-to-day form of university study, and experience the online learning, as the main form of interrelationship, can be subjected to anxiety (Abdous, 2019).

A research conducted in South Korea identifies a number of recommendations and areas of intervention, starting from learning experiences offered, towards support services (Alemu & Cordier, 2017). The campus is usually designed to accommodate students in the best possible conditions. In order to attract future students to universities, it is necessary to improve student satisfaction with the housing and food facilities offered by the campus (Najib, Yusof, & Sani, 2012; El-Said & Fathy, 2015).

The factors presented as having an important role in choosing the academic path are: parents, friends, teachers and the media. There are authors who support the importance of the family in the development of occupational interests, as well as in the development of academic aspirations (Bryant, Zvonkovic, & Reynolds, 2006). The profession of parents has an influence on the young peoples' choice of future careers, along with the media and the personal choices (Saleem et. al., 2014). The results of a research showed that parents, together with friends, were the most influential sources of information in the process of decision making when young people

are choosing the university. Apart from personal contacts, a future student's visit to the university campus, weighed heavily in the decision-making process (Johnston, 2010). The results of a research identify the role and importance of the media in choosing the university where future Dutch students are about to study (Constantinides& Zinck Stagno, 2012).

### **3. The Research Methodology**

#### **3.1. Research objectives**

The research objectives are focused on: analyzing the degree of satisfaction concerning the training offered by the faculty; identifying the main reasons why young people choose college; identifying persons with authority over young people when it comes to choosing the academic path.

#### **3.2 Research hypothesis**

The main research hypothesis was:(1) we assume that students are generally satisfied with the training provided by the faculty; if they are dissatisfied, the dissatisfaction refers to the activities related to the practical modules; (2) we assume that the main reason why students have chosen their academic path are the inclinations, even their passion for the chosen field, a field in which they want to practice after completing their studies; (3) we assume that the persons with authority influencing young people's choice of the academic path are their parents and teachers.

#### **3.3 Research method**

The survey was based on a questionnaire, as the main method used in the research process. The questionnaire was built on two main dimensions: competences formed according to the university specialization and competences formed by the psycho-pedagogical module (Alpha Chronbach Coefficient: 0.864).

#### **3.4 Research group**

The research group comprised 221 students (from the 1st, second, 3rd year at the university- bachelor's degree), students who have completed or were currently completing the psycho-pedagogical module (N - 221). Of these, 82.8% (183 subjects) were female, the rest 17.2% (38 subjects) were male. If we take a look at the age distribution, we notice that most of the respondents belong to the age range 21-25 years (84.2% - 186 subjects), next to a small percentage, those aged between 31-40 years (7.7% - 17 subjects), then those aged between 26-30 years (6.8% - 15 subjects) and finally, those over 41 years old (1.4% - 3 subjects). Another criteria of characterization of the researched subjects was: the faculty that they are attending. Thus, most students (33.0% - 73 subjects) were from the Faculty of Psychology and Education Sciences and from the Faculty of Economic Sciences and Business Administration (25.8% - 57 subjects). Then follow the ones from the Faculty of Foreign Languages (16.7% - 37 subjects), also students from

the Faculty of Physical Education and Mountain Sports (10.4% - 23 subjects), those from Music and Law (5.4% - 12 subjects), Sociology and Communication (1.8% - 4 subjects) and the smallest percentage were from the Faculty of Electrical Engineering and Computer Science (1.4% - 3 subjects). Of the investigated students, the vast majority are attending in the final university year (year 3) - 94.1% - 208 students. Only 11 students (5.0%) are from year are attending the 2nd year and there were only 2 students (0.9%) are from the 1st year.

#### **4. Results**

We will begin the results analysis with the first hypothesis: we assume that students, in general, are satisfied with the training offered by the faculty; if they are dissatisfied, this refers to the activities related to the practice modules. On item 5 of the questionnaire which refers to the degree of student's satisfaction concerning the study program, more precisely concerning the training and development of professional skills, there is an average of 3.94 with a standard deviation of .817 (on a scale from 1 to 5). A very large number of students, 215 (97.3%) say they are satisfied with the professional skills formed by the study program. Of these, 50.7% say they are satisfied, 25.8% are very satisfied and 20.8% are relatively satisfied. The few dissatisfied students (2.7%) are from the following faculties: Psychology and Educational Sciences - 1.35% (3 subjects); Economic Sciences - 0.9% (2 subjects) and Physical Education and Mountain Sports - 0.45% (1 subject). The specializations where they are dissatisfied are: Psychology 1.35% (3 subjects), respectively Finance-Banking, Management, Physical Education and Sports by 0.45% (1 subject). All 6 dissatisfied students (2.7%) are aged between 21-25 years old. If we refer to the interpretation by gender, girls and boys register a value of the mean values significantly equal: 4.02 with a standard deviation of .752 boys and 3.96 with a standard deviation of .831, girls. The students were asked in another item of the questionnaire if they would have the opportunity to give time back "to which faculty they would enroll". Their answers, for the most part, were that yes, they would also opt out for the same academic path and the same specialization (study program): 78.3% - 173 subjects. Only 7.7% (17 subjects) would opt out for the same academic path, but in another specialization (study program) and 31 of the subjects (14%) consider that the first time they were misdirected and the second time they would opt for a different faculty. If we look at the satisfaction towards faculty from the perspective of professional training and the opportunity to be able to hire immediately after graduation, the positive attitude decreases, only 66.1% of students (146 subjects) say they feel professionally trained and skilled. An item of the questionnaire investigates the competencies formed by the faculty (see Table no.1).

Table no. 1. Percentage values concerning students' competencies formed by the faculty

No.	Skills	Percentage	Students
1	Computer skills	94.6%	209
2	Research skills	66.1%	146
3	Interpersonal and communication skills	55.7%	123
4	Managerial skills	55.7%	123
5	Assessment skills	47.1%	104
6	Psychosocial skills	43%	95
7	Entrepreneurial skills	38.5%	85
8	Teaching skills	32.1%	71

It can be observed how on top of the skills trained by the faculty, students have chosen the computer skills, in a very high percentage: 94.6% - 209 subjects. These competencies are followed by the research ones, in a percentage of 66.1% - 146 subjects and next ones are the relationship and communication skills, followed by the managerial ones, with a percentage of 55.7% - 123 subjects. It is gratifying to see computer skills in the first place, especially if we consider that the faculty forms superior computer skills: the use of programming languages, and computer programming skills specific to different specializations, advanced statistical processing, etc. Students state that at least the faculty consists of: teaching skills (32.1% - 71 subjects), entrepreneurial skills (38.5% - 85 subjects) and psychosocial skills (43% - 95 subjects). It is sad to see that entrepreneurial skills are rated on the last places, skills that would need to be trained for 21st century society.

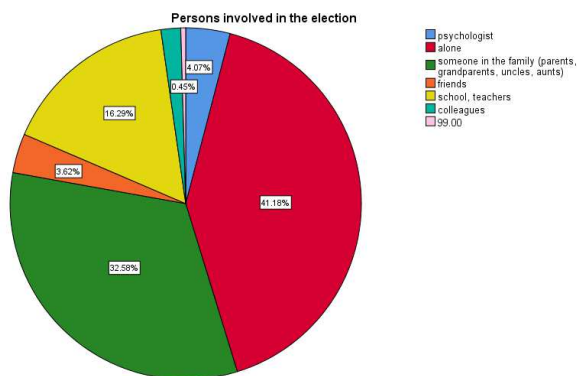
Most of the students' dissatisfactions (34.4% - 76 subjects) are registered towards the practical activities, activities that should be well programmed and planned, linking the theoretical aspects to the applied ones. Other dissatisfactions are directed towards the insufficient specialized subjects (projects, optional courses) (15.4% - 34 subjects) and towards the insufficiency or lack of language courses, pedagogy / psychology, public speaking, teamwork, career development (10% - 22 subjects). If we look at the correlations between variables, we notice that there are positive correlations of a medium level: between managerial skills and entrepreneurial skills (.444 \*\* with a p - 0.01), between managerial skills and assessment skills (.422 \*\* with a p - 0.01) and between managerial skills and research skills (.476 \*\* with a p - 0.01).

Analyzing of the second hypothesis: we assume that the main reason why students choose the academic path are their inclinations, even the passion for the chosen field, a field in which they want to work after graduation. The item aiming at the main reason why young people turned to college registered the following results: orientation according to personal

passions and inclinations (26.2% - 58 subjects); desire for a career in the field (19.5% - 43 subjects), acquisition or development of professional skills (11.3% - 25 subjects), the rest of the results registering percentages below 8% (to be mentioned here, the large number of undecided students: 14.9% - 33 subjects ). It is very important that for university studies, the choice it is made taking into account the passions, the inclinations of each of the young subjects. It can be a prerequisite for obtaining further satisfaction in the applied profession. When asked to give a second reason for choosing the academic path, the students were quite reserved. Only 23.1% (51 subjects) stated a second reason, as “I liked the specialization or I found the specialization interesting”, the rest of the results registering percentages below 6%. Here, for this second reason, it is worth observing that there are a large number of students who do not respond to this request (42.1% - 93 subjects).

The third hypothesis: we assume that the people with authoritarian influence towards their academic choice are parents and teachers. On the item regarding the people who influenced young people making the choice, most, almost half, say they made the choice, by themselves (41.18% - 91 subjects). These answers are aligned with another item that investigates whether young people have chosen their faculty according to their wishes. Most young people, 94.1% - 2 08 subjects, state that yes, they have chosen their faculty according to their wishes. Returning to the people who influenced young people in makingtheir faculty choice, it can be observed that 32.58% - 72 subjects stated that "someone in the family (parents, grandparents, uncles, aunts)" were the people who influenced them. School, through teachers is seen as a factor of lower influence: 16.3% - 36 subjects. Psychologists, friends, colleagues are the factors with the least influence, below 10% (see Chart no.1).

Chart no. 1. The people involved in decisionmaking while choosing the academic path



## 5. Conclusions

The degree of student's satisfaction concerning the study program, more precisely with the training and development of professional skills registers an average of 3.94 with a standard deviation of .817 (on a scale from 1 to 5). A very large number of students, 215 (97.3%) say they are satisfied with the professional skills trained by the study program. Of these, 50.7% say they are satisfied, 25.8% are very satisfied and 20.8% are relatively satisfied. We notice that there are positive correlations of medium level: we can look at correlations between managerial skills and entrepreneurial skills (.444 \*\* with a p - 0.01), between managerial skills and evaluation skills (.422 \*\* with a p - 0.01) and between managerial skills and research skills (.476 \*\* with a p - 0.01). The analysis of the main reason why young people turned to college, recorded the following results: orientation according to personal passions and inclinations (26.2% - 58 subjects); desire for a career in the field (19.5% - 43 subjects), acquisition or development of professional skills (11.3% - 25 subjects), the rest of the results registering percentages below 8% (it is worth mentioning here, the large number of undecided students: 14.9% - 33 subjects). Asked about the people who influenced them in the academic path decision making process, most young people, almost half, said they made the choice by themselves (41.18% - 91 subjects). The answers are aligned with another item, that investigates whether young people chose their academic path according to their wishes: the majority of young people, 94.1% - 208 subjects, stated that yes, they chose their academic path according to their wishes. About the people who influenced the young people in the academic path choosing process, it could also be observed: 32.58% - 72 subjects state that "someone in the family (parents, grandparents, uncles, aunts)" were the people who influenced them. School, through teachers it is seen as a factor of lower influence with a share of: 16.3% - 36 subjects. Psychologists, friends, colleagues are the factors with the least influence, below 10%.

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# METHODS TO BUILD, DEVELOP MATHEMATICAL CONCEPTS AND SKILLS IN THE EARLY CHILDHOOD MATHEMATICS IN NIGERIA

**Onoshakpokaiye, E. ODIRI,**  
**Institute of Education,**  
**Delta State University, Abraka, Delta State, Nigeria.**  
**onos68@yahoo.ca**  
**ORCID: 0000-0002-8067-9441**

**Abstract:** *Effective teaching and learning of early childhood mathematics are of great importance to every country's educational system, most especially in Nigeria. Early childhood mathematics is the first contact of young children with mathematics in the formal school setting. Therefore, this early stage must be well taken care of to foster and build a proper solid foundation in their mathematics education and other subjects. This stage of life is where mathematics concepts and skills can be developed in them for future use and success in school. Mathematics assist young children to think and make sense of the world around them. The paper looked at Nigeria education policy briefly, some of the ways effective teaching and learning of early childhood mathematics can be achieved and developing mathematical counting skills in early childhood mathematics. Some methods of teaching mathematics at the early childhood were also discussed.*

**Key words:** *Methods; Mathematical concepts; skills; Early childhood; Mathematics*

## **Introduction**

The recent and proliferation of early childhood education programme throughout the country, Nigeria, calls for an urgent attention to intensify effort to maintain quality early childhood education. There is need for professionally qualified mathematics teachers and effective teaching methodology on how to handle or teach these beginners of mathematics. Many practicing day care providers/owners and teachers we have today do

not have the necessary training or requirements needed to promote early childhood mathematics education. Various types of knowledge, expertise and skills are very crucial in assisting the young children learn mathematics. The teachers need to acquire expertise in the areas of how to teach early childhood mathematics. The mathematics teachers need to ascertain the knowledge these children have already acquired in mathematics, the way they think, reason about it, and how they learn it. Research has shown that young children have surprising interest and competence in early childhood mathematics (Ginsburg & Baron, 1993). The teachers need to appreciate the knowledge these children have already gained in mathematics that they are to learn. Early childhood mathematics deals with mathematical ideas such as cardinal numbers and patterns, there is the need for teachers to understand them (Ma, 1990). Teachers needs to understand, develop and use effective strategies for teaching the young children mathematics (Lampart, 2001). Early childhood mathematics is very important for young children's present and future success in school. Research has shown that all young children have the ability to learn mathematics and become competent in it (National Research Council. (2009). At this early stage of life, the children are eager and interested to learn mathematics, but much attention are not being paid to teaching them before entering the formal school settings for learning.

### **Nigeria Education Policy**

Primary education is the foundation and major component of the universal basic education (UBE) programme in Nigeria. The main objectives of the Nigeria education system as stated in the National Policy on Education being; access and to ensure quality in the delivery of basic education. Some other objectives are: i) “to inculcate in the children permanent literacy, numeracy and the ability to communicate effectively (FRN, 2013)”. ii) “Lay a sound basis for scientific, critical and effective thinking. Provide opportunities for the child to develop life manipulative skills that will enable the child function effectively in the society within the limits of the child’s capacity (FRN, 2013).” In order to achieve these stated objectives, the federal government included mathematics in the National policy on Education and therefore made it as a compulsory subject throughout all levels of educational system. To inculcate in the children permanent literacy and numeracy and laying sound basis for scientific and reflective thinking call for the study and the use of mathematics.

There are different levels of classroom competence the teachers must possess in order for his/her teaching of the early childhood mathematics in the school to be effective (Onoshakpokaiye, 2010). The purpose of teaching mathematics to the children in school is enable them develop and acquire mathematics skills that will assist them to succeed in their future education,

become useful to themselves and contribute to the progress of the society which they lived. Hence there is the need for the mathematics teachers to use effective and appropriate methods or strategies that can arouse the young children interest towards studying or learning mathematics at all levels of education, most especially the young children. By so doing, early childhood mathematics will be actualized and the ultimate stated objectives of the national policy on education will also be achieved

### **Early childhood mathematics education**

Mathematics is an indisputable queen of all sciences and one of the core subject students offered in schools both at the primary level up to the tertiary institutions of learning due to its important nature to human learning and everyday activities. Mathematics education for early childhood is a basic foundation for the future learning of mathematics. The beginning of child learning of mathematics is of great importance. The early years of young children life requires them to explore or discover mathematics concepts and ideas of the world around them. It enables the young children to reason, think critically and make sense out of the world inside and outside the school which eventually help them in building solid foundation for their success in school.

The early stage of the children in mathematics requires them to understand the concepts, ideas and manipulative skills needed to understand the subject “mathematics” before attaining adulthood. At their early stage of life young children require mathematical understanding of the concepts and skills needed to succeed in their education in all careers and even everyday life. Mathematical proficiency or competency is needed from the young children for them to succeed in their course work that provides a gateway to technological literacy and higher education (Haycock & Huang, 2001, Haycock, 2001, Schoenfeld, 2002, The Education Trust, 2001). Apart from ensuring a basic and sound mathematics foundation for all members of the society, there is the need to equip the increasing numbers of young people for work which require a higher proficiency level (Kilpatrick, Swafford & Findell, 2001, U.S department of labour bureau of labour statistics, 2000, NAEYC & NCTM, 2010). According to National Association for the Education of Young Children (NAEYC) and The National Council of Teachers of Mathematics (NCTM) (2010), with reference to Americans observed that “if progress in improving mathematics proficiency of Americans is to continue, much greater attention must be given to early childhood mathematics experience”. This statement is also applicable to Nigerians, no progress can be made without the success or improvement of the early childhood mathematics. For a nation to improve or progress in mathematics, early childhood mathematics must be given priority, since it is

the foundation upon which every other levels of education are built, otherwise that nation will be backward mathematically (Onoshakpokaiye,2007).

The future of the young children in learning and understanding mathematics require them building a solid foundation at the early stage based on high-quality of teaching, professional teachers and accessible to good mathematics education, exerting much effort, time and commitment by the mathematics teachers to teach the early childhood mathematics and which will eventually contribute to significant progress of young children mathematics learning. The young children need to be allowed to experience mathematics in every setting through effective research- based curricular and teaching practices. In carry out these practices, the teachers are required to have good support of the education policies, good educational facilities and resources to enable them succeed in this challenging task and important work of teaching the young children (NAEYC & NCTM, 2010)

### **SOME OF THE WAYS EFFECTIVE TEACHING AND LEARNING OF EARLY CHILDHOOD MATHEMATICS CAN BE ACHIEVED**

#### **Recognize and Build on the young children’s knowledge and experience**

Noting that the young children came from different home background, social economic status, and cultural background and having different experiences, there is the need for the teachers to recognize these individual differences so as to accommodate and have effective early childhood mathematics teaching /learning. Building and recognizing children individual experiences and knowledge are central to the teaching/learning process (NAEYC & NCTM, 2010). Since these children are from different cultural, linguistic, home background and having different experiences from their community, there is need for the mathematics teachers to recognize their individual differences. It is of immense importance for the teachers to know much about such differences among them and put much effort so that he/she can build bridges between these individual different experiences and new learning so as to achieve equity and educational effectiveness (Berk & Winsler, 1995, Heath, 1983, Vygotsky, 1934)1986).

Recognizing the young children individual strengths, learning styles will help in making mathematics curriculum and instruction to be more effective. Since the young children first mathematics knowledge they acquired is through intuition, the mathematic concepts need to be well explained to enable the children make maximum use of their prior knowledge and therefore connect it to school mathematics. The young children are happy and enjoy their early informal experiences with

mathematics. Therefore, improving the early childhood mathematics education can provide basic foundation for the young children success in school. Building on the young children mathematical experiences acquired through play and the relationship between their learning and their everyday life help in teaching and sustain the interest of the young children in mathematics. When young children have a pre- knowledge of a particular mathematics concepts or ideas, the work become easier for the teacher to carry out. Since they already have entry behavior and it make easier for them to understand. When the previous experiences or knowledge of the young children are connected to their new experiences or knowledge, they therefore gain confidence, competence and are interested in mathematics (NCTM, 2000, Bredekamp & Rosegrant, 1995). Hence teachers need to ascertain the young children previous knowledge or experiences and therefore build on it so as to enable them understand and succeed in learning mathematics.

In early childhood mathematics, there are many experiences require from the young children to enable them relate their knowledge to mathematics language and concepts which they have acquired through intuition at the early childhood mathematics. When these concepts they have acquired through intuitive are effectively taught, it assists them to make full use of their prior knowledge and eventually connect it to the school mathematics. Effective early childhood mathematics programmed provide many opportunities for young children to represent, reorganize, generalize, quantify, and refine what they have gained through experiential or intuitive level (Clements & Conference Working group, 2004).

### **Curricular offered should match their mental development**

For effective teaching of the early childhood mathematics to take place in the schools, the mathematics curriculum offered to the young children must be well structured according to their mental development to sustain their interest. What the teachers will teach, how to teach it and who to teach it, is of great importance in the teaching of the young children for the teaching /learning to be effective. Nwachukwu (2009), stated that “knowledge has various levels of objectives which can be grasped by the child whose mental development is keeping with the levels of knowledge given to them.” He stated further by saying that teachers should take the entry behavior of the young children into consideration since it is the basic foundation in which new knowledge is built. According to Onoshakpokaiye (2007), young children have different ways of understanding particular mathematics concepts therefore teachers should endeavour to intensify effort to carry them along. The author stated further that young children’s individual strengths, learning styles makes mathematics curriculum to be more effective at the early childhood. For teaching / learning of mathematics

to be effective, mental development of the child must match the activities to be carried out otherwise teaching will be ineffective (Onoshakpokaiye, 2010).

### **Encourage young children natural interest and good learning environment**

Young children at their early year of life usually show a natural interest and also enjoy mathematics since it is their first formal contact with mathematics. National Research Council (2009) stated that “mathematics learning has often been more a matter of memorizing than of understanding. Today it is vital that young people understand the mathematics they are learning. They are positively disposed to do and to understand mathematics when they first encounter it.” Research has showed that young children spontaneously explore and use mathematics before entering school, this usually come through intuition and during this stage their mathematical knowledge can be quite complex and sophisticated (Seo& Ginsburg, 2004). The young children play and interests are the foundation of their first mathematical experiences, which provide basis for their future mathematics learning in school (Seo& Ginsburg, 2004; Van Oers, 2010). NAEYC & NCTM (2010), stated that during the young children play and activities they usually explore mathematics ideas and processes, here they make comparison of quantities, classify, sort and observe shapes and patterns, in this process they acquire mathematical concepts, ideas and skills useful for learning mathematics. NAEYC & NCTM (2010), went further to state that “mathematics helps children to make sense of the physical and social worlds around them, and those children are naturally inclined to use mathematics.” When teachers capitalize on such moments and carefully plan variety of experiences with mathematics ideas in the mind of children, mathematics sense and interest can be cultivated and serves as basis for further learning.

It is of great importance for young children to develop confidence in their ability to understand and use mathematics. Let them see mathematics as within their reach. NCTM (2000), stated that since experiences of the young children shape their attitude towards mathematics, it is important to engage and encourage good learning environment for their early encounter with mathematics to enable them develop confidence in their ability to understand mathematics and also to make use of mathematics. According to Clements & Conference Working Group (2004), young children develop disposition, they are curious, imaginative, inventive, and flexible and persistence when their experiences are positive in the process of using mathematics to solve problems and this eventually contribute to their future success in early mathematics in and out of school.



### **Mathematics curriculum and teaching practices should be based on the knowledge of young children developmental stages**

Early childhood mathematics curricula and teaching practices should be based on solid understanding of both mathematics and the development of the young children. This should be well monitored through observation and other informal evaluations to ensure that instructional decisions are based on each child mathematics needs. The curriculum should be well structured so that the young children will able to cope, comprehend and cover it. The environment and the background of the young children should also be well reflected in the curriculum. Knowledge of the young children developmental stages is very crucial as regard to teaching and learning of mathematics. First and foremost, teachers must be equipped or have a broader knowledge of young children cognitive development, their reasoning ability, concepts development and then how these concepts can be acquired.

Every decision as regard to mathematics curriculum and teaching practices should be based on the knowledge of the young children development and learning such as their cognitive, linguistic, physical and social-emotional. For the effectiveness of mathematics teaching, there is the need for the mathematics teachers to have broader knowledge of cognitive development of the young children and also be familiar with their social-emotional and motor development, all of these are relevant to mathematics develop (NAEYC & NCTM,2010). To determine the types of questions or puzzles and manipulative materials that will be needed to complement learning of mathematics, the teachers need to combine the knowledge of early childhood cognition with the knowledge of their motor development (Bronson, 1995).

### **Make provision for enough time, materials and engage the children in play to help them explore and use mathematics ideas**

According to NAEYC & NCTM (2010) “children become intensely engaged in play. Pursing their own purposes, they tend to tackle problems that are challenging enough to be engrossing yet not totally beyond their capacity.” Agwagah (2005) stated that to develop critical thinking in young children, mathematics thinking should be based in teaching mathematics. The interactions of the children during play provide them with the natural challenges that involve critical thinking. When young children have the same problems, they usually discover different approaches on how to handle it, then discuss it and learn from one another (Natasi& Clements, 1991, Yackel, Cobb & Wood1991). Play tend to prompt and promote critical thinking and learning in mathematics and other subjects.

Though play does not guarantee mathematical development, but it assists in the development of mathematical ideas. The important aspect of play is that it assists in learning and also enable the young children to develop critical thinking and promote learning of mathematics among them. For the teachers to achieve the purpose use of play in promoting mathematics learning at the early childhood, he/she need to follow up by reengaging the young children to recall and represent mathematical ideas acquired during play time. Mathematics learning is enhanced when the mathematics teachers asks the young children provoking questions that needs clarifications, extensions, and development of new understandings (NCTM, 2000). Play assist the children to acquire mathematics skills and experiences on how objects are related, these experiences serve as foundation for the development of mathematics concepts (NAEYC & NCTM, 2010). Classic unit blocks and other construction materials such as connecting blocks give children entry into a world where objects have predictable similarities and relationships (Leeb- Lundberg, 1996, Pratt, 1948, NAEYC & NCTM, 2010).

There should be provision of enough teaching materials and good numbers of periods in the early childhood mathematics programmed to enable the children learn mathematics through playful activities that encourage counting, measuring and constructing with blocks (NCTM, 2000, Hildebrandt & Zan, 2002). The teacher can observe and study the children during play, learn more about their development, interests and therefore use the knowledge to teach them and inform the curriculum planner and instruction.

### **Integrate mathematics with other activities**

In teaching young children mathematics, the teachers need to integrate mathematics with other activities to make the lesson more meaningful and interesting to them. The children everyday activities and routines can be used to introduce and develop important concepts or ideas in mathematics to the children. Early childhood mathematics teachers can help the young children develop mathematical knowledge through other activities carry out by the children. The teachers can use every available opportunity to build and develop the young children understanding of mathematics. Early childhood mathematics teachers should actively introduce mathematics concepts, good methods and language through different appropriate experiences and effective teaching/learning strategies.

Every activity of the children can be used to teach them mathematics. Mathematics can be integrated into the young children experiences such as social studies, literature, music, language, science, art, movement and all parts of the classroom environment. An extended investigation gives the young children excellent opportunities to apply mathematics, as well as to

develop independence, persistence and flexibly in making sense of real-life problems (NCTM, 2000). NAEYC & NCTM (2010), stated that “teachers should ensure that the mathematics experiences woven throughout the curriculum, it should follow logical sequences, allow depth and focus, and help children move forward in knowledge and skills”. It further stated that the concepts should be developed in a coherent and purposeful manner.

### **Introduce mathematical concepts, good teaching methods and appropriate experiences.**

Teachers’ efficient use of different approaches, strategies and materials to support the interest and ability of the children in mathematics is of great importance for an effective early childhood mathematics curriculum programme. Besides integrating significant mathematics learning in play, classroom routines, learning experiences across the curriculum are necessary. For effective early childhood mathematics programme, there is need to provide carefully planned experiences that focus attention on children development of mathematical concepts, ideas or set of related ideas. Teachers need to think of ways in engaging young children in revising previous concepts when planning for new investigations and activities, such experiences help the children to link the new concepts with the previously acquired mathematics ideas and concepts (NCTM, 2000).

Mathematics is an integral part of everyday life and so it should be connected to everyday activities (Onoshakpokaiye, 2007). The method of introducing and modifying games by the teachers can promote important mathematics concepts and provide opportunities for children to practice skills (Kamii& Housman1999, Griffin, Case &Capodilupo, 1995). For instance, teachers can modify any simple board game in which players move along a path to make the game more mathematically powerful and more appropriate for children of differing developmental levels (Kamii& Housman, 1999, Charlesworth, 2000, NAEYC & NCTM (2010). According to Fuson (2004) cited in NAEYC & NCTM (2010), effective early childhood teachers build on children informal mathematics knowledge and experiences, always taking children background and language into consideration.

Teacher education programmes should pay special attention to the mathematics curriculum of early childhood and develop themselves professionally to support high-quality mathematics education. They should be versatile in terms of mathematics content, pedagogy and knowledge of child development and family relationships. The development of institutional policies that promote teachers’ mathematical learning, teamwork and planning can provide necessary resources to overcome classroom, community, institutional and obstacle to young children proficiency in mathematics (NAEYC & NCTM, 2010).

## **Developing mathematical counting skills in early childhood mathematics**

### **Pre-counting**

Mathematics skills taught in early childhood education are designed to provide the basic foundation for children to succeed in elementary school and other educational levels. Number sense is the ability of the children to count accurately, first forward, then later in school, they will learn how to count backwards. Numeracy or number system is a very important skill needed by the early childhood mathematics to move ahead; it is the ability to count. It is the basic foundation for learning numbers and also the first mathematical skill that a child must develop. At the early childhood, children must learn how to count number either forwards or backwards and know the relationship between these numbers to equip them for future education.

The pre-counting is very vital in teaching the young children mathematics, it focuses on understanding the concepts and how they are related to one another. At this early stage of life, the young children develop these concepts by making comparison but no counting. These concepts are of great importance to the children learning of mathematics, it laid the solid foundation for the child development in mathematics and also assist the children in understanding the difference between these numbers and the different ways these numbers are related to one another.

### **One-to-one counting**

The mathematical thinking skills of the early childhood can be developed through counting. Counting is another important aspect of learning in early childhood mathematics, the meaning attached to counting is the foundation for the children in developing mathematical concepts or ideas upon which every other number concept is based. One-to-one counting focuses on how to develop the ability of the early child in counting. Here two skills are required; **(i)** the ability of the child to say the counting words in order **(ii)** the ability of the child to relate each of the spoken number with one and only one object. Young children usually learn how to count by memorizing but they need to understand the counting through counting skills in a different meaningful way. The mathematics teacher needs to teach the young children how to count beginning from smaller numbers and once they are able to grasp and master the counting of smaller numbers then, their knowledge can be extended to the number sequence of counting both forwards and backwards, from any given number.

### **Counting from one to solve another problem**

Solving problems by counting enable the young children to understand that counting is useful and can be used in many situations.

Counting of objects can be used to solve addition and subtraction problems. Whatever materials the children may be playing with can be used to draw their attention to help them understand that addition and subtraction problems can be solved through their counting skills. The children can be asked to add up or subtract two different sets of numbers. For example, when the children are asked to add up 4 and 3. First of all the children will start by counting out “1, 2, 3 and 4” using either pebbles or their fingers for the first number, thereafter count out “1, 2 and 3” for the second number. The two sets of numbers are then joined together and counting all together as “1, 2, 3, 4, 5, 6, 7” to add up 7. They can also be asked to take away 3 from 4. In this case the children will count 1, 2, 3 and 4 either by using their fingers or pebbles, then take away 1, 2 and 3 from it and count the remaining number to be “1”. With the first and second illustration, the children will be able to understand that by joining small sets of number with total of seven and by taking away one number from the other to get one they can solve addition and subtraction problems. This will also assist them to count different concrete materials to solve number problems which will eventually help them to understand that counting is not just to memorize only but it can be used to solve mathematical problems. The importance of counting from one to solve number problems develops children’s mathematical skills and help them understand addition and subtraction operations using counting skills to combine and separate groups of objects. Through the counting, young children will understand that when group of objects are joined together, the objects increases, and also when the objects are separated, the objects decreases. In this process the children acquire the knowledge of addition and subtraction operation.

### **Some methods of teaching mathematics at the early childhood**

The purpose of teaching mathematics in schools is to assist the young children develop or acquire mathematical skills needed for them to succeed in their education, being useful to themselves and contribute to the progress of society. There is need for the young children to appreciate, develop interest in mathematics and be more attentive to its teaching (Onoshakpokaiye, 2010). The mathematics teacher needs to use good teaching strategies that will stimulate and facilitate mathematics learning by the young children. There are various approaches that the mathematics teachers can adopt in the teaching and learning of mathematics. Reginald (1980), defined methodology as the method by which materials are being presented to the students and also engaging them with the work before them. Okpala (2006) stated that teacher must select the method that is best and appropriate for a particular situation or activity to be carried out by the teacher and the student.

**Inductive methods:** According to Okpala (2006), the inductive method starts from specific to general that is from the known to unknown and concrete to abstract. By using this method, the young children are given a number of specific problem and then required them to find the general solution to it. In inductive method laws are generated from particular cases by searching out patterns for the given circumstance. Okpala (2006) sees inductive as a process whereby the young children discover things and it is a discovering method. The inductive method give the young children an ample opportunity to discover things such as new concepts, laws, truths and easy or suitable methods for solving mathematical problems and also finding solutions to the mathematical problems without the assistance of their teachers.

**Activity method:** Another useful method that can be used in teaching mathematics at the early childhood is the activity method. Onoshakpokaiye (2010), stated that activity method is a situation whereby the young children are given mathematical problems to solve in order to keep them busy. It is a very useful method in the teaching and learning of mathematics. In this method the young children are given sets of mathematics puzzles to solve and allow them to work on their own without much supervision by their teacher. For this method to be effective in the teaching of mathematics, the teachers must not solve every exercise and the students should not be passive, exercises should be given to them to practice so as to keep them busy and able to learn. This is where the saying ‘practice makes perfect’ comes into play. Practicing exercises is very important in the teaching/ learning of mathematics. When a child is able to solve given exercises, it motivates, make the child to be happy and make him/her develop more interest in the learning of mathematics. When mathematics is understood by the young children and also knows the rules for solving mathematics problems, it makes the lesson to be more interesting to the students and both the teacher and students are happy, therefore making teaching and learning to be effective. According to Okpala (2006), the activity method assists in building competency and sense of self-expression in the young children and also helps as means of acquiring practical experience.

### **The inquiring and heuristic method**

Ezenweani (2006) stated that the process of inquiry involves allowing the young children to search out information themselves. This method gives the young children ample opportunity in gaining scientific attitudes. This method enables the young children to explore, measure, observe, classify, and predict, experiment and so on. He went further to say that pure inquiring

method allow the young children to carry out the above activities through trial and error.

## Conclusion

Laying strong foundation on the early childhood mathematics is of great importance towards the success of the child in their education and future life. Building Positive attitude in the young children and solid foundation in learning mathematics from early childhood cannot be overemphasized. This is the stage where solid foundation in mathematics can be built. The government, curriculum expert and mathematics teachers need to know the developmental stages of the young children to be able to plan and teach them so that mathematics can be meaningful to them. The teachers should also ensure that the foundation is properly lay otherwise there will be problem in their future life. This is the stage where mathematical concepts and skills can be developed in them to carry on to higher level of education. To achieve the objectives of the education in Nigeria. There must be proper teaching at this level for effective learning.

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**PROPRIETOR INCENTIVES AND SUPERVISION AS  
CORRELATES OF SECONDARY SCHOOL SCIENCE,  
SOCIAL SCIENCES AND HUMANITY TEACHERS'  
WORK MOTIVATION IN ILORIN METROPOLIS,  
NIGERIA**

**\* <sup>1</sup>Dr.Bello, GANIYU  
Senior Lecturer**

**Department of Science Education, University of Ilorin, Ilorin, Nigeria  
P.M. B 1515 Ilorin, Nigeria  
bello.g@unilorin.edu.ng  
2348033882477**

**<sup>2</sup>Bello Ilias AYO  
Administrative Officer  
Department of Management Information System,  
Nigeria Police Academy  
Wudil, Kano, Nigeria  
Cent4aybob@gmail.com  
2348034757239**

**and**

**<sup>3</sup>Dr. Bello, Zakariyau ADEBAYO  
Lecturer II**

**Department of Integrated Science, Kwara State College of Education  
Ilorin.  
P.M. B 1527 Ilorin, Nigeria  
Zakbay26@gmail.com  
2348036092412**

**Abstract:** *In this descriptive survey study, investigation was made to determine the level of work motivation among secondary school science, social sciences, and humanities teachers and ascertained whether proprietor incentives and supervision are predictors of work motivation among the teachers in Ilorin, Kwara State, Nigeria. Six hundred (600) secondary school teachers were purposively selected from 63 senior secondary schools within Ilorin metropolis. Three*

*valid and reliable research instruments were designed by the researchers to collect data, namely; Proprietor Incentive Questionnaire (PIQ), School Supervision Questionnaire (SSQ), and Teacher Motivation Scale (TMS). The reliability coefficients of the instruments were 0.94, 0.87, and 0.87, respectively. Multiple Regression Analysis, statistical technique was employed to analyze the data gathered using SPSS version 16. Findings revealed that the teachers were moderately motivated and significant difference in favour of public school teachers existed in the levels of teacher work motivation. Social science and science teachers were the most and the least motivated. Also, significant relationships existed among predictors and criterion variable, while Job Security was identified as the most influential variable in predicting teacher work motivation. It was concluded that the teachers were not fully motivated. The researchers advocated that; school proprietors, should avoid mass retrenchment of teachers, and implement the full complement of the Teacher Special Salary Scale. Supervisors should jettison the traditional 'catch and punish' approach dreaded by the teachers in favor of teacher-friendly mentor-supervisor approach.*

**Keywords:** *Motivation; Teacher; Job security; Supervision; Proprietor Incentives; Science Teachers; and Secondary Schools.*

## **Introduction**

The crucial role of motivation in job performance and the attainment of organization goals has sustained education researchers' interest on teachers' work motivation. Several theories and definitions of motivation abound in literature, none of which is universally accepted. Indeed, according to Souders (2019, November 11), there are as many faces of motivation as there are human desires. This is a reflection of the multidimensional nature of motivation which is responsible for its numerous definitions. As cited by Saari and Judge, (2004) Locke defines motivation as 'a pleasurable or positive emotional state resulting from the appraisal of one's job experiences' Badubi (2017) explained that there are two components of this definition, the first is the employer's attachment to job while the second is the employer's assessment of the worker's work and reason(s) for behaving in a particular manner. In the view of Verywell Mind (2019, September 30), motivation refers to the process that sets in motion, guides, and sustains behaviors directed toward a specific goal. In a simple sense, motivation can be conceived as a process that stimulates individuals to undertake specific

actions to achieve a goal. It implies that in the teaching-learning situation, motivated teachers are in prime position to enhance students' performance.

Intrinsic motivation and extrinsic motivation are the two major categories of motivation. According to Legg (2019, February 11), intrinsic refers to motivational stimulus that originated from within the individual. It is a behavior or action-driven by internal satisfaction. It is the internal drive to do what is interesting to you because you enjoy doing it without obvious external rewards. The reward in intrinsic motivation is the activity itself. Extrinsic motivation is driven by an external reward such as money, praise fame and so forth. In addition, the fear of punishment also serves as a stimulus for extrinsic motivation, as explained by Rochau (2017, September 25). To enhance effective and efficient performance by employees, proprietor/ management often use incentives to motivate employees through the provision of monetary and non-monetary incentives. This is to ensure that employees meet or even surpass the expectation of the proprietors/management (Richard & Hendry, 2014). Supervision is also a means of motivating supervisees use by proprietors /management. Supervision, according to Cambridge Dictionary (n. d.) is 'the act of watching a person or activity and making certain that everything is done correctly, safely, etc.' Supervisors motivate employees through support, encouragement, and empowerment. Patrick, Role, and Lazarus (2014) noted that work supervision is a major job motivation among the teachers. Similarly, according to Park, Kang, and Kim (2018) supervisors play crucial roles in work motivation of employees. They are inseparable component of human service organization servicing as bridge between the expectations of goals and outcomes for their organization. They serve as leader, mediator, mentor, and manger; consequently, they direct their supervisees' activities and motivation towards the attainment of organization goals, according to Lewis, Packard, and Lewis (2012).

Government and proprietors of private schools in Ilorin, Kwara State provide incentives to teachers in public and private schools respectively. The incentives are expected to serve as external motivation to the teachers towards the achievement of goals of schools especially improved learning outcome. Incentives enjoy by teachers especially in public schools in Ilorin, Kwara State include; sponsorship to training workshops, conferences, seminars and in-service training courses (Ilorin Info 2012, October 28). Teachers also, enjoy promotion but it is irregular, and often does not translate to financial benefit immediately as reported by The Punch Newspaper (2018, January 5). School facilities in public schools are in deplorable state except in few selected schools that enjoy periodic upgrading (Pulse, 2016 April 29). Although teachers in the state are on Teacher Special

Salary Scale, the special salary package has not been fully implemented and their salary and allowance are irregular (*Naija News (2017, December 23)*).

Payment of Science Teacher Allowance is an additional monetary incentive that some category of teachers enjoys in the state. However, the allowance, ₦ 25:00 per month is ridiculously low as indicated by the Kwara State Ministry of Education, Science and Technology (2010, August 20). Teachers also enjoy annual leave bonus, but payment is irregular. In the area of job security, retrenchment for various reasons occurs periodically (Premium Times; 2012, May 10). The transformation of the Inspectorate Unit of the Ministry of Education and Human Capital Development to Quality Assurance Bureau in 2009 to provide advisory and supportive services is another form of incentive to teachers. (ESSPIN, 2010). Summarily, the most common incentives that teachers in Kwara State like other states in Nigeria enjoy are, Monetary, Training, Promotion, Facilities /Work environment, Job Security and Supervision. In spite of these incentives, among others, students' performance remains relatively unimpressive.

Students' performance at the West African Senior School Certificate Examinations (WASSCE) in Ilorin, Kwara State, and Nigeria, in general, remain unimpressive. Majority of the students that sat for the WASSCE often fail to pass with five credits, including English and Mathematics, the benchmark for admission into tertiary educational institutions in the nation. For instance, the West African Examinations Council (WAEC) results for 2016-2018 statistics released by the National Bureau of Statistics (2019) shows that only 36.5% and 52.3% of private and regular candidates respectively that sat for WASSCE in 2016 passed with 5 credits and above including English and Mathematics. This translates to a national average of 44.4%. In 2017 only 24.00% and 56.53% of the private and regular candidates respectively passed with 5 credits and above including English and Mathematics. The national average for 2017 stood at 40.26%. The data for 2018 WASSCE results showed that 33.81% and 48.15% of the private and regular candidates respectively passed with 5 credits and above including English and Mathematics, with a national average of 40.98%. The performance of candidates from Kwara State that sat for the WASSCE between 2016 and 2018 was below the national average as shown in the WAEC results for 2016-2018 statistics released by the National Bureau of Statistics (2019). Only 41.1% (27.1% private and 55.1% regular), 40.21% (18.4% private and 62.03% regular) and 32.46% (15.69% private and 49.24% regular) of both the private and regular candidates from Kwara State that sat for the WASSCE in 2016, 2017 and 2018 respectively passed with 5 credits and above including English and Mathematics. This unimpressive students' performance is a major concern for stakeholders in

secondary school education. It seems that there is a lack of motivation on the part of the teachers to perform their job satisfactorily as opined by Osalusi & Onipede (2017). Indeed, Ushie and Agba (2010) observed that in Nigeria, workers including teachers are routinely deprived of regular payment of salaries, and fringe benefits which consequently impacts negatively on their efficiency. Also, Jacobson (2013) reported that in the five South-south states in Nigeria, science teachers were poorly motivated. Poorly motivated teachers will likely exhibit negative attitude to work such as habitual lateness to school, habitual absenteeism, and teaching without preparation of lesson notes. It is thus imperative to motivate teachers by providing incentives.

In view of the fact that teachers are the sole determinant of the quality of instructional delivery and by extension the quality of learning outcome, researchers were prompted to focus attention on teacher work motivation among other teacher-related factors that impact on students' performance. Although teacher work motivation is not the only factor that impacts upon students' performance; nevertheless, literature has established its significant impact on students' performance. Mustafa and Othman (2010); Nyakundi, Raburu, and Okwara (2019); and Nkirote and Thinguri (2020), among others, clearly established a positive correlation between teacher work motivation and students' academic performance.

Nyakundi, Raburu and Okwara, (2019) carried out study to examine the influence of teacher work motivation on academic performance of pupils in primary schools in Kenya. The study was carried out among a sample of 145 head teachers and 843 teachers in 15 schools in Nyamira south sub-country, Kenya. Stratified random sampling procedure was used to select the sample. The researchers adopted the mixed-method approach to gather both quantitative and qualitative data using interview schedules and questionnaires, respectively. Descriptive and inferential statistical tools were used to analysed the quantitative data while the qualitative data were subjected to thematic analysis. Results of the study showed that the teachers had moderate levels of motivation while students' performance was viewed to reflect the level of the teacher's work motivation. Similarly, Adelabu (2005) and Martin, Joseph, and Albert (2012) reported that teachers in Nigeria and Ghana respectively were generally not fully motivated. The studies conducted by Haki Elimu, (2011) Kalage, (2016) even reported that teachers were at low level of work motivation in Tanzania.

A similar study was carried out in Nigeria among biology teachers in Calabar, Nigeria by Ibok, (2020). The researcher examined the effects of teacher work motivation on students' performance in biology. The sample size for the survey study was 200 biology teachers selected from nine public secondary schools while a questionnaire was used for data collection. Results

of the study showed relationship between students' performance in biology and teachers' condition of service, regular salary payment and promotion, Nkirote, and Thinguri (2020) examined the influence of teacher work motivation on learning outcomes among pre-primary learners in the more sub county, Kenya. The researchers adopted mixed research method which involves the concurrent triangulation design. Stratified random sampling method was used to select 3,426 participants that consisted of 61 head teachers, 157 teachers and 3,208 pupils. Data gathering was carried out using a combination of questionnaire, interview, and checklist. Findings of the study revealed that motivated teachers produced better outcomes because the work harder.

Several factors have been identified by researchers to influence teacher work motivation, prominent among which are proprietor incentives such as training, promotion, school facilities, job security, monetary incentives such as bonus and special allowance, type of school, qualification, gender as well as supervision. For instance, Osalusi and Onipede (2017) noted that issues of regular payment of salary, reward and punishment on job performance, job satisfaction and accomplishment, monetary incentives, bonus, flexible work hours, training, and work environment among other factors influences work motivation. Azash, Safare, Thirupalu, and Subban (2012) conducted a study to determine if job characteristics can predict work motivation and job satisfaction of bank employees. Simple random sampling method was used to select 215 bank officers in the cities of Andhra Pradesh. Data collection was carried out using a combination of questionnaire, interview and observation. In addition, secondary data was collected from bank reports, journals, and books. The statistical tools used for data analyses were, Mean, Standard Deviation, Correlation and Multiple Regress Analysis. Results of the study revealed that job characteristics were a predictor of job motivations.

Al-Salameh (2014) conducted a study to determine the relationship between teacher work motivation and gender, school type and qualification. The study was conducted among 312 Jordanian primary stage teachers. A work motivation scale developed by the researcher was used to collect data in the study. Statistical tools used to analyze the data include, Mean, Standard Deviation, t-test and Analysis of Variance. The results revealed that the teachers had good level of work motivation, while the motivation level of the public and private schools' teachers were not significantly different. Similarly, there was no significant difference in the work motivation level of teachers based on age. Female teachers were more motivated than male teachers, while teachers having bachelor were found to be more motivated than those with diploma.

Louis, Tara, and Anitha (2017) investigated the importance of teachers' biographical variables on their work motivation. The study was carried out among 450-degree college teachers in government, private aided and private unaided colleges in Bangalore city. The teachers were selected through stratified sampling procedure, while a proforma developed by the researchers was used to collect data in the study. Mean Standard deviation and t-test statistical techniques were used for data analysis in the study. The results showed that there was no significant difference in the work motivation of the teachers based on gender, age, experience, and marital status. Furthermore, the result indicated that teachers working in private aided and private unaided colleges were more motivated than teachers working in government colleges. The result also showed that there was a significant difference in the work motivation of arts and science teachers. The science teachers were more motivated than arts and commerce teachers while the art teachers were more motivated than commerce teachers.

Jaja, Thamrin, and Widodo (2015) examined the effects of supervision, leadership, and working motivation to teachers' performance on junior high schools in the city of Bogor, West Java, Indonesia. Proportional random sampling method was used to select 289 teachers that participated in the study. Data analysis in the survey study was carried using regression and correlation analysis techniques. The results indicated a positive relationship among the variables. It was concluded that supervision, leadership, and work motivation can boost the performance up to 72.4%, 72% and 77.2 % respectively.

Basuki (2017) examined the contribution of supervision implementation and work motivation toward the performance of elementary school physical education teachers in Banjarmasin, Indonesia. The study was carried out among 148 teachers while questionnaires were used to gather data in study. A combination of Path Analysis with Structural Equation Modeling was used to analyses the data gathered in the study. Findings showed that supervision implementation and work motivation significantly contributed to the teachers' performance. Lilis, Ahmad, and Muhammad (2018) carried out a study to determine the influence of supervisor's academic supervision with commitment and motivation of teacher's work behavior in Banjarmasin, Indonesia. Proportional random sampling method was used to select 178 participants from a population of 320. A questionnaire was used to collect data in the study. Structural Equation Modeling with Amos was used to analyses the data collected in the study. Findings from the study showed that; supervisor's academic supervision influenced teacher's work motivation, work commitment and behavior. Park, Kang, and Kim, (2018) examined how supervisor support contributes to motivation, training and job performance. In the study, the responses of 216 participants from



educational organizations in the USA were subjected to analyses. Results indicated that the support of supervisor for training directly affected motivation to learn.

Several studies were also, conducted to identify predictors of work motivation. For instance, Kiyoshi (2006) reported that training affects teacher motivation significantly. Nyakundi, (2012) noted that salary and allowances, job satisfaction, professional development training programme and work situational-factors influences teachers' motivation and job performance. While Lubna and Khawaja (2012) report that job security is a good predictor of teacher motivation, Muhammad, Musawwir, Gulnaz, Huma, and Adnan, (2012) reported that job satisfaction is a predictor of teacher motivation. Salary, recognition, promotion, and working conditions are predictors of teacher motivation according to Muhammad and Neelam (2013). Martin, Joseph, and Albert (2012) submitted that recognition and work conditions are the best predictors of motivation of teachers. Similarly, Oredein and Awodun (2013) reported that regular payment of salary and allowance enhances teacher motivation. However, Patrick, Role, and Lazarus (2014) concluded that work supervision is a major job motivation among the teachers. Omole, Ajani, Odunjo, and Olaide (2019) carried out a study to determine if salary and work motivation can predict teachers' job satisfaction. The study was carried out among 214 senior secondary school teachers in Ekiti, Nigeria. Three standardized instruments namely, *and Personal Information Questionnaire, Work Extrinsic and Intrinsic Motivation Scale and Job Satisfaction Scale* were used to collect data in the study. *Findings of the study indicated that salary and work motivation were predictors of job satisfaction but gender does not.*

## **Material and Method**

*Research Type:* This study adopted the descriptive survey research method of the correlational type; thus, it was an ex post facto study. Descriptive research gives an actual description of a situation and enables the researcher to collect data from a representative of sample of the entire population. Simon and Goes (2011) noted that the focus of. correlational studies are to investigate one or more attributes of a group in other to find out the extent to which the attributes vary together. This study sought to determine the relationship between proprietor incentives and supervision as predictor variables and teachers' work motivation as the criterion variable. Hence, the researchers considered that adoption of the correlational type of descriptive research method to be appropriate.

*Statement of the Problem:* Extant literature establishes the crucial role of employees' work motivation in the realization of the goals and objectives of human service organizations such as educational institutions. In addition,

incentives that are commonly provided by proprietors/managements of human service organizations to employees such as; Monetary, Training, Promotion, Facilities /Work environment, and Job Security, have equally been established in literature to influence employees' work motivation. However, extant literature on teacher work motivation focused mostly on work motivation among teachers in public schools. Relatively little is known about work motivation among private school teachers in comparison to their counterparts in public schools especially in Nigeria in spite of the existence of dichotomy in the incentives available to teachers in public and private schools. Similarly, it seems that the incentive that is more influential in predicting teacher work motivation than others is yet to be sufficiently established in extant literature. In addition, supervision and teachers' field of specialization (science, social sciences and humanities) attracted little attention in most extant literature on teacher work motivation. Therefore, this descriptive survey study examined and compared the level of work motivation among secondary school science, social sciences and humanities teachers in public and private schools. It also, ascertained whether proprietor incentives (Monetary, Training, Promotion, Facilities /Work environment, and Job Security), and supervision are predictors of work motivation among the public and private schools' teachers in Ilorin, Kwara State, Nigeria.

*Purpose of the Study:* The purpose of this study was to determine and compared the level of work motivation among secondary school science, social sciences and humanities teachers in both public and private schools. It also, sought to ascertain if proprietor incentives and supervision are predictors of work motivation among the public and private schools' teachers in Ilorin, Kwara State, Nigeria. Specifically, it determined:

- the level of work motivation among secondary school science, social sciences and humanities teachers in public and private schools;
- the relationship between the predictor variables, (proprietor incentives- Monetary, Training, Promotion, Facilities/Work environment and, Job Security) and Teacher work motivational level;
- the predictor variable that is the most influential in predicting the work motivation level of secondary school teachers; and
- if any predictor variable does not significantly contribute to the prediction model.

*Research Questions:* The following five research questions were raised and answered in this study:

1. What is the level of work motivation among secondary school teachers in public and private schools?
2. What is the level of work motivation among Science, Social Science, and Art/Humanities secondary school teachers?

3. Is there any significant relationship among the predictor variables, proprietor incentives; Monetary, Training, Promotion, School Facilities, Job Security, Supervision, and the criterion variable; motivational level?
4. Does the obtained regression equation resulting from the set of the predictor variables allow for reliable prediction of the criterion variable?
5. Which of the predictor variables is the most influential in predicting the work motivation level of secondary school teachers?

*Research Hypotheses:* Two null hypotheses were generated from the research questions and were tested using the Chi-square statistical technique at 0.05 alpha level. The two hypotheses were stated below:

- $H_{01}$  :There is no statistical significant difference between the motivation levels of teachers in private and public secondary schools.
- $H_{01}$  :There is no statistical significant difference between the teacher work motivation levels across teachers' areas of specialization.

*Population, Sample, and Sampling Technique:* The population for the study consisted of all secondary school teachers in Ilorin metropolis. The population was stratified into three strata as follow: Science, Social sciences, and Arts/Humanity teachers. Purposive sampling technique was then employed to select 600 teachers consisting of 200 science teachers, 200 social sciences teachers, and 200 arts/humanity teachers. The purposive selection was based on teachers that indicated interest in participating in the study through the completion of Informed Consent Form made available to teachers in all 63-government approved/registered senior secondary schools within the Ilorin metropolis.

*Research Instruments:* The following instruments were designed, validated, and used for data collection:

1. Proprietor Incentive Questionnaire (PIQ),
2. School Supervision Questionnaire (SSQ), and
3. Teacher Motivation Scale (TMS).

All the three instruments were self-constructed by the researchers following standard guidelines of instrument construction. The Proprietor Incentive Questionnaire (PIQ) was a 28 items questionnaire rated on a 4 - point Likert scale ranging from 4 (Very High) to 1 (Very Low), designed to collect data on proprietor incentive such as; Monetary incentives, training opportunities, promotion, job security, and school facilities. The School Supervision

Questionnaire (SSQ) was a 15 items questionnaire designed to capture the rate of supervision in schools and supervisor attitudes to teachers. Lastly, the Teacher Motivation Scale (TMS) was a 50 initial items scale but finally reduced to 14 items scale after construct validation. The scale was designed to capture secondary school teachers' work motivation levels. Each item was also scored on a 4 - point Likert scale ranging from 4 (Very High) to 1 (Very Low). In this measuring scale, a mean score of less than 2.00 was considered to be a low level of work motivation, while a mean score of between 2.00 and 3.00 indicated a moderate level of work motivation, and mean score above 3.00 was considered to be a high level of work motivation.

*Validation and Reliability of the Instruments:* A field test was carried on the three (3) instruments in order to establish the psychometric properties of the instruments. The field testing was carried out in five (5) private secondary schools and five (5) public secondary schools in Ilorin. The schools and 50 teachers that took part in the field testing of the instruments were not used for the main study. The internal consistency of PIQ, SSQ and TMS was estimated at .94, .87, .87, reliability coefficient respectively, using SPSS vision 20 statistical package

## Results

The results of data analysed in the study were presented in line with the research questions and hypotheses.

*Research Question 1:* What is the level of work motivation among secondary school teachers in public and private schools?

Table 1 revealed that 40.3% of private secondary school teachers were within the range of low motivation level, 32.0% were within moderate motivation level, and only 27.7% of private secondary school teachers were within the range of high motivation level. On the other hand, only 23.3% of public secondary school teachers were within the range of low motivation level, 37.0% were within the moderate motivation level, and 37.7% were within the region of high motivation level. In general, 31.8%, 34.5%, and 33.7% of both teachers in public and private secondary schools were at a low, moderate, and high level of work motivation, respectively. This result revealed that slightly more teachers were at a moderate work motivation level than those at low and high motivation levels.

**Table 1, School Type and Teacher Work Motivation Level Cross-tabulation**

Sch.	Privat	Count	Motivation Levels			Total
			Low Motivation level	Moderate Motivation level	High Motivati on level	
			121	96	83	300

Type	Public School	% within School Type	40.3%	32.0%	27.7%	100.0%
	Count		70	111	119	300
	Private School	% within School Type	23.3%	37.0%	39.7%	100.0%
	Count		191	207	202	600
Total		% within School Type	31.8%	34.5%	33.7%	100.0%

*Hypothesis 1:* There is no statistically significant difference between the motivation levels of teachers in private and public secondary schools. This hypothesis was tested using the chi-square statistical tool. The result ( $X^2(2) = 21.121, p = 0.000 < 0.05$ ), as shown in Table 2, indicated that a significant difference existed between the motivation level of teachers in private and public secondary schools because the P-value (0.000) is less than 0.05. Therefore, the null hypothesis was rejected. The significant difference was in favor of teachers in public secondary schools with a higher percentage of teachers at moderate and high motivation levels than their counterparts in private schools, as indicated in Table 1.

Table 2  
**Chi-Square Tests for School Type and Teacher Work Motivation Level**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.121 <sup>a</sup>	2	.000
Likelihood Ratio	21.323	2	.000
Linear-by-Linear Association	19.237	1	.000
N of Valid Cases	600		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 95.50.			

*Research Question 2:* What is the level of work motivation among Science, Social Science, and Art/Humanities secondary school teachers?

Table 3. **Area of Specialization and Motivation Level Cross-tabulation**

Area of Specialization		Motivation			Total
		Low Motivation Level	Moderate Motivation Level	High Motivation Level	
Science	Count	190	10	0	200
	% within Area of Specialization	95.0%	5.0%	0.0%	100.0%
Social Science	Count	1	83	116	200
	% within Area of Specialization	0.5%	41.5%	58.0%	100.0%
Art and Humanities	Count	0	114	86	200
	% within Area of Specialization	0.0%	57.0%	43.0%	100.0%
Total	Count	191	207	202	600
	% within Area of Specialization	31.8%	34.5%	33.7%	100.0%

Table 3 revealed that 58.0% and 43.0% of the social science and arts/humanities teachers were at the high level of work motivation respectively, while none of the science teachers were at a high level of work motivation. Most (95.0%) of the science teachers were at a low work motivation level, while the majority (57.0%) of the arts/humanities teachers were at a moderate work motivation level as indicated on the Table.

*Hypothesis 2:* There is no statistically significant difference between the teacher work motivation levels across teachers' areas of specialization.

This hypothesis was also tested using the chi-square statistical tool. Table 4 showed that the chi-square value ( $X^2(4) = 566.352$ ,  $p = 0.000 < 0.05$ ,) was significant since the P-value (0.000) is less than 0.05. Therefore, hypothesis 2 was rejected. This implies that a significant difference existed between the work motivation levels of science, social science, and arts/humanities teachers. That is the difference in the percentages of social science, arts/humanities and science teachers at each level of motivation were significant in favor of social science teachers with the highest percentage of teachers at high level of work motivation.

**Table 4. Chi-Square Tests for motivation levels across teachers' area of specialization**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	566.352 <sup>a</sup>	4	.000
Likelihood Ratio	681.963	4	.000
Linear-by-Linear Association	290.413	1	.000
N of Valid Cases	600		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 63.67.			
b. Computed only for a 3x3 table			

*Research Question 3:* Is there any significant relationship among the predictor variables, proprietor incentives; Monetary, Training, Promotion, School Facilities, Job Security, Supervision, and the criterion variable; motivational level?

Table 5 revealed the 21 possible relationships among the seven variables, 11 (52.4%) of which were statistically significant positive relationships, while 3 (14.3%) were statistically significant negative relationships and the remaining 7 (33.3%) were not a statistically significant relationship. A statistically significant positive relationship existed between; Motivation and Monetary incentives, Motivation and Job Security, Monetary incentives and Training, Monetary incentives and Promotion, Monetary incentives and Job Security, Monetary incentives and, School facilities, Training and Promotion, Training and Job Security, Training and School facilities, Promotion and Job Security, School facilities and Supervision. The highest positive relationship (.499<sup>\*\*</sup>) existed between monetary incentives and promotion, while the lowest positive relationship (.107<sup>\*\*</sup>) existed between Monetary incentives and school facilities. Table 5 equally revealed that a statistically significant negative relationship existed between; Motivation and School Facilities, Promotion and Supervision, Job security, and School Facilities. Statistically significant relationship does not exist between; Motivation and Training, Motivation and Promotion, Motivation and Supervision, Monetary Incentive and Supervision, Training and Supervision, Promotion and School Facilities, Job security and Supervision. The result showed significant correlation among the variables of the study, and none of the variables were highly correlated; hence, there were no issues of multicollinearity among the variables.

**Table 5. Correlation and Descriptive Statistics among the Variables of the study**

	Motivation	Monetary	Training	Promotion	Job security	School facilities	Supervision
Motivation Correlation Sig.	1						
Monetary Correlation Sig.	.131** .001	1					
Training Correlation Sig.	.048 .238	.426** .000	1				
Promotion Correlation Sig.	.035 .000	.499** .000	.365** .000	1			
Job security Correlation Sig.	.313** .000	.427** .000	.322** .000	.419** .000	1		
School facilities Correlation Sig.	-.103* .012	.107* .009	.111* .007	.079 .052	-.123** .003	1	
Supervision Correlation Sig.	.061 .135	-.047 .249	.005 .906	-.124** .002	-.149 .231	.179** .000	1

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed), \*. Correlation is significant at the 0.05 level (2-tailed).

*Research Question 4:* Does the obtained regression equation resulting from the set of the predictor variables allow for reliable prediction of the criterion variable?

A model summary typically shows three multiple correlation indices. These are multiple correlation ( $R$ ) = .360, multiple correlation squared ( $R^2$ ) = 0.121 and adjusted squared multiple correlation ( $R^2_{adj}$ ) = .112. The correlation between the predictor variables and the criterion was shown in Table 6 by ( $R$ ), which was 0.360. The Table also showed the value of  $R^2_{adj}$  to be 0.112. This means that 11.2% of the variance observed in teachers' work motivation level was accounted for by the six predictor variables.

Table 6. **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.360 <sup>a</sup>	.121	.112	9.538



Predictors: (constant), supervision, monetary, school facilities, promotion, training, job security.

The ANOVA summary on Table 7 showed that  $F(6, 593) = 13.652$ ,  $P < 0.05$  and that the F-ratio was statistically significant at 0.000. This result clearly indicated that the combination of the six predictor variables allows reliable prediction of the criterion variable. The composite predictions of Monetary, Training, school Facilities, Job Security, and Supervision on teachers' work motivation level shown in tables 6 and 7 indicated that all the predictors' variables significantly ( $F(7452.310) = 13.652$ ,  $p < 0.05$ ) predicted teachers' work motivation. And that a positive relationship ( $R = .360$ ) existed between the predictor's variables and the criterion variable. Since the adjusted  $R^2$  was .112, it can be said that Monetary incentives, Training, School Facilities, Job Security, promotion, and Supervision predicted 11.2% variance in Teachers' work motivation. Hence, it is obvious that the predictor variables allow a reliable prediction of the criterion variable.

Table 7

#### ANOVA<sup>b</sup> Summary

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	7452.310	6	1242.052		
Residual	53949.875	593	90.978	13.652	.000 <sup>a</sup>
Total	61402.185	599			

a. Predictors: (constant), supervision, monetary, school facilities, promotion, training, job security

b. Dependent variable: work motivation

*Research Question 5:* Which of the predictor variables is the most influential in predicting the work motivation level of secondary school teachers?

Table 8 showed that four of the independent variables (Monetary, Promotion, Job security, and Supervision) significantly contributed to teachers' work motivation. *Job Security* ( $\beta = 0.339$ ,  $t(599) = 7.434$ ,  $p < 0.05$ ) has the strongest predicting effect on teachers' work motivation, followed closely by *Monetary Benefit* ( $\beta = 0.138$ ,  $t(599) = 2.380$ ,  $p < 0.05$ ), *Supervision* ( $\beta = 0.080$ ,  $t(599) = 2.022$ ,  $p < 0.05$ ), and *Promotion* ( $\beta = -0.110$ ,  $t(599) = -2.342$ ,  $p < 0.05$ ). While Training and School Facilities did not contribute significantly to teachers' work motivation levels. This result means that Job security was the most influential variable in predicting the work motivation level of secondary school teachers in Ilorin metropolis.

Table 8

**Standardized Beta Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	17.672	4.991		3.541	.000
Monetary	.223	.094	.138	2.380	.018*
Training	-.110	.112	-.043	-.982	.327
Promotion	-.911	.389	-.110	- 2.342	.020*
Job security	1.465	.197	.339	7.434	.000*
School facilities	-.142	.083	-.070	- 1.719	.086
Supervision	.081	.040	.080	2.022	.044*

a. Dependent Variable: Teachers' Work Motivation

*Summary of Findings:*

- Slightly more teachers in public and private secondary schools were at a moderate work motivation level than those at low and high motivation levels.
- Significant difference existed between the work motivation levels of public and private secondary school teachers in favour of teachers in public secondary schools with a higher percentage of teachers at moderate and high motivation levels than their counterparts in private schools.
- Majority of the social science and arts/humanities teachers were at a high and moderate level of work motivation respectively, while most of the science teachers were at a low level of work motivation.
- Significant difference existed between the work motivation levels of science, social science, and arts/humanities teachers. in favour of social science teachers with the highest percentage of teachers at a high level of work motivation.
- Statistically significant positive relationships existed between 11 out of the 21 possible relationships among the variables, 3 were statistically significant negative relationship, and the remaining 7 were not statistically significant.

- Four of the independent variables (Monetary, Promotion, Job security, and Supervision) significantly contributed to teachers' work motivation
- All the predictor variables significantly predicted teacher work motivation.
- Job security has the strongest predicting effect on teacher work motivation, followed closely by monetary incentives, Supervision, and Promotion.

## **Discussion**

Findings in this study showed that work motivation among secondary school teachers in Ilorin metropolis was at a moderate level. This result could be attributed partially to irregular salary, allowances, and promotion of the teachers. The implication of this finding is that the teachers were yet to be sufficiently motivated to discharge their responsibilities. Since it has been established in literature that positive correlation exists between teacher work motivation level and students' academic performance, the performance of secondary students in Ilorin and Kwara State in general at the WASSCE could be a reflection of their teacher work motivation level observed in this study. This result corroborated the finding of Adelabu (2005) which revealed that teachers in Nigeria were generally not fully motivated. It equally corroborated the results of similar study conducted in Ghana by Martin, Joseph, and Albert (2012) and the studies carried out in Kenya (Nyakundi, 2012; Nyakundi, Raburu & Okwara, 2019) who also, reported that teachers in these nations were not sufficiently motivated. However, the finding is in contrast to the result of a similar study carried out in Tanzania by HakiElimu (2011) and Kalage (2016) which reported that teachers were at low level of work motivation. The finding was equally contrary to the report of the study conducted by Al-Salameh (2014) among Jordanian primary stage teachers who were noted to be highly motivated.

Results of this study showed that significant difference existed between the levels of work motivation of public and private secondary school teachers in favour of teachers in public secondary schools. This could be ascribed to a relatively high level of job security enjoy by teachers in public secondary schools among other factors. Indeed, this finding lends credence to another result in this study which showed that job security was the strongest predictor of teacher work motivation. However, the finding contracted the report of Al-Salameh (2014) which showed that the motivation level of the public and private schools' teachers was not significantly different. Similarly, it was at variance with the finding of Louis, Tara, and Anitha (2017) which indicated that teachers in private schools

were significantly more motivated than their counterparts in Bangalore city public schools.

This study revealed that a significant difference existed between the work motivation levels of science, social science, and arts/humanities teachers in favour of social science teachers, while the science teachers were at a low level. This may be attributed in part to the dashed hope of science teachers in the restoration of payment of Science Teachers Allowance. A decade ago, Kwara State Ministry of Education, Science and Technology (2010, August 20) promised to restore and increase the ridiculously low (₦ 25:00 per month) allowance to the science teachers. The finding was consistent with the outcome of a similar study carried out by Louis, Tara, and Anitha (2017) which showed that there was a significant difference in the work motivation of arts and science teachers. Also, the result was similar to reports of the study carried out by Jacobson (2013) in the five South-south states in Nigeria and the study conducted by Oredein and Awodun (2013). These studies indicated that science teachers were poorly motivated and noted a significant relationship between regular payment of science teachers' allowance and academic performance of the science students. However, the result was not consistent with that of Louis, Tara, and Anitha (2017), who reported that science teachers were more motivated than arts and commerce teachers while the art teachers were more motivated than commerce teachers.

The result of this study indicated that significant relationships existed between the predictors and the criterion variables. This implies that all the predictor variables are potent tools for motivating the teachers. The finding was consistent with several other similar studies such as Muhammad, Musawwir, Gulnaz, Huma, and Adnan,(2012), Lubna and Khawaja (2012),Oredein and Awodun (2013),Patrick, Role, and Lazarus (2014), and Omole, Ajani, Odunjo, and Olaide (2019).The results also indicated that school supervision was significant as one of the variables that predicted teachers' work motivation. The finding could be ascribed in part, to the advisory and supportive services provided to teachers by the Quality Assurance Bureau of the State Ministry of Education and Human Capital Development. This finding was in accord with that of Patrick, Role, and Lazarus (2014) which indicated that supervision is a major job motivation among the teachers.

The results of this study showed that four of the independent variables (Job security, Monetary, Promotion, and Supervision) significantly contributed to teachers' work motivation and that Job security has the strongest predicting effect on teacher work motivation. This implies that proprietors of schools could leverage on these variables to significantly enhance teacher work motivation than other variables. This result may be due to the premium value placed on job security in the face of continuous

increase in the number of unemployed graduates in the nation and the threat of layoff could serve as work motivator. However, the finding was not consistent with the results of similar studies such as, Martin, Joseph, and Albert (2012), Muhammad, and Neelam (2013) which showed that recognition and work conditions were the best predictors of motivation of teachers.

*Conclusion:* Premise on the major findings in this study, the researchers concluded that both public and private senior secondary school teachers in Ilorin metropolis were not fully motivated while, significant difference in favour of public-school teachers existed in teacher work motivation levels. Social science teachers were the most motivated while Science teachers were the least motivated. Teachers considered Job security as the topmost work motivator while training and school facilities were not considered as motivators. In addition, it was concluded that significant relationships existed between the predictors and the criterion variables, and that the predictor variables allow a reliable prediction of the criterion variable.

*Recommendations:* The researchers put forward the following recommendations premised on the major findings in this study:

- Retrenchment of teachers should be avoided or at least reduced to the lowest level at all cost to improve job security and work motivation among the teachers.
- Proprietors of secondary schools in Ilorin, Kwara State, Nigeria especially private schools should urgently raise the level of work motivation among the teachers through upward review of monetary incentives, regular promotion, and supervision among other incentives.
- The implementation of the full complement of the Teacher Special Salary Scale by the proprietors of secondary schools could significantly improve the level of work motivation among all the categories of teachers.
- There is a need for restoration and upward review of science teacher allowance, accelerated promotion and automatic sponsorship to professional development programmes for outstanding science teachers. This could uplift the level of work motivation among science teachers.
- The adoption of a teacher-friendly mentor-superior paradigm by supervisors could improve teachers' level of work motivation.
- Proprietors of secondary schools in Ilorin should pay special attention to the provision of school facilities in good quantity and quality, while the school environment should be equipped with very attractive

features and kept tidy always. This recommendation has a high potential to improve teachers' work motivation levels, attract students to school, and stimulate students to learn.

### **Disclosure Statement:**

There is no financial interest or benefit that has arisen from the direct applications of this research.

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# THE HEALTH PROFILE OF THE PRIMARY SCHOOL STUDENT.

## IMPACT ON SCHOOL ACHIEVEMENT

**Florina Ancuta DUMINICĂ, Ph.D.,**  
Faculty of Psychology and Educational Sciences,  
University of Bucharest, Romania;  
[ancuta.duminica@fpse.unibuc.ro](mailto:ancuta.duminica@fpse.unibuc.ro) ;

**Marcela POPESCU, Ph.D.,**  
Faculty of Psychology and Educational Sciences,  
University of Bucharest, Romania  
[marcela.popescu@scoalafinlandeza.ro](mailto:marcela.popescu@scoalafinlandeza.ro)

**Abstract:** *This article presents the implementation of an experiment-based approach to see the impact on school achievement of the health profile student in primary school. The research relied on the principle that physical activity must be integrated into the teaching process, not eliminated because movement is essential for improving or increasing academic achievement. The experimental group was formed of 250 primary school students, divided into two groups: the control group - 125 students and the experimental group -125 students, 13 teachers, one nurse, and two physiotherapists. The experiment itself was marked by the use of methods to integrate physical activity during classes, followed by the process of measuring school results through six assessment tests in school subjects - mathematics and Romanian language - for the 250 students from the primary school cycle in Bucharest - 125 students comprised the experimental group, which integrated various physical activities in their learning, and the other 125 - the control group, which did not use physical activities in the school curriculum. The results of the study encourage the idea of using movement during every school day. Physical activity, so beneficial to health and learning, must become an important part of the educational process.*

**Keywords:** *physical activity; academic achievement; programs; optimization; health;*

## Introduction

Movement is essential for improving or increasing academic achievement. It must be integrated into the teaching process, not eliminated (Holt, Bartee & Heelan, 2013).

School achievement can be considered as that qualitative state in relation to a certain objective set for attainment, while success assumes achievement at high levels of performance (Tulbure, 2010)".

In the literature, "... *student success is defined as an academic performance, involvement in educational activities, satisfaction, acquisition of desired knowledge, skills and competencies, determination, reaching of educational goals, and success after completing compulsory education* (Kuh et al., 2010)."

Ausubel, Robinson & Floyd, (1981) consider that school achievement is the congruence of the student's intellectual potential and the level of school tasks' completion.

In the opinion of I.T. Radu (2000) the students' school results represent "effects of the teaching activity, different by their nature, performances that are liable to be measured and appreciated".

The ability to apply knowledge (skills and abilities), intellectual abilities, personality traits, behaviors, attitudes, as well as the accumulated knowledge are considered school results.

Recent experimental studies have shown that children's cognitive functions benefit from improvement from physical exertion. Ardoy et al. (2014) revealed results that participation in four hours of intense physical activity per week improves children's overall cognitive performance (including verbal and nonverbal skills, abstract thinking, spatial perception, math skill and verbal expression), compared to just two hours of usual sports time per week.

In the study by Ruiz et al. (2010), physical activity during recess was associated with improved cognitive performances, including logical, numerical, and verbal skills among teenagers. In addition, Castelli et al. (2011) reported that involvement in intense physical activities had a positive effect on the performance of inhibitory control tasks.

There is more and more scientific research that certifies the fact that sports activity has benefits in the development of children's cognitive functions but also in academic performance (Donnelly et. al., 2009).

In the organization of the instructive-educational process, the study of psychomotricity is considered paramount. Rene Zazzo (1979) considers that basic education in primary school is carried out by psychomotor education because it conditions the whole learning process. The child must have the

consciousness of his own body, know its laterality, be able to place himself within space, be master of time and gain enough stability and coordination of his own movements and gestures for the learning process to be effective.

### **Purpose and assumptions**

The general *purpose* of this study is to identify the degree of influence of physical activity on school achievement.

The general *objective* of the research aims at identifying a link between physical activity and school achievement, highlighting the degree of influence of physical activity on school achievement.

The general *hypothesis* that we intend to prove is that participation in organized physical activity programs favors the increase of school achievement in the case of primary school students.

The specific hypothesis is:

The higher the student's age, the higher the body mass index, exceeding its normal value.

### **Methodology**

#### **Participants and research design**

The study was conducted on a sample of 250 primary school students, divided into two groups: the control group - 125 students and the experimental group -125 students, 13 teachers, one nurse, and two physiotherapists.

The methods used were the reflexive diary and the experiment. The diary method falls into the category of narrative research methods (Neacșu, Manasia&Chicioreanu, 2016, pp 91). The use of the diary can be an important tool in this context of completing research because it can be a way to combine theory with practice.

Broadly speaking, experimentation represents "the methodical use of the experiment to verify hypotheses about the properties of a given phenomenon (Ferréol, 1998, pp. 70)." Specifically, the experiment is a "research design used to extract causal inferences about the impact of a treatment variable on an output variable" (Jupp, 2010, pp. 199).

In the design of the study, the following variables were taken into account: *the independent variable* (age of students) and *the dependent variable* (student profile from the perspective of body mass index - underweight, normal weight, overweight - *continuous ratio variable* (school

achievement expressed and analyzed based on the results obtained in the assessment tests).

The independent variable was used as an "influence variable, whose possible effects on the dependent variable are to be highlighted (Popa, 2008)." This variable was organized into five ordinal classes indicating the separation of the sample into the following age groups (6 years old, 7 years old, 8 years old, 9 years old, 10 years old) and is a quantitative variable.

The dependent variable (body mass index) was classified using the ranking established by the World Health Organization (underweight, normal weight, overweight). The gender, age, and profile of students by body mass index are constant variables in the research. The amount of information assimilated as a result of the use of physical activities during the school program is the continuous variable, as a ratio, within the research, because it will be assumed that it can be influenced by the use of movement. This was measured by the score obtained by the two groups (experimental and control) on the 12 tests of the experiment, six tests in mathematics, and six tests in Romanian language and literature, throughout the school year.

Highlighting the link between these variables represents the purpose of the study, so that awareness can be raised among educational actors about the importance of integrating organized physical activity programs in the school classes.

## **Intervention program**

Each participating teacher had a reflexive diary in which he wrote down, throughout the experiment, the results of periodic assessment tests on communication in Romanian / Romanian language and literature, mathematics and environmental exploration / mathematics, ideas for activities during the lessons (setting the objectives, what I did, why I did this activity, how the students reacted, what I learned) and my own observations regarding the integration of physical activities in the learning process.

To improve the way we work in a team, we organized a training program for teachers in the experimental group. The *training* program consisted of teachers' participation in four theory sessions lasting 60 minutes. The topics addressed for the intervention sessions were:

**Workshop 1. Elaboration of the evaluation tests** (establishing the content of the primary school curriculum and elaboration of evaluation tests).

**Workshop 2 - Obesity in children (awareness of the importance of a healthy lifestyle).**

**Workshop 3 - How can you make a school day more active?** (Examples of good practices to make a school day more active: **Just dance**,

**Balance board or pillow, Bike-bench - a prototype school bench with pedals).**

**Workshop 4 - The importance of preventing bad postures in children - kinetoprophylaxis and ergonomic education (ergonomic education and the benefits of physical activity).**

## **Procedure**

The teachers agreed to participate. They were informed with regards to the course of the program and their involvement in activities.

The first stage of the experiment consisted of obtaining *a health profile of the primary school student* based on the body mass index. Each student was weighed to determine the BMI.

This was followed by the training program organized for the teachers involved in this research.

The experiment itself was marked by the use of methods to integrate physical activity during classes, followed by the process of *measuring school results* through six assessment tests in school subjects - mathematics and Romanian language - for the 250 students from the primary school cycle in Bucharest - 125 students comprised the experimental group, which integrated various physical activities in their learning, and the other 125 - the control group, which did not use physical activities in the school curriculum.

## **Results**

All results obtained from implementing the experiment were processed using the software IBM SPSS Statistics, version 23.0. We had no difficulty in collecting the data. All test results were statistically validated.

During the first phase, we used the Crosstabs procedure and the Chi-square Test to investigate the degree of correlation of the two variables: body mass index and students' age. The statistical decision to *deny the null hypothesis* was due to the value of the Pearson Chi-Square Test and especially of its significance rank ( $p = 0.000$ ), confirming the research hypothesis: *The older the student, the higher the body mass index, exceeding its normal value.*

**BMI index \* Respondent Type Crosstabulation**

			Respondent type		Total
			control	experimental	
BMI index	normal weight	Number	60 <sup>a</sup>	40 <sup>b</sup>	100
		% from BMI index	60.0%	40.0%	100.0%
		Std. Residual	1.4	-1.4	
	underweight	Number	3 <sup>a</sup>	1 <sup>a</sup>	4
		% from BMI index	75.0%	25.0%	100.0%
		Std. Residual	.7	-.7	
	overweight	Number	62 <sup>a</sup>	84 <sup>b</sup>	146
		% from BMI index	42.5%	57.5%	100.0%
		Std. Residual	-1.3	1.3	
Total	Number	125	125	250	
	% from BMI index	50.0%	50.0%	100.0%	

Tabel 1 -BMI values depending on the type of respondent

Each test applied at this stage confirms that the body mass index increases with age. The curriculum for the preparatory school is a flexible one, allowing time for games and physical activities because it is the stage in which the child goes from preschool to school. All activities in kindergarten involve movement because learning is done exclusively through play, and children are encouraged to explore. As the child grows and the curriculum becomes busier and requires more time for activities that are static.

### Mann-Whitney Test

		Rank		
	Respondent tvoie	N	Mean Rank	Sum of Ranks
R1	control	125	139.14	17393.00
	experimental	125	111.86	13982.00
	Total	250		
R2	control	125	136.67	17083.50
	experimental	125	114.33	14291.50
	Total	250		
R3	control	125	128.78	16098.00
	experimental	125	122.22	15277.00
	Total	250		
R4	control	125	123.00	15375.00
	experimental	125	128.00	16000.00
	Total	250		
R5	control	125	122.61	15326.00
	experimental	125	128.39	16049.00
	Total	250		
R6	control	125	116.45	14556.00
	experimental	125	134.55	16819.00
	Total	250		

Test Statistic <sup>a</sup>						
	R1	R2	R3	R4	R5	R6
Mann-Whitney U	6107.000	6416.500	7402.000	7500.000	7451.000	6681.000
Wilcoxon W	13982.000	14291.500	15277.000	15375.000	15326.000	14556.000
Z	-3.018	-2.457	-.721	-.548	-.634	-1.988
Asymp. Sig. (2-tailed)	.003	.014	.471	.584	.526	.047

a. Grouping Variable: Respondent type

Tabel 2 -Mann-Whitney Test – Romanian language discipline results



### Mann-Whitney Test

		Rank		
	Respondent type	N	Mean Rank	Sum of Ranks
M1	control	125	139.27	17409.00
	experimental	125	111.73	13966.00
	Total	250		
M2	control	125	136.85	17106.00
	experimental	125	114.15	14269.00
	Total	250		
M3	control	125	128.92	16115.50
	experimental	125	122.08	15259.50
	Total	250		
M4	control	125	122.70	15338.00
	experimental	125	128.30	16037.00
	Total	250		
M5	control	125	122.76	15345.50
	experimental	125	128.24	16029.50
	Total	250		
M6	control	125	116.64	14580.50
	experimental	125	134.36	16794.50
	Total	250		

	Test Statistic <sup>a</sup>					
	M1	M2	M3	M4	M5	M6
Mann-Whitney U	6091.000	6394.000	7384.500	7463.000	7470.500	6705.500
Wilcoxon W	13966.000	14269.000	15259.500	15338.000	15345.500	14580.500
Z	-3.046	-2.496	-.752	-.613	-.600	-1.945
Asymp. Sig. (2-tailed)	.002	.013	.452	.540	.548	.052

a. Grouping Variable: Respondent type

Table 3 -Mann-Whitney Test – Math discipline results

The *T-Statistics Test* Tables presented the Mann-Whitney test values for the two groups tested simultaneously: the experiment group and the control group. In our case, it is obvious that there is no statistically significant difference in confirming the positive influence on school achievement between the two groups.

Starting with the fourth test (R4) the experiment group shows an increase in the results compared to the control group. This increase is maintained for both test five and the last test.

## Discussions

*As sedentary lifestyles increase* among children worldwide, according to the World Health Organization, physical activity, so beneficial to health and learning, is becoming an important part of the educational process.

Schools play a key role in encouraging children to engage in physical activity both at school and outside of school hours. It is necessary for schools to accept the importance of physical activity in the child's development and also to be aware that it can be done in any context and without complex equipment.

Our culture treats the mind and body as if they are two separate entities, while physical activity may be considered an "antidote" for improving well-being, memory, attention, self-esteem, social skills.

School achievement is one of the most important areas of child development, especially in pre-teens. Despite the continuous dramatic increase in children's illness risks, there are fewer and fewer educational sports projects to make way for academic activities. This negative trend continues despite the obvious positive influence of the movement on school achievement.

*Creating positive models of physical activity* by organizing different projects, provides good experiences, and supports autonomy and the development of certain skills. Starting from outlining the theoretical framework, by referring to numerous international studies conducted on this topic, along with creating a working model, a starting point for the future is set, a model that can be continuously improved depending on the types of problems encountered.

*The kinesthetic class* is a concept explored and used very little in the Romanian education system. The gradual replacement of *traditional furniture with ergonomic furniture* must be a priority in order to reduce the percentage of students who end up, over time, with spine deformities.

We believe that it is necessary to move *from ego-system to ecosystem* by creating a *network of experts* from the educational and medical field, who would work together to identify practical premises for launching a national strategy to combat sedentary lifestyles.

Another important aspect is *teacher training*. Research showing a positive link between physical activity and the teaching-learning process should be of immediate interest to teachers and parents. There are many ideas for integrating physical activity into a regular school day. However, it is important that such physical activity would be implemented in a way that leads to the adoption of a healthy and physically active lifestyle from

childhood and adolescence, as it will lead to a decrease in sedentary lifestyle at adult age.

This research can be a starting point for future studies. As there is an increase in school results starting with the fourth test, in the second semester, we propose that the next longitudinal study be conducted for more than one year in order to analyze whether the difference is significant.

### **Limits and future directions**

The present research analyzed several groups of primary school students in order to create a representative sample. However, a sample that is not randomly selected for the entire population is not a representative one. The selected students are only from Bucharest, the sixth sector, so they cannot be a nationally representative group.

Among the limitations identified, I mention the errors in data collection or inconsistency of teachers, the anticipation of greater effects than those which actually occurred, and the researcher's lack of control on the research sample, which is large (250 students, 13 teachers, and two healthcare professionals).

Also, in the focus group, participants may offer answers that are different from those they had before the group interview. Among the causes, we can mention: the context effect (the attitude may be different when they feel studied) (Bernard, 2006) and the herd effect (people have the tendency to provide answers similar to those of the other participants).

The rolling of the experiment may have as a limitation the *type III error*, which involves "correct rejection of the null hypothesis, followed by the incorrect assignation of the cause (Raiffa, 1968, apud Popa, 2008, pp. 107)".

Time was also a limitation; we believe that such research must be a longitudinal study of at least three years to see if significant changes occur.

What can be considered an appropriate step in order to continue this research in the future is to investigate the impact of physical activity on the body mass index by calculating it both at the beginning and at the end.

The next stage could be a study that will explore the cumulative effect of well-being and learning over a longer period of time, given that physical activity has an impact on academic achievement.

It is important that the study on this topic continues because the quality of physical activity in schools can influence school achievement and the well-being of a person. In the future, research needs to focus also on understanding the dependence relationship between physical activity and its

positive effects on health and cognition. For example, it is necessary to determine what is the pillar of increasing school achievement - whether it is the impact of socio-economic factors, which are often associated with increased physical activity, or whether it is the awareness of the benefits of physical activity that lead to improved school results. Lastly, we believe that more research is needed on students' motivation and how they perceive physical activity. Is there a positive correlation between the two variables? If so, how does this influence school achievement? If students are involved in the educational process and enjoy it (through the use of physical activity), they are more motivated to complete work tasks and, therefore, are more likely to achieve higher academic results based on evaluations.

## Conclusions

There are no longitudinal interventions that are a replica of the existing ones or that confirm the results. Students may be exposed to other factors that influence their physical activity or school results. These factors could be family problems, social relationships, eating habits, changes in the school curriculum, and different stages of growth in children of the same age. In our case, it is obvious that as the student's age increases, the body mass index is higher, exceeding its normal value. From a statistical point of view, there is no significant difference in confirming the positive influence on school achievement between the two groups. Starting with the fourth test (R4) the experiment group shows an increase in the results compared to the control group. This increase is maintained for both test five and the last test.

Plato said that "in order to succeed in life, man has two means: education and physical activity. They must not be taken separately, one for the soul and one for the mind, but together."

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## **HOME ENVIRONMENTAL FACTORS INFLUENCE ON ACADEMIC PERFORMANCE OF SECONDARY SCHOOL STUDENTS IN OWERRI ZONE II, IMO STATE, NIGERIA**

**Stanley U. NNOROM**

**Email: [su.nnorom@unizik.edu.ng](mailto:su.nnorom@unizik.edu.ng)**

**08037440551**

**Department of Educational Management and Policy**

**Ezenwagu, STEPHEN**

**Email: [sa.ezenwagu@unizik.edu.ng](mailto:sa.ezenwagu@unizik.edu.ng)**

**08039115421**

**Department of Educational Management and Policy**

**Benignus C. NWANKWO**

**Email: [bennistle@yahoo.com](mailto:bennistle@yahoo.com)**

**08035739514**

**Department of Education Foundations**

**Nnamdi Azikiwe University Awka, Anambra State, Nigeria.**

**Abstract:** *The basic goal of this research was to determine some home environmental factors influencing the academic performance of secondary school students in Owerri Zone II, Imo State, Nigeria. Survey research design was adopted and two research questions guided the study. The population for the study comprises 1030 respondents made up of all the 64 principals and 966 teachers in the 32 public secondary schools in Owerri Zone II, Imo state. A sample of 206 respondents was selected randomly and this represents 20% of the respondents' population. The sample consists of 32 principals and 174 teachers in the study area. The instrument used for data collection was a questionnaire designed by the researchers. Face and content validity of the instrument was obtained after the appraisal and input made by two experts; One in Measurement and Evaluation, and another in Educational Management and Policy, Faculty of Education Nnamdi Azikiwe University Awka. Corrections were made based on their observations before the instrument was approved for use. The reliability coefficient of the instrument was 0.89 using Charlesspearman's rank correlation coefficient(Spearman's  $\rho$ ). The analysis of the data revealed that some families lack modern*

*mechanical or electronic device, educational materials and supervision at home to enhance student's academic performance. More so, some parents are unwilling to be involved in the academic performance of their children due to their socio- economic status. Recommendations such as giving proper orientation to the parents no matter their educational development and background, should devote time with their children and check their children's academic work, direct them where necessary, discuss the academic problems of their children with their teachers or school guidance, counselors so as to detect the students problem early enough and tackle it before it affects the students.*

**Keywords:** *Home environment; Academic Performance.*

## **INTRODUCTION**

Good education does not happen by chance. It is a product of effective teaching and learning process, coupled with the effort of the teacher, the school, the students, parents and their various home environments Farver et al (2006). According to Estes, K. (2011), students are exposed to three types of education; formal, informal and non-formal. In line with UNESCO, formal education is training typically provided by an education or training institution, structured (in terms of learning objectives, learning time or learning support) and leading to certification. It is intentional from the learner's perspective. Non-formal education is training which takes place outside the formal system either on a regular or intermittent basis, while informal education is learning resulting from daily life activities related to work, family or leisure. Informal learning is part of non-formal learning. Therefore, training and development of a child is naturally placed in the hands of the parents. This is congruent with the common assertion of sociologists that education can be an instrument of cultural change whose foundation begins from home. The home environment means the family background of the child, which includes all the human and material resources present in the home, that affect child's living such as the parent's level of education, occupation, social-economic status and the socializing facilities available in the house. The home is the institution or a place where the child's earliest education and socialization begins. According to Nwachukwu and Agulanna (2009), the home is described as the primary and most important human institution for the socialization of the child. The child's experience within the family definitely influences his behaviours; they have provided the child the nature which he or she requires for normal physical cognitive and psycho to social development.

Home means an enjoyable, happy place where you can live, laugh, learn (Lanza ST, et al 2011) and more so, it's where you are loved, respected, and cared for. The home environment entails; emotional warmth displayed by parents while interacting with their children; provision of stimulating and learning experiences in the home; and physical surroundings, such as safety of play areas and cleanliness. A healthy and safe home environment is essential for promoting and protecting health and development during childhood. The environment plays a very important role in one's personal growth. Meece (2006) stated that parents who provide a warm, responsive and supporting healthy environment, encourages exploration, and learning materials accelerate their children intellectual development. Children need stable, supportive social environments and access to resources within the home to enhance cognitive, emotional, and physical development. Alternatively, unstable, noisy, chaotic home environments have negative effects on children's health (Dush et al., 2013) and development. Children are motivated to work on activities and learn new information and skills when their environments are rich in interesting activities that arouse their curiosity and offer moderate challenges.

The academic performance of any child cannot be separated from the home environment in which the child lives; healthy home environment offers emotional security to a child. Academic performance of students is a key feature in education (Rono, 2013). It is considered to be the centre around which the whole education system revolves. Academic performance (Narad and Abdullah 2016) refers to the level of achievement or learning outcomes of students. According to Narad and Abdullah (2016) academic performance is the knowledge gained which is assessed by marks by a teacher and/or educational goals set by students and teachers to be achieved over a specific period of time. They added that these goals are measured by using continuous assessment or examinations results. He opined that the academic performance of students determines the success or failure of any academic institution. Singh, Malik and Singh (2016) also argued that academic performance of students have influence on the socio-economic development of a country. In the same vein, Farooq, Chaudhry, Shafiq and Behanu (2011), asserted that students' academic performance serves as bedrock for knowledge acquisition and the development of skills. More so, Farooq et al., (2011) emphasized that the top most priority of all educators is academic performance of students. According to Akuezuilo and Agu (2007) asserted that performance test is used to arrive at academic performance. Therefore, performance tests are instrument used to measure learning abilities.

In some countries, academic performance is measured by the academic index. In Nigeria, academic performance of students in secondary school is majorly measured by the student's performance in external



examinations like WEAC, NECO, and JAMB examinations. Chukwudi O.C. (2013) discovered that individual differences in academic performance have been linked to differences in intelligence and personality. He explained that students with higher mental abilities as demonstrated by IQ test (quick learners) and those who are higher in conscientiousness (linked to effort and achievement motivation) tend to achieve highly in academic settings. However, a number of factors contribute to such students. Such factors emanate from the school environment, curriculum planning and implementation, siblings/ Peer group influence, home environment, parents, socialization patterns in the home, location of the home, modern gadgets at home and so on.

K.Magnuson (2007) pointed out that parent's academic socialization is a term describing the way parents influences student's academic achievement by shaping students skill, behaviors and attitude towards school. He further explained that parent's influences student through the environment and discourse parents have with their children. This means that academic socialization can be influenced by parent's social economic status. Thus, highly educated parents tend to have more stimulating learning environments. Parental socioeconomic characteristics to a greater extent determine student's performance in school and their adjustment to life (Aikens et al., 2008). Family financial resources, which are associated with parents "occupation and educational attainment, often imply increased opportunities both at home and in school. Indeed, family background is the foundation for children's development, as such family background in terms of family types, size, socio-economic status and educational background play important role in children's educational attainment and social integration (Ushie et al., 2012). The home has a great influence on the child's psychological, emotional, social and economic state.

In the view of Ajila&Olutola (2000), the home affects the individual since the parents are the first socializing agents in an individual's life. Home environment affects academic development in many ways; for example, parents with higher socio-economic status are able to provide their children with the (often necessary) financial support and home resources for individual learning (Asikhia, 2010). They are also more likely to provide a more stimulating environment to promote cognitive development. At this level of educational providers, students from high Socioeconomic status (SES) families are also more likely to attend better schools, particularly in countries with differentiated educational systems, strong segregation in the school system according to neighbourhood factors and/or clear advantages of private over public schooling (Schulz, 2005). Asikhia (2010) further opines that parents' socio-status could be defined more objectively by using such indices as occupation, income and education. Permissive parenting on the

other end of the spectrum is characterized by little control over children, aiming for high levels of warmth but undemanding. Unlike authoritarian parents, punishment is very rarely used in permissive homes and children are commonly given greater opportunity to make their own decisions in life (Kang & Moore, 2011). They often take a very casual and easy-going approach (Agulanna 2009) toward their children, opening up conversations and subsequently developing warmer relationships between them. However, children raised by permissive parents are less likely to be intrinsically motivated, thus lacking persistence in approaching learning tasks (Kang & Moore, 2011).

Again, parents who attained high level of education, might have known the importance of education, and would not like their children to be left behind in the quest for education since these parents would also like their children to enjoy the benefits of attaining high educational level. According to Ogwu (2008), the high socio-economic status parents are able to provide their books and toys to encourage them in their various learning activities at home. Parents face major challenges when it comes to providing optimal care and education for their children. However, the challenges are acutely devastating among the poor income families struggling to provide the basic needs to sustain the family. Families with low socio-economic status often lack the financial, social and educational supports that characterized families with high socio-economic status. Many students from low-income homes are kept away or sent out from school or excluded from certain activities for lack of money to provide the prescribed equipment or materials. On the contrary, Pedrosa et al (2006) in their study on social and educational background pointed out that those students who mostly come from deprived socio-economic and educational background performed relatively better than others coming from higher socio-economic and educational area.

Douglas (2012) Family size is the total number of people consisting of parents and their children. It is worthy to mention that the family size is one of the factors that determine the educational developments.

Large family size creates in the upbringing of their children an identified problem of insufficient food, poor clothing, insufficient fund, disciplinary problem and malnutrition. Students need nutritious food and regular medical care. These things help them get a good start in life and lessen the chances that they will later have serious health problems and troublesome learning. Nutrition plays a vital role in the educational development of students. If a student is hungry in school, he/she is less likely to concentrate. This idea dates back to early psychological finding that before one can be complete, basic needs must be met. Young M et al. (2018) asserted that children from families with low socio-economic status are at a greater risk of hunger, homeless, sickness, physical and mental disabilities,

violence, teen parenthood, family stress and educational failure. Student from low socio-economic background that encounter these environmental factors are four times more likely to have learning disabilities than students from high socio-economic background while a combination of these environmental factors accelerate academic success.

Similarly, it is believed that factors such as malnutrition, lack of motivation in homes, spousal violence, and single parents as well as impoverished home environment affects the development of intellectual ability negatively (Mario, 2006). This means that students from low socio-economic backgrounds tend to be below or just an average in their intellectual development particularly when this phenomenon is accessed in terms of scores or tests. The target of this study is on home environmental factors influence on academic performance of students. It is against this background that the researchers are interested in investigating the home environmental factors influencing academic performance of secondary school students in Owerri zone II Imo state, Nigeria. The researcher intends to investigate the variables in the family background with a view of assessing their relative influence on academic performance of senior secondary school student in Owerri zone II, Imo state of Nigeria.

### **Statement of the Problem**

Most families in our society seem not to give adequate attention to the education of their children. It appears some of the parents have erroneous notion about the performance of their children, they do not know and seem to fulfill their role of guidance and encouragement in the child's performance in schools. Some people also have the notion that the mass failure or success in schools could be traced back to the teachers and the school authorities. Most students in Nigerian secondary schools are in greater risk of poor academic achievement in both internal and external examinations (WAEC and NECO). For instance, the available records of WAEC and NECO result analysis of 2018-2019 show a continuous decline in students' overall performance in school certificate examinations. Parents, teachers, students and government, hold accountable for students' poor performance in schools. Parents blame teachers for lack of dedication to duties. The teachers blame government for poor salaries hence they are poorly motivated, parents also accuse government for not equipping the schools with learning materials, government blame parents for not doing good homework and the students are blamed for lack of discipline and dedication to their studies. Base on the above issues, the relevant question is; what is the influence of home environment on academic achievement of secondary school students?

### **Purpose of the Study**

The purpose of the study is to find out the home environmental factors influence on academic performance of students in Owerri zone II, Imo state, Nigeria. Specifically, the study will find out

1. How socio-economic factors of home influence on students' academic performances in Owerri zone II.
2. How home structure/background influence students' academic performance.

### **Research Questions**

The study will provide answers to the following research questions:

3. What are the socio-economic factors of home influence on student's academic performances?
1. What is the home structure/background influences on student's academic performances?

### **Hypothesis**

The null hypothesis formulated was tested at 0.05 level of significance to guide the study.

Ho1: There is no significant difference between the mean ratings of socio-economic factors and structural background influence on student's academic performances in owerri zone II Imo state.

### **Method**

The research design adopted for the study was descriptive survey. The population for the study comprises 1030 respondents made up of all the 64 principals and 966 teachers in the 32 public secondary schools in Owerri Zone II, Imo state. A sample of 206 respondents was selected randomly and this represents 20% of the respondents' population. The sample consists of 32 principals and 174 teachers in the study area. The instrument used for data collection was a questionnaire designed by the researcher. It was titled "Home Environmental Influence on Academic Performance of Secondary School Students" (HEIAPSSS). Face and content validity of the instrument was obtained after the appraisal and input made by two experts; One in Measurement and Evaluation, and another in Educational Management and Policy. Corrections were made based on their observations before the instrument was approved for use. Thirty copies of the instrument were distributed to thirty respondents that were chosen from secondary schools in other zone that were outside the study area on two occasions within the space of one week for the reliability. The reliability coefficient of the instrument was 0.89 using Charles Spearman's rank correlation coefficient (Spearman's  $\rho$ ). On the spot administrative method was adopted, although those that could not respond immediately were given a day interval. This is to ensure 100% return of the questionnaire. The method of data analysis adopted was that

questionnaire items that have weighted mean scores that are equal to or above 2.50 are considered “agreed” while those whose weighed mean score was below 2.50 are considered “disagreed”. Z-test was used to test the hypothesis at 0.05 level of significance.

## Result and Discussion

### 1. Table 1: Mean ratings of the socio-economic factors of homes influence students academic performances?

S/N	The Socio-Economic Factors of Home Influence on Students Academic Performances	Principals SD	SD	Techer	Decision	
1	Late admission of the student in a school.	06	3.2	1.12	3.2	Agreed
2	Failure of parents to follow up on children’s school work.	32	3.2	1.05	3.2	Agreed
3	Poor Parents and students enter relationship at home.	00	3.2	1.05	3.2	Agreed
4	Lack of stationery e.g. pens, exercise books, geometrical sets/ educational materials/ supervision of the students’ academic work at home.	2	3.1	1.11	3.2	Agreed
5	Family Socio-economic status has influence on the students’ academic performance.	08	3.4	0.88	3.3	Agreed
6	The family income in tells the type of the school the child enroll.	64	2.8	1.16	2.8	Agreed

7	The home structure of the student can influence the academic performance of the student.	13	3.1	1.23	3.2	Agreed

**Table 1**

Criterion Mean = 2.50

Table 1 shows that items 1, 2, 3... and 10 have mean scores that are greater than 2.50. Sequel to this, it therefore follows that the respondents agreed that all the home factors itemized can influence the student’s academic performance. All the items were rated above the cut-off point value of 2.50 in a four-rating scale.

**Mean response of the home structure/background influence on student’s academic performances**

S/N	Home structure/background influence student’s on Academic Performance of the Students	Principals	Teachers	SD	SD	Decision
8	Home size and Parents interest towards the student’s academic activities helps student’s academic excellence in school.	3.1	0.96	1.20	3.2	Agree
9	On time enrollment of students in school by the Parents encourage students to perform well.	3.0	1.20	1.16	3.1	Agree
10	Family’s that are together can also enhance student’s academic performance.	3.2	0.97	0.94	3.3	Agree
11	Provisions of modern mechanical or electronic device or tool at home enhance student’s academic performance.	3.1	1.03	1.09	3.2	Agree

12	Sufficient provision of necessary school needs to the students can encourage the student’s academic performance.	3.1 0.63	1.02	3.1	Agree
13	Good interaction between Parents and children can enhance children’s academic performance.	3.1 1.17	1.14	3.0	Agree

Criterion Mean = 250

Data on Table 2 showed that the items 11, 12, 13...and 18 have mean scores that are greater than 2.50. It revealed that the entire home structure/background influence student’s on Academic Performance of the Students with all the items rated above the cutoff point value of 2.50.

Hypothesis: Ho: There is no Significant Difference between the mean Ratings of the Response of the Principals and Teachers on the socio-economic factors and structural background influence on student’s academic performances in owerri zone 11, Imo state, Nigeria.

**Data on Table 3:** Z-test on There is no Significant Difference between the mean Ratings of the Response of the Principals and Teachers on the socio-economic factors and structural background influence on student’s academic performances in owerri zone 11, Imo state, Nigeria.

Respondents:	N	‘X’	SD	z-tab	z-cal	level of significance	Decision
Principals	32	3.1	1.09	1.96	2.31	0.05	Ho is not rejected
Teachers	174	3.2	1.03				

Data on Table 3, showed Z-cal score (2.31) was greater than the Z-table score (1.96). Sequel to this, it was agreed that the null hypothesis has no significant difference between the mean ratings of the response of principals and teachers on the socio-economic factors and structural background influence on student’s academic performances in owerri zone 11, Imo state, Nigeria was not accepted.

### Discussion

The result of this study indicated that the home environmental factors affecting student’s academic performance in Owerri Zone 11, Imo state, Nigeria include all that was listed in the table above. This in line with the findings of Ushie et al, (2012) observed that Family financial resources,

which are associated with parents “occupation and educational attainment, often imply increased opportunities both at home and in school. Indeed, family background is the foundation for children’s development, as such family background in terms of family types, size, socio-economic status and educational background play important role in children’s educational attainment and social integration. Parents’ Educational Background has an enormous influence on their children’s education for several reasons, most importantly because they are their children’s first teachers.

Ali et al. (2013) found daily study hours, social economic status of parents/guardians and age as factors that significantly affects academic performance. Similarly, Narad and Addullah (2016) and Farooq et al., (2011) also found economic status of parents, their academic background and encouragement as factors that influence academic performance. Proper guidance from parents and teachers, communication skills, and learning facilities have also been found as a significant determinant to academic performance (Singh, Malik & Singh, 2016). The findings also indicates a combination of home, school, students and teacher factors (Narad & Abdullah, 2016; Farooq, Chaudhry, Shafiq & Behanu, 2011) as well as environmental, personal, social, psychological and economic factors (Sign, Malik & Sign, 2016; Ali et al. 2013). Other authors have also found that age, gender and parents’ level of education affects academic performance (Khan, Iqbal & Tasneem, 2015; Eshetu, 2014). It should be noted that these findings differ among countries, different academic levels and the subjects involved.

## **Conclusion**

Result from the study indicated that parents’ educational level, occupation, family size, economic status, and level of motivation are key variables of family background that significantly influences the academic performance in Owerri zone II in Imo State secondary schools. Also students’ from sound family background naturally tend to perform better than their peers from paltry family background. Base on this, the study advised that Students should be encouraged, monitored, motivated and supported by their parents and teachers. These results are vital information for all stakeholders in educational administration, practice and evaluation to note, especially parents of students who are at the home front should support their ward’s educational achievement by providing the right and most favorable home environment to enhance better school performance by the students.

## **Recommendations**

Based on the findings of the study, the following recommendations were made:



1. Parents of students should yearn for higher educational qualification statuses since it will translate in to better occupations and higher wages, that is, higher economic statuses; thus, better educational choices and offerings can be provided for their wards.
2. Parents should endeavor to motivate and give their children adequate time to read and do their homework at home rather than engaging them in domestic and non educational activities.
3. Parents and all the significant others at homes should make home environments to be learning stimulatory and study friendly for students.
4. Similar study may be replicated at other locations, at any other level of Nigeria's educational system in any part of the country.
5. Parents should provide their wards with essential materials that will enhance educational achievement.

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## FUTURE PRESCHOOL TEACHERS' ATTITUDES ABOUT 21ST-CENTURY DIGITAL SKILLS

Olivera Cekić-JOVANOVIĆ<sup>a\*</sup>;

Gordana STEPIĆ<sup>b</sup>

and Andrijana MILETIĆ<sup>c</sup>

<sup>a</sup>Faculty of Education, University of Kragujevac, Jagodina,  
Serbia; <sup>b</sup>Preschool Teacher Training and Business Informatics  
College of Applied Studies – Sirmium, Sremska

Mitrovica, Serbia; <sup>c</sup>Faculty of Education, University of  
Kragujevac, Jagodina, Serbia;

\*o.cekicjovanovic@gmail.com

**Abstract:** *The study examines the attitudes of future pre-school teachers in preschool institutions about 21st-century digital skills, especially in the field of Methodology of Teaching Environmental Studies. The aim of the research was to examine whether future preschool teachers recognized the possibilities of applying digital technologies in educational work, through self-assessment of digital competencies, and whether there was a statistically significant difference in the attitudes of students of vocational and academic studies. The sample included 125 students, future preschool teachers (57 respondents from vocational studies and 68 respondents from academic studies). The attitudes of students, future preschool teachers, were examined using a five-point Likert-type scale created on the basis of the European Framework for the Digital Competence of Educators. The results of the study showed that future pre-school teachers had positive attitudes and recognized the possibilities of applying digital technology in preschool educational work. Future pre-school teachers positively evaluate their 21st-century digital skills, but in general there is a statistically significant difference in the self-assessment of digital competencies between students of academic and*

*vocational studies, that is, students of academic studies have more positive attitudes about digital competencies compared to students of vocational studies.*

**Keywords:***preschool teachers; European framework for the digital competences; digital competences of educators; key competencies in education for 21st century; pre-school teacher education; methodology of teaching; attitudes of educators; Environmental studies; vocational studies; academic studies.*

## **Introduction**

A large number of researches dealing with the educational process indicate that it should respond to rapid and dynamic changes, by enabling children to develop skills that will facilitate their lives and work in modern society. Hence, a system of competencies for the 21st century -KC21 (*twenty-first century skills*) - has emerged as an important concept in upbringing and education (Pelegriño & Hilton, 2013, Redeş, 2016). A special place in the series of KC21 competencies belongs to digital competencies, as digital technology has gained an increasingly important place in the lives of children in the 21st century through shaping the way they learn and gain new experiences, spend free time, communicate, play and socialize with peers. Research shows that when used adequately, the use of digital technology in a real program can: support the preschool child's overall development and the development of social and cooperative competencies and children's participation; help in the development of language and mathematical literacy and in the development of "new literacy" or "multi-literacy" (Yelland et al., 2008 according to Pavlović Breneselović, 2014).

The necessity of developing digital competence is implied by the fact that it is one of the eight key competencies for lifelong learning and active participation in society (European Parliament and the Council, 2006; Kojić, Kojić Grandić, & Markov, 2019). Currently, the most commonly used and comprehensive theoretical framework for digital literacy in Europe is The Digital Competence Framework for Citizens, or DigComp. The Digital Competence Framework (DigComp 1.0) was published in 2013 (Ferrari, 2013) and has been revised twice, in 2016 (DigComp 2.0) (Vuorekari et al, 2016) and 2017 (DigComp 2.1) (Carretero et al., 2017). Within DigComp 2.0, five competence areas are defined: information and data literacy, communication and collaboration, digital content creation, safety and problem solving, and within each area there is a list of competencies. While in the second version the conceptual model and terminology were somewhat changed, in the last version the focus was on developing a greater number of

proficiency levels: basic level, intermediate level, advanced level and highly specialized level.

When it comes to educational policy documents, the importance of digital competence is recognized both internationally and nationally. The development of digital competence within the system of compulsory education is prescribed by the Law on the Education System Foundations of the Republic of Serbia and is an integral part of the new Preschool Curriculum Framework "Years of Acent". The Digital Competence Framework - Teacher for a Digital Age (2019) has been created, as one of the measures of educational policy for the development of digital education. This framework can be indirectly used for the development of digital competence of preschool teachers, since it is primarily aimed at teachers and is not harmonized with the new concept of preschool education in the Republic of Serbia. Therefore, we will rely on new documents of educational policy in the field of preschool education.

As the first level in the system of education and upbringing, preschool education achieves the basis for the development of competencies for lifelong learning and thus ensures the continuity of education and lifelong learning (Years of Acent, 2019). Based on the Rulebook on competency standards for the profession of preschool teachers and his professional development, the competence of preschool teachers is determined through three areas: (1) direct work with children; (2) developing cooperation and learning communities; (3) developing professional practice.

The area of "developing professional practice" points out that the preschool teacher should have knowledge about the use of digital technologies. The preschool teachers should be able to: apply and integrate new technologies in the direct educational work; use the advantages, control the disadvantages and dangers of digital technologies and develop awareness and habits in children and parents for an adequate use thereof; use digital technologies in planning activities and designing the necessary materials, in observation, evaluation and documentation; work in various databases (for data records: on children, parents, evaluation, etc.); apply digital technologies for the exchange of information with family, colleagues, associates, local community and other stakeholders and institutions and use digital technologies for professional development. When it comes to the values, it is emphasized that the preschool teachers should have a working etiquette of using digital technologies for the purpose of developing curriculums (the Rulebook on competency standards for the profession of preschool teachers and his professional development, 88/17 and 27/18 – state law).

In this paper, we will look at digital competence in accordance with the theoretical framework provided by the European Commission, according to

which digital competence is a set of knowledge, skills and attitudes necessary when using digital technology to perform various tasks, solve problems, communicate, manage information, collaborate, create and share content and construct knowledge; in an efficient and effective way, critically, creatively, autonomously, adaptively, ethically and reflexively; at work, in free time, for participation in society, learning, socializing (Vuorekari et al., 2016).

Knowledge within the digital competence of pre-school teachers is not reduced to knowledge of technologies and mastering applications, yet knowledge about digital technologies is placed in a broader pedagogical discourse on child's learning and development and creation of a curriculum (Bolst, 2004; Gibbons, 2010; Turvey et al., 2010; Yelland et al., 2008 according to Pavlović Breneselović, 2014). Skills are not built on knowledge about the possibilities that technologies provide for us and on mastering them, but are reflected in the ability to put the possibilities that technologies have in the function of the principles of working with children and their learning and development (Pavlović Breneselović, 2014). Being competent in the field of digital technologies in preschool education means acting professionally, ethically and creatively in educational practice (Ibid, 2014). The question that arises today is not whether digital technology should be integrated into the real program of the preschool institution, but how to support pre-school teachers during professional development, from their initial education onwards, to respond to the demands of the digital age and new educational policy documents.

Research matters of the use of digital technology in preschool education can be classified into four major groups: evaluation of the application of digital technology in preschool institutions (Natsiopoulou & Bletsou, 2011; Masoumi, 2015), the impact of digital technologies on preschool children (Voogt & Mckenney, 2008; Toki & Pange, 2010), opinions and attitudes of pre-school teachers towards the application of digital technology in preschool institutions (Gialamas & Nikolopoulou, 2010; Konca, Ozel & Zelyurt, 2016; Mikelić Preradović, Lešin & Boras, 2017) and the development of digital competence of preschool teachers and its applications in the preschool environment (Kalogiannakis, 2010; Kalaš, 2013, Liu & Pange, 2015; Sillat, Kollom & Tammets, 2017). However, in some papers, these groups of matters are intertwined. The things that are of great importance for our paper are research matters that dealt with the development of digital competence of future pre-school teachers and in-service teachers, as well as with the development of their views on the application of digital technology in educational work.

Since attitudes are relatively permanent systems of positive or negative evaluation, feelings and tendencies to take action for or against, in relation to

different objects, attitudes are tendencies or predispositions of an individual to evaluate an object in a certain way. Attitudes have their own strength, permanence, direction and influence the action of individuals (Trebješanin, 2000). Accordingly, the attitudes of future pre-school teachers can influence their direct activities within the educational work. Positive attitudes of pre-school teachers about the application of digital technology, as well as the development of their digital competencies and effective training have a positive effect on the successful integration of digital technology into the real preschool program (Nikolopoulou & Gialamas, 2009). On the other hand, there are also factors that can negatively affect the application of digital technology in preschool institutions, such as inadequate training, lack of skills and experience, and of course the attitudes of preschool teachers (Sillat, Kollom & Tammets, 2017).

With this in mind, the attitudes of future pre-school teachers about the possibilities of applying digital technology in preschool educational work, as well as their self-assessment of digital competencies, can be an important factor influencing their actions and the application of digital technology in preschool educational work. Therefore, in this research we tried to shed light on and examine the attitudes of future pre-school teachers towards the possibilities of applying digital technology in working with preschool children, through self-assessment of 21st-century digital skills.

When talking about the concept of self-assessment, Vidanović (2006) states that the term self-confidence can be used for this term, which is also defined as a positive evaluation of oneself and belief in one's own abilities and capacities. Self-assessment, as well as other self-reflective activities allow students to assess their own abilities based on clearly defined criteria, in this case digital competencies, but also to receive feedback that should be the starting point in order to improve their work. Some research on digital competencies indicates that teachers who assess that they are digitally competent place greater emphasis on digital literacy of students and have more positive attitudes about the use of digital technologies in educational work (Fraillon et al., 2014; Siddik, F., Scherer, R. & Tondeur, J, 2016)

The self-assessment of digital competencies of pre-school teachers is influenced by numerous factors - age, years of work experience, place of work and education, which is supported by the results of a survey conducted on a sample of 465 respondents. When it comes to age, younger preschool teachers have more developed competencies, but the competencies of pre-school teachers decline with the increase in years of work experience. In the same research, it was concluded that preschool teachers with university degree show better preparedness for the use of modern media in their work than those with secondary education and college degree (Stanisavljević Petrović, Pavlović, 2017).



As preschool children spend most of their time with pre-school teacher who are participants and agents of change, it is important that they use adequate digital technology appropriate to their age, abilities and interests, and that they support and improve the curriculum. If used in a meaningful way, it can be an extremely useful learning tool. Preschool institutions should accept the concept of lifelong learning, follow research on the application of digital technologies in preschool education and, based on their own assessment of practice, improve the quality of educational work.

The role of pre-school teachers is to create an environment in which new technologies are used for research and encouragement (Arsenijević, Andevski, 2012). Based on previous research, "children in Serbia do not sufficiently use the positive aspects of digital technology and have poorly developed digital skills" (Kuzmanović, 2017, according to Kuzmanović, 2019).

If future pre-school teachers - students highly value their own digital competencies, they are expected to feel more competent and ready to use digital technology in educational work. It is also expected that such pre-school teachers will find places for activities through which children's digital competencies are developed.

The aim of the research was to determine whether future pre-school teachers recognized the possibilities of applying digital technologies in educational work with children in preschool institutions, through self-assessment of 21st-century digital skills.

In accordance with the set goal, we dealt with the following research tasks:

(1) Examining the attitudes of students - future pre-school teachers on the possibilities of applying digital technologies in planned learning situations in the field of Environmental Studies.

(2) Examination of the statistical significance of the difference in the self-assessment of digital competencies of future pre-school teachers - students of vocational and academic studies in the field of Methodology of Teaching Environmental Studies.

We decided on the field of Methodology of Teaching Environmental Studies for it is interdisciplinary, integrates various sciences such as biology, physics, chemistry, geography, history, sociology, methodology, pedagogy, developmental psychology, etc. The field of Methodology of Teaching Environmental Studies, due to the complexity of the content it deals with, provides great opportunities for the integration of educational technology both during the preparation and during the implementation of planned learning situations with children in preschool institutions.

## Methods

In accordance with the fact that in Serbia, according to the law, preschool teachers can be educated in two ways:

(1) by studying at vocational studies, that is, at teacher education colleges for a period of 3 years; and

(2) by studying at academic studies, that is, faculty of education for a period of 4 years, the research was conducted at the Faculty of Education and at Colleges of teacher education, during 2019/2020.

Based on previously studied literature and research results in the field of digital competencies and application of educational technology, for the purposes of this research a research instrument was constructed, i.e. an e-form questionnaire in the form of a Likert-type scale which examined the attitudes and self-assessment of digital competence of future preschool teachers. The instrument collected numerical data for the quantitative method of their analysis.

The first part of the questionnaire contained questions for collecting general data and information about the respondents (gender of respondents, achievements in the Methodology of Teaching and the Methodology of Teaching Environmental Studies, name of institutions etc.). The second part was a five-point Likert-type scale, consisting of 26 statements (items).

The statements in the survey questionnaire were formulated on the basis of the *Rulebook on competency standards for the profession of preschool teachers and his professional development* (“RS Official Gazette”, No. 88/17 and 27/18), which is based on *DigComp 2.1*. (Carretero, Vuorikari & Punie, 2017).

*Table 1. Statements (items -IT) from the research instrument.*

Code	Definition of items / Formulation of statements
T1	I use e-mail in everyday life and during my studies.
T2	I use WWW - Internet databases in everyday life and during my studies.
T3	I use social networks in my daily life and during my studies.
T4	I have the necessary knowledge and skills to apply digital technologies as a future preschool teacher <i>to exchange information</i> with family, colleagues, associates, local community and other stakeholders and institutions.

- T5 I believe that, as a future preschool teacher, I have competencies to *work in various databases* for recording information about children, their parents, evaluation of educational work, etc.
- T6 I can successfully use digital technologies to *summarize, compare and consolidate* information from different digital sources.
- T7 I am not competent enough to *judge the quality, relevance, accuracy and scope* of digital information.
- T8 I successfully use digital technologies in *finding and collecting* relevant information and educational materials for planned learning situations in the field of Environmental Studies.
- T9 As a future preschool teacher, I have competencies that enable me to use digital technology in *planning* planned learning situations in the field of Environmental Studies.
- T10 I can effectively *adapt, present and methodically transform* digital information and educational materials in accordance with the age of the children and the topic of the planned learning situation in the field of Environmental Studies.
- T11 I am able to apply digital tools for organizing and classifying information (chart diagrams, schemes, planners, schedules, mind maps, animations, video tutorials, etc.) in the field of Environmental Studies.
- T12 I have the necessary competencies for the use of appropriate digital technologies for *designing and creating* the necessary educational materials for working with children in the realization of the planned learning situation in the field of Environmental Studies.
- T13 I am competent enough to *apply and integrate* digital technologies in the direct educational work, in the realization of the planned learning situation in the field of Environmental Studies.
- T14 I can *evaluate and document* various Environmental Studies' activities done with children in preschool institutions in many ways, because I have digital competencies that allow me to create, process and archive photos, digital texts, videos, etc.
- I am competent to do *multimedia presentations of content that is interactive* and allows children better understanding as well as easier

T15 and faster learning in the field of Environmental Studies.

T16 I have digital competencies for the meaningful use of digital technologies as tools that *enable children* to access information during the implementation of the planned learning situation in the field of Environmental Studies.

T17 I am able to use digital technology to enable children to *meaningfully use* digital technologies to express themselves and learn through play within a topic or project in the field of Environmental Studies.

T18 The digital competencies that I have help me to enable children *to use digital technologies themselves for the purpose of monitoring their own learning*.

T19 I am competent to use digital technologies in such a way as to enable children to progress at *their own pace* within the planned learning situations in the field of Environmental Studies, in the way that suits them best.

T20 I am competent to use digital technologies in such a way as to enable children to *make decisions and think critically* within the planned learning situations in the field of Environmental Studies.

T21 I am competent to adequately and safely use the advantages of digital technology in educational work in the field of Environmental Studies.

T22 Adequate attitude and working etiquette of using digital technologies is necessary for every preschool teachers.

T23 I believe that preschool teacher should develop awareness and habits in children and parents for the adequate use of digital technologies.

T24 I believe that as a future preschool teacher I am not competent enough to develop awareness and habits in children and parents for the adequate use of digital technologies.

T25 I believe it is important that digital technology is used for professional development of preschool teacher.

T26 I believe that, as a future preschool teacher, I am not always able to control the shortcomings and dangers of applying digital technology.

We evaluated the reliability of the questionnaire by calculating the Cronbach'  $\alpha$  reliability coefficient which is  $\alpha = 0,83$ ,  $\alpha > 0,7$ .

### Research Sample

The appropriate sample of respondents represents a group of students of the Faculty of Education and Colleges of Teacher Education, which was selected on the basis of the accessibility or expediency. The sample of respondents consisted of N = 125 students, who were students of the third year of vocational and basic academic studies of the study program preschool teacher. 54 respondents were from vocational studies (teacher education colleges) and 61 from basic academic studies (of the study program *Preschool teacher*). All students included in the research have previously successfully completed the course “Methodology of Teaching” (MT). The structure of the respondents is given in Table 2.

Table 2. Sample structure of respondents

Institution	Gender				Total		Achievement in Informatic	Achievement in MT*	Achievement in MTES**
	Female		Male		$\Sigma$				
	f	%	f	%	f	%			
Vocational studies	54	43,2	3	2,4	57	45,6	7,44	8,04	8,56
Academic studies	61	48,8	7	5,6	68	54,4	7,88	8,12	8,78
	115	92	10	8	125	100			

\*MT = Methodology of Teaching

\*\*MTES = Methodology of Teaching Environmental Studies

### Results and Discussion

When it comes to the first research task, the results showed that the majority of respondents (96%, 120 students) had a positive attitude about the possibilities of applying digital technologies in planned learning situations in the field of Environmental Studies. 76% (95 respondents) had a positive attitude and recognized the possibilities of using e-mail and social networks in communication with colleagues, parents and children in order to exchange information. Analogous to the mentioned results, the majority of students (73.6%) recognized the possibility of using digital technologies in such a way as to enable children to make decisions and think critically within the

planned learning situations. Also, 82.4% (103 respondents) recognized the possibility of applying digital technology in working with children by using different databases.

On the other hand, as many as 88.8% (111 respondents) had a positive attitude about the need for permanent professional development of preschool teachers. Respondents within this research (analogous to the results of research with in-service preschool teachers) perceive the level of education and training in the field of ICT as the most important factors influencing the *application* of digital technology in practice (Liu & Pange, 2015). They generally understand the need for additional ICT training as part of their professional development (which is a lifelong process), as well as the importance of motivation in acquiring new skills (Mikelić Preradović, Lešin & Boras, 2017).

Kalogiannakis (2010) indicates that there is a gap between the ICT subjects attended by future preschool teachers at the university and the expected level of ICT use in the preschool environment and points out that a crucial factor for the application of digital technology in preschool institutions is whether future preschool teachers were adequately educated for that purpose during their studies. In accordance with the self-assessment of digital competencies, future preschool teachers, 75% of respondents, agree with the statements and believe that they have the necessary competencies for meaningful use of digital technologies as tools to enable children to access information during the planned learning situations in the field of Environmental studies (which can be somewhat abstracted to other fields). In addition, 59.5% of respondents positively self-assess digital competencies for finding, adapting, organizing and classifying information; designing and creating the required educational materials; summarizing, comparing and combining information from different digital sources of knowledge, as well as evaluating and documenting activities in educational work with children. In accordance with the needs of modern society, it is necessary to follow new trends in curriculum design (Herlo, 2015).

As a special category of digital competencies in the European Framework for the Digital Competence of Educators, *adequate and safe use* of digital technology in the educational system has been singled out. "The dominance of the Internet in the children's world certainly makes it imperative for adults to be active participants in guiding children when using the Internet, in order to provide them with safe and secure access to online content" (Rajić, 2012), and accordingly, within this research, the results showed that 92 (73.6%) future students had a positive attitude about their ability to safely use digital technologies.

On the other hand, close to 45% of respondents believe that they do not have sufficiently developed digital competencies related to the possibility of

successful use of digital technology for *mental engagement and individualization* of children's work, as well as for creating multimedia *interactive* content aimed at better understanding phenomena and processes and at easier and faster learning. On that account, some other studies suggest that the professional development of preschool teachers should be taken into account when considering the use of digital technology in practice (Kerckaert, Vanderlinde, & Braak, 2015), hence, at higher-educational institutions of teacher education, teaching should be directed towards greater / more frequent practical application of digital technology in practice exactly with the aim of improving the quality of educational work.

An interfering factor in the development of digital competencies of preschool teachers and in the application of digital technology in practice can arise in the training of preschool teachers at different levels (initial education, on-the-job training), which offers support for certain digital skills, but little attention is paid to pedagogical analysis of the use of technology in early childhood upbringing and education (Liu, Toki & Pange, 2014). 65% of respondents completely agree, 28% partially agree, and 7% disagree with the fact that digital technology must be used for professional development of preschool teachers (IT25). These results are in line with the results that show that preschool teachers who develop relevant ICT knowledge through continuous professional development can create more opportunities for integrating ICT into everyday activities and jointly develop activities aimed at productive integration of ICT in preschool institutions (Kalaš, 2013).

In order to respond to the second research task and reliably examine the attitudes of students - future preschool teachers about the possibilities of applying digital technologies in planned learning situations in the field of Environmental Studies and determine whether there is a statistically significant difference in self-assessment of digital competencies of students of vocational and academic studies, we analyzed the uniformity of the groups according to:

- (1) gender of respondents;
- (2) achievements in the IT group of subjects, as relevant areas for the development of digital competencies of future preschool teachers;
- (3) Methodology of teaching, as relevant areas for the application of appropriate methodological procedures along with the use of educational technology in working with children in preschool institutions; and
- (4) Methodology of Teaching Environmental Studies, as an interdisciplinary subject that offers numerous opportunities for the application of educational technology in direct work with children in preschool institutions.

When calculating the normality of the data distribution, the result of the Kolmogorov-Smirnov normality test was used, since the sample of respondents was larger than 50, **N=125**.

*Tabela 3. Normality test – Data distribution*

	Grupa ispitanika	Kolmogorov-Smirnov		
		Statistic	df	Sig.
<b>Gender of respondents</b>	Vocational studies(VS)	0,540	57	<b>0,000</b>
	Academic studies (AS)	0,529	68	<b>0,000</b>
<b>Achievement Informatic</b>	in VS	0,195	57	<b>0,000</b>
	AS	0,179	68	<b>0,000</b>
<b>Achievement Methodology of Teaching</b>	in VS	0,181	57	<b>0,000</b>
	AS	0,172	68	<b>0,000</b>
<b>Achievement Methodology of Teaching Environmental Studies</b>	in VS	0,241	57	<b>0,000</b>
	AS	0,196	68	<b>0,000</b>

Significance is everywhere less than 0.05 ( $p = 0.000$  in all cases), the results do not have a normal distribution, which leads us to further use the Mann-Whitney test to calculate the statistical significance of the difference between the group of students from academic studies and vocational studies.

*Table 4. Student achievements in Informatics, Methodology of Teaching and Environmental Studies Methodology*

Group	Median	Mean Ranks	Sum of Ranks	Kolmogorov-Smirnov test	Mann-Whitney test



					Statistic	Sig.	U	Z	Sig.
<b>Informatice</b>	<b>F</b>	8,00	59,60	3397,00	0,540	0,000	1744	-	<b>0,324</b>
	<b>G</b>	8,00	65,85	4478,00	0,529	0,000			
<b>Methodology of Teaching</b>	<b>F</b>	8,00	61,20	3488,50	0,195	0,000	1835,5	-	<b>0,602</b>
	<b>G</b>	8,00	64,51	4386,50	0,179	0,000			
<b>Methodology of Teaching Environmental Studies</b>	<b>F</b>	9,00	59,73	3404,50	0,181	0,000	1751,5	-	<b>0,335</b>
	<b>G</b>	9,00	65,74	4470,50	0,172	0,000			

Significance is higher than 0.05 everywhere ( $p = 0.304$ ;  $0.324$ ;  $0.602$ ;  $0.335$ ), which means that the groups are uniform according to gender, achievements in the IT subjects, achievements in the Methodology of Teaching and in the Methodology of Teaching Environmental Studies.

After examining the uniformity of groups, we were interested in whether there was a statistically significant difference in students' attitudes about the possibilities of applying digital technology in educational work, and in the self-assessment of digital competencies of these two groups of students (students of academic and vocational studies).

The results showed that there was a statistically significant difference in the self-assessment of digital competencies of future preschool teachers who are taking academic studies in relation to students of vocational studies. The grades which preschool teachers in vocational studies (VG) used to assess their digital competencies differ significantly from the grades of preschool teachers in academic studies (AG). When comparing the results for each individual item, we found that there was a statistically significant difference between AG and VG within 13 of the 26 items.

*Table 5. Self-assessment of digital competencies of students of vocational and academic studies.*

Items	Group	Median	Mean Ranks	Sum of Ranks	Kolmogorov-Smirnov test	Mann-Whitney test
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					Statistic	Sig.	U	Z	Sig.																																																																																																																																																						
IT1	FG	4,00	73, 23	4174,0 0	0,451	0,000	1355,00	-3,375	<b>0,001</b>																																																																																																																																																						
	SG	5,00	54, 43	3701,0 0	0,271	0,000				IT2	FG	5,00	61, 16	3486,0 0	0,357	0,000	1833,00	-0,627	0,531	SG	5,00	64, 54	4389,0 0	0,394	0,000	IT3	FG	5,00	59, 11	3369,0 0	0,455	0,000	1716,00	-1,697	0,090	SG	5,00	66, 26	4506,0 0	0,524	0,000	IT4	FG	5,00	69, 39	3955,0 0	0,428	0,000	1574,00	-2,086	<b>0,037</b>	SG	5,00	57, 65	3920,0 0	0,325	0,000	IT5	FG	4,00	74, 84	4266,0 0	0,434	0,000	1263,00	-3,753	<b>0,000</b>	SG	5,00	53, 07	3609,0 0	0,250	0,000	IT6	FG	4,00	68, 66	3913,5 0	0,358	0,000	1615,50	-1,784	0,074	SG	5,00	58, 26	3961,5 0	0,274	0,000	IT7	FG	3,00	70, 91	4042,0 0	0,216	0,000	1487,00	-2,325	<b>0,020</b>	SG	3,00	56, 37	3833,0 0	0,187	0,000	IT8	FG	4,00	67, 18	3829,0 0	0,364	0,000	1700,00	-1,322	0,186	SG	5,00	59, 50	4046,0 0	0,261	0,000	IT9	FG	4,00	67, 93	3872,0 0	0,318	0,000	1657,00	-1,507	0,132	SG	5,00	58, 87	4003,0 0	0,235	0,000	IT10	FG	4,00	70, 40	4013,0 0	0,306	0,000	1516,00	-2,384	<b>0,017</b>	SG	4,00	56, 79	3862,0 0	0,318	0,000	IT1	FG	4,00	71, 45	4072,5 0	0,235
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IT4	FG	5,00	69, 39	3955,0 0	0,428	0,000	1574,00	-2,086	<b>0,037</b>																																																																																																																																																						
	SG	5,00	57, 65	3920,0 0	0,325	0,000				IT5	FG	4,00	74, 84	4266,0 0	0,434	0,000	1263,00	-3,753	<b>0,000</b>	SG	5,00	53, 07	3609,0 0	0,250	0,000	IT6	FG	4,00	68, 66	3913,5 0	0,358	0,000	1615,50	-1,784	0,074	SG	5,00	58, 26	3961,5 0	0,274	0,000	IT7	FG	3,00	70, 91	4042,0 0	0,216	0,000	1487,00	-2,325	<b>0,020</b>	SG	3,00	56, 37	3833,0 0	0,187	0,000	IT8	FG	4,00	67, 18	3829,0 0	0,364	0,000	1700,00	-1,322	0,186	SG	5,00	59, 50	4046,0 0	0,261	0,000	IT9	FG	4,00	67, 93	3872,0 0	0,318	0,000	1657,00	-1,507	0,132	SG	5,00	58, 87	4003,0 0	0,235	0,000	IT10	FG	4,00	70, 40	4013,0 0	0,306	0,000	1516,00	-2,384	<b>0,017</b>	SG	4,00	56, 79	3862,0 0	0,318	0,000	IT1	FG	4,00	71, 45	4072,5 0	0,235	0,000	1456,50	-2,545	<b>0,011</b>																																												
IT5	FG	4,00	74, 84	4266,0 0	0,434	0,000	1263,00	-3,753	<b>0,000</b>																																																																																																																																																						
	SG	5,00	53, 07	3609,0 0	0,250	0,000				IT6	FG	4,00	68, 66	3913,5 0	0,358	0,000	1615,50	-1,784	0,074	SG	5,00	58, 26	3961,5 0	0,274	0,000	IT7	FG	3,00	70, 91	4042,0 0	0,216	0,000	1487,00	-2,325	<b>0,020</b>	SG	3,00	56, 37	3833,0 0	0,187	0,000	IT8	FG	4,00	67, 18	3829,0 0	0,364	0,000	1700,00	-1,322	0,186	SG	5,00	59, 50	4046,0 0	0,261	0,000	IT9	FG	4,00	67, 93	3872,0 0	0,318	0,000	1657,00	-1,507	0,132	SG	5,00	58, 87	4003,0 0	0,235	0,000	IT10	FG	4,00	70, 40	4013,0 0	0,306	0,000	1516,00	-2,384	<b>0,017</b>	SG	4,00	56, 79	3862,0 0	0,318	0,000	IT1	FG	4,00	71, 45	4072,5 0	0,235	0,000	1456,50	-2,545	<b>0,011</b>																																																												
IT6	FG	4,00	68, 66	3913,5 0	0,358	0,000	1615,50	-1,784	0,074																																																																																																																																																						
	SG	5,00	58, 26	3961,5 0	0,274	0,000				IT7	FG	3,00	70, 91	4042,0 0	0,216	0,000	1487,00	-2,325	<b>0,020</b>	SG	3,00	56, 37	3833,0 0	0,187	0,000	IT8	FG	4,00	67, 18	3829,0 0	0,364	0,000	1700,00	-1,322	0,186	SG	5,00	59, 50	4046,0 0	0,261	0,000	IT9	FG	4,00	67, 93	3872,0 0	0,318	0,000	1657,00	-1,507	0,132	SG	5,00	58, 87	4003,0 0	0,235	0,000	IT10	FG	4,00	70, 40	4013,0 0	0,306	0,000	1516,00	-2,384	<b>0,017</b>	SG	4,00	56, 79	3862,0 0	0,318	0,000	IT1	FG	4,00	71, 45	4072,5 0	0,235	0,000	1456,50	-2,545	<b>0,011</b>																																																																												
IT7	FG	3,00	70, 91	4042,0 0	0,216	0,000	1487,00	-2,325	<b>0,020</b>																																																																																																																																																						
	SG	3,00	56, 37	3833,0 0	0,187	0,000				IT8	FG	4,00	67, 18	3829,0 0	0,364	0,000	1700,00	-1,322	0,186	SG	5,00	59, 50	4046,0 0	0,261	0,000	IT9	FG	4,00	67, 93	3872,0 0	0,318	0,000	1657,00	-1,507	0,132	SG	5,00	58, 87	4003,0 0	0,235	0,000	IT10	FG	4,00	70, 40	4013,0 0	0,306	0,000	1516,00	-2,384	<b>0,017</b>	SG	4,00	56, 79	3862,0 0	0,318	0,000	IT1	FG	4,00	71, 45	4072,5 0	0,235	0,000	1456,50	-2,545	<b>0,011</b>																																																																																												
IT8	FG	4,00	67, 18	3829,0 0	0,364	0,000	1700,00	-1,322	0,186																																																																																																																																																						
	SG	5,00	59, 50	4046,0 0	0,261	0,000				IT9	FG	4,00	67, 93	3872,0 0	0,318	0,000	1657,00	-1,507	0,132	SG	5,00	58, 87	4003,0 0	0,235	0,000	IT10	FG	4,00	70, 40	4013,0 0	0,306	0,000	1516,00	-2,384	<b>0,017</b>	SG	4,00	56, 79	3862,0 0	0,318	0,000	IT1	FG	4,00	71, 45	4072,5 0	0,235	0,000	1456,50	-2,545	<b>0,011</b>																																																																																																												
IT9	FG	4,00	67, 93	3872,0 0	0,318	0,000	1657,00	-1,507	0,132																																																																																																																																																						
	SG	5,00	58, 87	4003,0 0	0,235	0,000				IT10	FG	4,00	70, 40	4013,0 0	0,306	0,000	1516,00	-2,384	<b>0,017</b>	SG	4,00	56, 79	3862,0 0	0,318	0,000	IT1	FG	4,00	71, 45	4072,5 0	0,235	0,000	1456,50	-2,545	<b>0,011</b>																																																																																																																												
IT10	FG	4,00	70, 40	4013,0 0	0,306	0,000	1516,00	-2,384	<b>0,017</b>																																																																																																																																																						
	SG	4,00	56, 79	3862,0 0	0,318	0,000				IT1	FG	4,00	71, 45	4072,5 0	0,235	0,000	1456,50	-2,545	<b>0,011</b>																																																																																																																																												
IT1	FG	4,00	71, 45	4072,5 0	0,235	0,000	1456,50	-2,545	<b>0,011</b>																																																																																																																																																						

1	SG	4,00	55, 97	3802,5 0	0,227	0,000			
IT1 2	FG	4,00	67, 54	3849,5 0	0,286	0,000	1679,50	-1,407	0,159
	SG	4,00	59, 20	4025,5 0	0,267	0,000			
IT1 3	FG	4,00	70, 30	4007,0 0	0,268	0,000	1522,00	-2,232	<b>0,026</b>
	SG	4,00	56, 88	3868,0 0	0,251	0,000			
IT1 4	FG	4,00	66, 26	3777,0 0	0,341	0,000	1752,00	-1,056	0,291
	SG	4,00	60, 26	4098,0 0	0,305	0,000			
IT1 5	FG	4,00	72, 75	4147,0 0	0,371	0,000	1382,00	-3,036	<b>0,002</b>
	SG	5,00	54, 82	3728,0 0	0,274	0,000			
IT1 6	FG	4,00	68, 79	3921,0 0	0,392	0,000	1608,00	-2,041	<b>0,041</b>
	SG	4,00	58, 15	3954,0 0	0,377	0,000			
IT1 7	FG	4,00	67, 89	3870,0 0	0,306	0,000	1659,00	-1,553	0,120
	SG	4,00	58, 90	4005,0 0	0,298	0,000			
IT1 8	FG	4,00	70, 91	4042,0 0	0,283	0,000	1487,00	-2,468	<b>0,014</b>
	SG	4,00	56, 37	3833,0 0	0,342	0,000			
IT1 9	FG	4,00	69, 84	3981,0 0	0,260	0,000	1548,00	-2,143	<b>0,032</b>
	SG	4,00	57, 26	3894,0 0	0,298	0,000			
IT2 0	FG	4,00	70, 78	4034,5 0	0,240	0,000	1794,50	-2,382	<b>0,017</b>
	SG	4,00	56, 48	3840,5 0	0,272	0,000			
IT2 1	FG	4,00	68, 66	3913,5 0	0,300	0,000	1615,50	-1,742	0,082
	SG	4,00	58, 26	3961,5 0	0,243	0,000			
IT2 2	FG	5,00	63, 73	3632,5 0	0,311	0,000	1896,50	-0,231	0,817
	SG	5,00	62, 39	4242,5 0	0,311	0,000			

IT2 3	FG	4,00	59, 68	3401,5 0	0,257	0,000	1748,50	-1,002	0,316
	SG	4,00	65, 79	4473,5 0	0,253	0,000			
IT2 4	FG	2,00	69, 77	3977,0 0	0,265	0,000	1552,00	-1,987	<b>0,047</b>
	SG	3,00	57, 32	3898,0 0	0,227	0,000			
IT2 5	FG	4,00	65, 19	3716,0 0	0,311	0,000	1813,00	-0,682	0,495
	SG	5,00	61, 16	4159,0 0	0,267	0,000			
IT2 6	FG	4,00	67, 07	3823,0 0	0,290	0,000	1706,00	-1,216	0,224
	SG	4,00	59, 59	4052,0 0	0,293	0,000			
Total score	FG	103,5	74, 46	4244,0 0	0,076	0,200	1285,00	-3,239	<b>0,001</b>
	SG	111,0	53, 40	3631,0 0	0,141	0,006			

There is a statistically significant difference in the attitudes of students of vocational and academic studies when it comes to statements IT1, IT4, IT5, IT7, IT10, IT11, IT13, IT15, IT16, IT18, IT19, IT20, IT24. In relation to students of vocational studies, students of academic studies have more positive attitudes about digital competencies related to: the use of e-mail in communication; exchange of information with family, colleagues, associates, local community and other stakeholders and institutions; work in different databases; judging the quality, relevance, accuracy and scope of digital information; adaptation, presentation and methodological transformation of digital information; application of digital tools for organization and classification of information; application and integration of digital technology in the direct educational work; multimedia presentation of interactive content; digital competencies for meaningful use of digital technologies as tools that enable children to access information during the implementation of the planned learning situations in the field of Environmental Studies; independent use of digital technology by children in monitoring their own learning; the use of digital technologies so as to enable children to progress at their own pace within the planned learning situations in the field of Environmental Studies, in the way that suits them best; the use of digital technologies so as to enable children to make decisions and think critically within the planned learning situations in the field of Environmental Studies; development of awareness and habits in children and parents for the

adequate use of digital technologies. The development of digital competence of future preschool teachers should be based on didactics, pedagogical knowledge and practical application in the context of preschool institutions. Future preschool teachers believe that practice is an important part in shaping digital competence and point out that the application of theoretical knowledge in practice has enabled them to become confident in their competencies (Sillat, Kollom & Tammets, 2017).

On the other hand, the results show that there is no statistically significant difference in the attitudes of students of vocational and academic studies when it comes to statements IT2, IT3, IT6, IT8, IT9, IT12, IT14, IT17, IT21, IT22, IT23, IT25, IT26. In these cases, the significance is higher than 0.05 everywhere ( $p > 0.05$ ). Both groups of students have equally positive attitudes and believe that they have digital competencies related to: the use of Internet databases and social networks during their studies; finding and collecting relevant information and educational materials; planning learning situations in the field of Environmental Studies; designing and creating the required educational materials for working with children in the implementation of the planned learning situations in the field of Environmental Studies; summarizing, comparing and combining information from different digital sources of knowledge; evaluation and documentation of activities in educational work with children; meaningful use of digital technology to express and learn through play within a topic or project in the field of Environmental Studies; adequate and safe use of digital technology in educational work in the field of Environmental Studies; adequate attitude and working etiquette of using digital technologies; developing awareness and habits in children and parents for the adequate use of digital technologies; professional development of preschool teachers and control of the shortcomings and dangers of the application of digital technology. The results of this part of the research are in accordance with the results of studies related to the development of digital competence of preschool teachers and the application of digital technology in the preschool institutions environment (Kalogiannakis, 2010; Kalaš, 2013, Liu & Pange, 2015; Sillat, Kollom & Tammets, 2017).

## **Conclusion**

The study results showed that future preschool teachers had positive attitudes and recognized the possibilities of applying digital technology in educational work. These results are encouraging, in the sense that attitudes can provoke certain desirable actions, assuming that future preschool teachers who have positive attitudes about the application of digital technology in educational work and positively assess their digital competencies will more

often apply digital technology in practice in order to improve its quality. Future preschool teachers positively evaluate their 21st-century digital skills, but in general there is a statistically significant difference in the self-assessment of digital competencies between students of academic and vocational studies, that is, students of academic studies have more positive attitudes about digital competencies compared to students of vocational studies.

The reasons for such results can be found in the sample size, which is relatively small, then in the various structures of study programs in vocational and academic studies for teacher education, and in the number of subjects within which digital technology can be applied in direct educational work with children in preschool institutions. There is a possibility that under different, more strictly controlled conditions and a larger sample, the obtained results would be significantly different. In addition, it would be good to further examine the factors that influenced such research results, and accordingly improve the structure of study programs and teaching within the initial education of future preschool teachers (both in academic and vocational studies). Certainly, training programs for future preschool teachers should be designed and implemented in such a way as to enable the development of a scientific view and positive attitudes towards digital technology (Gialamas & Nikolopoulou, 2010).

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Separate tables.

Table 1. Statements (items - IT) from the research instrument.

Cod e	Definition of items / Formulation of statements
IT1	I use e-mail in everyday life and during my studies.
IT2	I use WWW - Internet databases in everyday life and during my studies.
IT3	I use social networks in my daily life and during my studies.
IT4	I have the necessary knowledge and skills to apply digital technologies as a future preschool teacher <i>to exchange information</i> with family, colleagues, associates, local community and other stakeholders and institutions.
IT5	I believe that, as a future preschool teacher, I have competencies to <i>work in various databases</i> for recording information about children, their parents, evaluation of educational work, etc.
IT6	I can successfully use digital technologies to <i>summarize, compare and consolidate</i> information from different digital sources.
IT7	I am not competent enough to <i>judge the quality, relevance, accuracy and scope</i> of digital information.
IT8	I successfully use digital technologies in <i>finding and collecting</i> relevant information and educational materials for planned learning situations in the field of Environmental Studies.
IT9	As a future preschool teacher, I have competencies that enable me to use digital technology in <i>planning</i> planned learning situations in the field of Environmental Studies.
IT10	I can effectively <i>adapt, present and methodically transform</i> digital information and educational materials in accordance with the age of the children and the topic of the planned learning situation in the field of Environmental Studies.
IT11	I am able to apply digital tools for organizing and classifying information (chart diagrams, schemes, planners, schedules, mind maps, animations, video tutorials, etc.) in the field of Environmental Studies.
IT12	I have the necessary competencies for the use of appropriate digital technologies for <i>designingandcreating</i> the necessary educational materials for working with children in the realization of the planned learning situation in the field of Environmental Studies.

- IT13 I am competent enough to *apply and integrate* digital technologies in the direct educational work, in the realization of the planned learning situation in the field of Environmental Studies.
- IT14 I can *evaluate and document* various Environmental Studies' activities done with children in preschool institutions in many ways, because I have digital competencies that allow me to create, process and archive photos, digital texts, videos, etc.
- IT15 I am competent to do *multimedia presentations of content that is interactive* and allows children better understanding as well as easier and faster learning in the field of Environmental Studies.
- IT16 I have digital competencies for the meaningful use of digital technologies as tools that *enable children* to access information during the implementation of the planned learning situation in the field of Environmental Studies.
- IT17 I am able to use digital technology to enable children to *meaningfully use* digital technologies to express themselves and learn through play within a topic or project in the field of Environmental Studies.
- IT18 The digital competencies that I have help me to enable children *to use digital technologies themselves for the purpose of monitoring their own learning*.
- IT19 I am competent to use digital technologies in such a way as to enable children to progress at their own pace within the planned learning situations in the field of Environmental Studies, in the way that suits them best.
- IT20 I am competent to use digital technologies in such a way as to enable children to make decisions and think critically within the planned learning situations in the field of Environmental Studies.
- IT21 I am competent to adequately and safely use the advantages of digital technology in educational work in the field of Environmental Studies.
- IT22 Adequate attitude and working etiquette of using digital technologies is necessary for every preschool teachers.
- IT23 I believe that preschool teacher should develop awareness and habits in children and parents for the adequate use of digital technologies.
- IT24 I believe that as a future preschool teacher I am not competent enough to develop awareness and habits in children and parents for the adequate use of digital technologies.
- IT25 I believe it is important that digital technology is used for professional development of preschool teacher.
- IT26 I believe that, as a future preschool teacher, I am not always able to control the shortcomings and dangers of applying digital technology.

Table 2. Sample structure of respondents

Institution	Gender				Total		Achievement in Informatics	Achievement in MT*	Achievement in MTES**
	Female		Male		$\Sigma$				
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%			
Vocational studies	54	43,2	3	2,4	57	45,6	7,44	8,04	8,56
Academic studies	61	48,8	7	5,6	68	54,4	7,88	8,12	8,78
	115	92,0	10	8,0	125	100			

\*MT = Methodology of Teaching

\*\*MTES = Methodology of Teaching Environmental Studies

Table 3. Normality test – Data distribution

	Group	Kolmogorov-Smirnov		
		Statistic	df	Sig.
<b>Gender of respondents</b>	Vocational studies(VS)	0,540	57	<b>0,000</b>
	Academic studies (AS)	0,529	68	<b>0,000</b>
<b>Achievement in Informatics</b>	VS	0,195	57	<b>0,000</b>
	AS	0,179	68	<b>0,000</b>
<b>Achievement in Methodology of Teaching</b>	VS	0,181	57	<b>0,000</b>
	AS	0,172	68	<b>0,000</b>
<b>Achievement in Methodology of Teaching Environmental Studies</b>	VS	0,241	57	<b>0,000</b>
	AS	0,196	68	<b>0,000</b>

Table 4. Student achievements in Informatics, Methodology of Teaching and Environmental Studies Methodology

	Group	Median	Mean Ranks	Sum of Ranks	Kolmogorov-Smirnov test		Mann-Whitney test		
					Statistic	Sig.	U	Z	Sig.
Information	FG	8,00	59,60	3397,00	0,540	0,000	1744	-0,986	<b>0,324</b>
	SG	8,00	65,85	4478,00	0,529	0,000			
Methodology of Teaching	FG	8,00	61,20	3488,50	0,195	0,000	1835,5	-0,522	<b>0,602</b>
	SG	8,00	64,51	4386,50	0,179	0,000			
Methodology of Teaching Environmental Studies	FG	9,00	59,73	3404,50	0,181	0,000	1751,5	-0,965	<b>0,335</b>
	SG	9,00	65,74	4470,50	0,172	0,000			

Table 5. Self-assessment of digital competencies of students of vocational and academic studies.

Items	Group	Median	Mean Ranks	Sum of Ranks	Kolmogorov-Smirnov test	Mann-Whitney test
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					Statistic	Sig.	U	Z	Sig.
IT1	FG	4,00	73,23	4174,00	0,451	0,000	1355,00	-3,375	<b>0,001</b>
	SG	5,00	54,43	3701,00	0,271	0,000			
IT2	FG	5,00	61,16	3486,00	0,357	0,000	1833,00	-0,627	0,531
	SG	5,00	64,54	4389,00	0,394	0,000			
IT3	FG	5,00	59,11	3369,00	0,455	0,000	1716,00	-1,697	0,090
	SG	5,00	66,26	4506,00	0,524	0,000			
IT4	FG	5,00	69,39	3955,00	0,428	0,000	1574,00	-2,086	<b>0,037</b>
	SG	5,00	57,65	3920,00	0,325	0,000			
IT5	FG	4,00	74,84	4266,00	0,434	0,000	1263,00	-3,753	<b>0,000</b>
	SG	5,00	53,07	3609,00	0,250	0,000			
IT6	FG	4,00	68,66	3913,50	0,358	0,000	1615,50	-1,784	0,074
	SG	5,00	58,26	3961,50	0,274	0,000			
IT7	FG	3,00	70,91	4042,00	0,216	0,000	1487,00	-2,325	<b>0,020</b>
	SG	3,00	56,37	3833,00	0,187	0,000			
IT8	FG	4,00	67,18	3829,00	0,364	0,000	1700,00	-1,322	0,186
	SG	5,00	59,50	4046,00	0,261	0,000			
IT9	FG	4,00	67,93	3872,00	0,318	0,000	1657,00	-1,507	0,132
	SG	5,00	58,87	4003,00	0,235	0,000			
IT10	FG	4,00	70,40	4013,00	0,306	0,000	1516,00	-2,384	<b>0,017</b>
	SG	4,00	56,79	3862,00	0,318	0,000			
IT1	FG	4,00	71,45	4072,50	0,235	0,000	1456,50	-2,545	<b>0,011</b>

1	SG	4,00	55,97	3802,50	0,227	0,000			
IT1 2	FG	4,00	67,54	3849,50	0,286	0,000	1679,50	-1,407	0,159
	SG	4,00	59,20	4025,50	0,267	0,000			
IT1 3	FG	4,00	70,30	4007,00	0,268	0,000	1522,00	-2,232	<b>0,026</b>
	SG	4,00	56,88	3868,00	0,251	0,000			
IT1 4	FG	4,00	66,26	3777,00	0,341	0,000	1752,00	-1,056	0,291
	SG	4,00	60,26	4098,00	0,305	0,000			
IT1 5	FG	4,00	72,75	4147,00	0,371	0,000	1382,00	-3,036	<b>0,002</b>
	SG	5,00	54,82	3728,00	0,274	0,000			
IT1 6	FG	4,00	68,79	3921,00	0,392	0,000	1608,00	-2,041	<b>0,041</b>
	SG	4,00	58,15	3954,00	0,377	0,000			
IT1 7	FG	4,00	67,89	3870,00	0,306	0,000	1659,00	-1,553	0,120
	SG	4,00	58,90	4005,00	0,298	0,000			
IT1 8	FG	4,00	70,91	4042,00	0,283	0,000	1487,00	-2,468	<b>0,014</b>
	SG	4,00	56,37	3833,00	0,342	0,000			
IT1 9	FG	4,00	69,84	3981,00	0,260	0,000	1548,00	-2,143	<b>0,032</b>
	SG	4,00	57,26	3894,00	0,298	0,000			
IT2 0	FG	4,00	70,78	4034,50	0,240	0,000	1794,50	-2,382	<b>0,017</b>
	SG	4,00	56,48	3840,50	0,272	0,000			
IT2 1	FG	4,00	68,66	3913,50	0,300	0,000	1615,50	-1,742	0,082
	SG	4,00	58,26	3961,50	0,243	0,000			
IT2 2	FG	5,00	63,73	3632,50	0,311	0,000	1896,50	-0,231	0,817
	SG	5,00	62,39	4242,50	0,311	0,000			

IT2 3	FG	4,00	59, 68	3401,5 0	0,257	0,000	1748,50	-1,002	0,316
	SG	4,00	65, 79	4473,5 0	0,253	0,000			
IT2 4	FG	2,00	69, 77	3977,0 0	0,265	0,000	1552,00	-1,987	<b>0,047</b>
	SG	3,00	57, 32	3898,0 0	0,227	0,000			
IT2 5	FG	4,00	65, 19	3716,0 0	0,311	0,000	1813,00	-0,682	0,495
	SG	5,00	61, 16	4159,0 0	0,267	0,000			
IT2 6	FG	4,00	67, 07	3823,0 0	0,290	0,000	1706,00	-1,216	0,224
	SG	4,00	59, 59	4052,0 0	0,293	0,000			
Tota l scor e	FG	103,5	74, 46	4244,0 0	0,076	0,200	1285,00	-3,239	<b>0,001</b>
	SG	111,0	53, 40	3631,0 0	0,141	0,006			

## DEVELOPING EARLY CHILDHOOD EDUCATION COMPETENCES (EARLY CHILDHOOD EDUCATION AND CARE, ECEC)

Gabriela KELEMEN, Ph.D.

Faculty of Educational Science, Psychology and Social Work,  
Aurel Vlaicu University of Arad

[gabriela.kelemen@uav.ro](mailto:gabriela.kelemen@uav.ro)

**Abstract:** *Early education is of increasing concern to specialists in the field: pedagogues, psychologists, sociologists, and not only them, the society as well, especially the family and parents, as well as many governmental and non-governmental organizations, which recognize the role of early educational intervention in the normal development of a child. Early education is a fundamental part of education and lifelong learning, and its central role is focused on educating and raising children in a stimulating educational environment. Early education with its components: teaching, learning, care, child safety, can be optimized by creating the best learning opportunities in the first years of a child's life. Early education supports and monitors physical and mental well-being, including social, cognitive and emotional development, and helps prevent any difficulties that may arise during their lifetime. Early education imposes a holistic vision on the actions exerted on the child, the different areas of development not being separated. Care is an integral part of this approach in a stimulating, integrative educational environment. Thus, it is necessary to train educators and teachers to achieve a quality education for all children, without discrimination, in an educational environment appropriate to their age, with the support of family and community. In this article we outline some directions that aim to train the professional skills of specialists in early education.*

**Key words:** *early education; professional skills; children; directions of action.*



## **Introduction**

From the studies conducted on early education in different European countries, together with the recommendations of the European Commission, we identified some priority directions in the training of teachers who specialize in teaching in the field of early education.

A professional in early education will use interactive, child-centered teaching strategies, active methodologies, practical learning methods understood as a way of approaching the educational process based on the child's needs, interests, aspirations, to promote the free and autonomous child development. The design of teaching activities will respect the teaching principles, intuitive, cooperative learning, learning by discovery, encouraging experiential learning and self-directed learning. Educational interventions need to be adapted to current theories on early childhood education and preschool development areas, focusing on the following content:

- early development;
- education and early care;
- training policies for teachers of early education;
- designing early education activities in areas of development: socio-emotional development, language development, communication, reading and writing, cognitive development, knowledge of the world (STEM), physical development, personal health and hygiene, learning skills and attitudes;
- assessing the child's progress;
- inclusive early education, quality of early education services - monitoring and evaluation.

## **Professional competences**

- Psycho-pedagogical knowledge about the child's development, the factors that contribute decisively to the child's physical and mental development;
- Pedagogical knowledge regarding the educational process, the stimulating factors that stimulate the development of the child's interest in knowledge;

- Knowledge of the role of the educational environment for the child's natural
- Specialized knowledge regarding the conception, design and implementation of educational activities;
- Essential knowledge of maintaining the child's well-being, physical and mental health.

An increase in the quality of early education presupposes economic and social conditions in addition to the teaching staff trained effectively so as to lead to the provision of a true early education. It is clear that the relationship between socio-economic conditions and quality schooling is crucial, but also for the subsequent achievement of children, for their subsequent professional success. Experience and training during early age is critical for the assimilation of children's future skills, coping skills, health, academic success and socio-cultural integration. Research demonstrates the benefits of early childhood education, helping children to promote the acquisition of social skills throughout life, which will help him/her to improve the educational and subsequent occupational profession in the social system. Improving good living conditions in early childhood by ensuring early education and well being in competent centers or institutions that integrate education, care, health, safety, and support for raising children, will reduce inequality, will increase the predisposition to effective development of children.

In addition to this theoretical knowledge, an educator who wants to deal with the field of early education must have skills (vocation), so as to know how to address to them according to their level of understanding thus ensuring the necessary conditions for a full, free, integral and harmonious development of the child's personality according to its rhythm and needs, to ensure the differentiated stimulation of children, aiming at the intellectual, affective, social and physical development of each child without any discrimination. Children are different in terms of physical and mental development, so the need to respect their own rhythm and needs must be constantly taken into account, supporting their autonomous and creative formation. The permanent interaction with the child within the community through communication and play will lead to the development of its capacity to interact and socialize. In an organized, institutional setting, children are directed, stimulated and encouraged to explore the environment in order to acquire new knowledge, skills, attitudes and behaviours. The exercises and experiments in which children take part in educational institutions help children assimilate autonomous learning experiences, discover their own identity, develop a positive self-image. In these learning activities the child is supported to

acquire knowledge, to develop skills, habits and attitudes necessary for social life, in order to successfully integrate into school and life. A specialized educator for the field of early education will be able to:

- Establish appropriate socio-emotional relationships with children.
- develop projects, programs and educational activities.
- develop harmonious relationships with the members of the work team, with parents and collaborators.
- Act effectively in emergency situations.
- continuously evaluate each child, intervening and permanently supporting his/her evolution using elements for evaluating the preschool progress (Systematic observation / formative evaluation).
- reflect on one's own professional practice (understanding the importance of educational research and continuous training).

Among the personality traits of a good educator we mention:

- Emotional balance (conveying confidence and security to children, avoiding contradictory messages).
- Patience and tolerance.
- Empathy.
- Sense of observation.
- Ability to adapt to the characteristics of the group of children and of each child.
- Initiative and responsibility.

### **The relationship educators – family - community**

The educator-family relationship is especially important to provide children with a unity of educational requirements and the best opportunities to learn and develop. Proactive parental behaviour, educational partnership established with the educational institution lead to the child's well-being.

Strengthening the children's self-esteem can be achieved through positive learning experiences and encouragement, as well as opportunities for diverse interactions with others. Children's experiences should be enriched by encouraging them when trying to find new areas of interest. The educational action of the family and the educational institution will address the positive concept of children's well-being, strengthen self-confidence, focus on their personal abilities in accordance with their age and innate abilities. (Principles of the Reggio Emilia Approach -Loris Malaguzzi.  
[https://www.youtube.com/watch?v=fYx\\_aGs-DjU](https://www.youtube.com/watch?v=fYx_aGs-DjU)

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### **Educational Environment**

The success of children's acquisitions and personality development is deeply affected by the quality of the educational environment. That is why we will insist on creating a good physical, psychological and social environment in child care and preschool institutions. An optimal learning environment is interactive, stimulating and safe, reflecting the children's diverse identities and needs. This environment must be flexible and can be changed according to the topics addressed and the interests of the child. Teachers organize the environment according to learning objectives ensuring the children's physical and mental safety, an educational environment that effectively contributes to their development. Interacting within the team develops different relationships among children, between children and adults, in which the emphasis is on the development of positive relationships, collaboration, acceptance, support and participation.

The environment in the group has to provide a safe, functional, aesthetic and suitable organization for educational interventions. This environment must respond to children's epistemological curiosity, support and stimulate learning, help facilitate the discovery, structuring of knowledge and the development of all mental processes. The organization of the room must be done in areas and centres of interest that capture the children's attention and determine them to participate in their own training. The organization of the educational space on areas identified for different activities, with games, toys, tools and equipment made available to the child becomes a learning environment that the child is free to choose according to the current interest. The organization of the room, the furniture, the teaching aids, the equipment and all the materials found in the room must respect all sanitary norms of hygiene and safety and be adapted to the children's age and interests.

### **Orientation of educational activities**

Didactics of the educational process for early education (0-3 years) aims at learning natural sciences, social sciences and mathematics; reading and writing; musical, plastic expression and body language. Nursery and kindergarten educators are responsible for the care and education of the little ones, using the modern concepts of early education. This involves respecting the uniqueness of the child and, as such, differentiated treatment of the little ones; the right to equal opportunities, to develop the child's maximum potential; understanding education as a continuous process, which begins with the birth of the child and takes place throughout its life; understanding any act of child care as an implicit act of education etc. The activities carried out with children in the institutions that offer early preschool education services are based on a specific curriculum that includes: activities based on symbolic games, sensory games, games with sand and water, construction games, didactic games.

- artistic-plastic activities: drawing, painting, modelling,
- practical activities: practical and household activities.
- music and movement activities: auditions, music games, text and song games, songs, eurhythmy.
- communication and creativity activities: stories, poems, reading pictures and illustrations from books
- knowledge stimulation activities: observations, image reading, mathematical activities, discussions, teaching games, experiments.
- outdoor activities: walks, sand games, games and sports activities.

The mentioned educational actions will reach their efficiency if the organization of the learning environment and the ergonomics of the educational space are adapted to their age, individual development, and if they are accompanied by appropriate demonstrative and illustrative materials: toys, games, chips, illustrations, books and so on. The children`s cognitive, psycho-motor and affective processes will be developed through an adequate management of learning situations experimentation and emotional expression. Security, interaction and autonomy are particularly important in preschool age, along with elements of hygiene (body, food, sleep), and physical security.

Early preschool education aims at the general development of the child, which will ensure a good start in life. The areas of child development targeted in the specific curriculum for early preschool age are physical

development, health, personal care, socio-emotional development, cognitive development, language development and communication. The development of learning skills and attitudes are essential for achieving a personalized education, by identifying the child's potential and the difficulties/disabilities of each child. The psychology of child development between the ages of 0-3 brings to the educators` attention the need to develop mental processes through optimal educational interventions, learning and personality development (0-6 years of age). During this period there are numerous learning difficulties and developmental disorders, which can be improved through psycho-pedagogical intervention strategies, systematic observation and analysis of contexts, through ameliorating interventions as part of a joint action plan conducted by the family and the educational institution, respecting deontology and professional ethics.

Another aspect to consider is social assistance, hygiene and childcare, that is:

- food, cooking, diet;
- elements of anatomy and physiology;
- domestic economy;
- elements of pathology and pharmacology;
- notions of social and health legislation;
- elements of psychology;
- first aid and hygiene items;

That is why the training of care (and education) staff for children of only 0-3 years old is subject to the access conditions valid for any higher degree professional training. vocational training. These conditions are not cumulative; they are options for access to initial training of staff working in the field of early education.

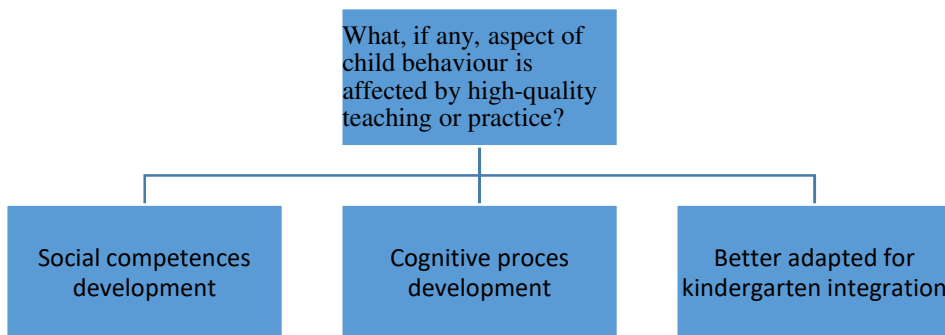


Figure 2. Research Questions -Impact of early education

## Conclusions

In order to professionalize the specialist in early education, it is necessary to improve some psycho-pedagogical tools that enhance knowledge of toddlers. Based on such knowledge a specialized curriculum shall be developed which is adapted to the children's level and includes personalized and differentiated activities. Designing educational activities for the early preschool group involves exploring roles and practices for working with and for children, and also involving the family and the community in professional practice. The best practice models are offered by approaches such as the Reggio Emilia programme, the Montessori, High/Scope and Waldorf alternatives. The good practices offered by these educational alternatives adapted to Romanian culture and local conditions, as well as the psycho-pedagogical profile of learners, teachers' roles, children's opinions, inclusion and diversity are real directions of action that integrate child-centred approaches in real practice.

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# THE ALTERNATIVE FOURTH - GRADE CALCULUS BOOKS A CRITICAL ANALYSIS

Camelia-Nadia BRAN, PhD  
Associate Professor  
„Aurel Vlaicu” University of Arad  
camelia.bran@uav.ro

Larisa ZBIRCEA (ONIGA), BSc, MSc candidate  
„Aurel Vlaicu” University of Arad  
larisazbircea@gmail.com

**Abstract:** *Mathematics as a study discipline is not one of the most attractive subjects for the majority of students. The rejective attitude of the human being, when dealing with the unknown, is a natural reaction of self-defence. But for some, it is precisely this lack of initial understanding that is appealing as a challenge for further discoveries and development. In this article we have analysed three fourth-grade calculus books, both in printed and digital version, in order to establish a proper hierarchy in accordance with fourth grade national curriculum. A complex evaluation grid was used in analysing three of the most used calculus books for the fourth grade. The highest result was obtained by the calculus book proposed by Intuitex Publishing House Bucharest. For further developments we aimed to elaborate our own calculus book for fourth grade. A shorter version, for two content units, was developed and tested by the authors.*

**Keywords:** *formal education; alternative text/calculus books; digital text book; mathematics, primary education, evaluation criteria.*

## 1.Introduction

The text books/calculus books are one of the pillars of the formal education of the student. This topic is a very trendy one, given the technological era we are going through. We cannot overlook the efforts of education to keep up with it. On a quick review of a text book/calculus book currently used in Romanian primary school, we can observe a new attachment, namely the presence of a CD pasted on the inner cover. This is

the digital text/calculus book, or an attempt of an e-book, summarizing several practical exercises, educational animations, teaching tales, educational songs and not in the least educational games. Education without play is like "soup without salt" if we make an analogy with the fairy tale written by Petre Ispirescu. Through the game the young students are most likely to acquire new knowledge, and to evolve in terms of skills, becoming valuable members of the society.

According to the Explanatory Dictionary of the Romanian Language (2016), the term "alternative" has two meanings that can be applied in the present context: which alternates and the possibility to choose between two solutions (DEX 2016).

Mihai Mitrica, Executive Director of the Romanian Publishers Association, says in an interview with the radio station Rfi: "The printed textbooks market represents a third of the total book market. Specifically, publishers sells of alternative and ancillary manuals worth 30-35 million euros, while the total book market reaches 100 million euros. The decision to ban alternative textbooks will seriously affect the education system in Romania" (Pietroşel, 2017).

In spite of these statistics, we cannot refer to alternative textbooks only at the level of turnovers, the textbooks must mean more than that.

Alternative text/calculus books have emerged as a necessity, the process of their elaboration have stimulated initiative and creativity of the authors and publisher. The single/unique text/calculus book accepted in Romania for tens of years during the communist regime for teaching the national curriculum, could not faithfully and correctly render the image of a field of knowledge. A diverse offer of calculus books was desperately needed hoping that the „alternative” calculus books would have had the capacity to satisfy any demands of the national curriculum, the scientific rigour of the discipline and students’ particularities. (Oltea, 2019).

Taking into account these aspects, we aimed to analyse the differences between the calculus books made available by the Ministry of Education and Research for the fourth graders. Even if each calculus book follows the same national curriculum, the degree of difficulty of explanations and exercises is different from one publishing house to another.

## **2. Aim of the research**

The purpose of this research is to identify the functionality of the present education system as related to the textbooks, specifically the mathematics calculus book for the 4th grade. There are many issues and questions that arise if we think about this subject. How does a text / calculus book end up on the student's bench? Who chooses this calculus book? Is it possible to use any text/calculus book in the class? Once chosen as a class

calculus book, is this instrument enough to develop the necessary skills envisaged by the national curriculum? How a calculus book should be designed? Do these calculus books contain suitable contents and learning activities for achieving the maximum potential of the student as related the development of their mathematical skills?

### **3. Analysis criteria**

For making the analysis more objective, we have chosen as the main evaluation instrument the official document made available by the Ministry of Education and Research called:

” Methodology for the methodological-scientific evaluation of school textbooks for pre-university education”. The following rejection criteria are presented in the methodology: compliance with the national curriculum/syllabus and non-discriminatory approaches. At the same time, it is necessary for a text/calculus books to comply with general criteria of quality involving:

Criterion I - the validity of scientific content;

Criterion II - the didactical approach of scientific content;

Criterion III - contribution to the optimisation of the teaching-learning-assessment process; Criterion IV - the organization of content for the training of competences in accordance with the curriculum;

Criterion V - the quality and accessibility of language;

Criterion VI - the quality of the printed format (fonts, page organising, images, graphs etc);

Criterion VII - the style and unity of the school textbook.

Particular attention should be paid by the evaluators to Criterion IV. The conformity of the proposed text/calculus book with the national curriculum requirements is measured by analysing the specific contents and learning activities included in the text/calculus books and their impact on the students ‘competencies development. If the concordance with the national curriculum-syllabus is not achieved any text book draft submitted to evaluation is rejected.

Another eliminatory criterion in the text/calculus book is its non-discriminatory nature of the content, texts, images or learning activities. Any text/calculus book should present its content without making any distinction between people according to their nationality, ethnicity, religion, language, gender, belief, social category, chronic non-contagious disease, disease, age or membership of a disadvantaged category. It also involves the elimination form the text/calculus book of any racist, xenophobic or nationalist-extremist ideologues. Subsequently, if the text/calculus book does not meet these requirements, it will be excluded from the evaluation process, but will be

able to included again after the deficiencies have been rectified. The evaluation methodology provides information on the entire process of text book evaluation, by offering details on the organisation of evaluation sessions, the evaluation of the translations' quality of textbooks, the evaluation of school textbooks for special education. At the same time, the evaluators are provided with all the necessary details for drawing up the catalogue of certified text/calculus books, structured according to the criteria and the official standard documents required in annexes placed in the last pages of the document. The assessor should fill during and after the evaluation process the following documents: "Note on the quality of the textbook". "Privacy commitment", "Standard evaluation grid of the textbook draft", "List of changes to be made in order to obtain the opinion of the "Good to be printed" (ibidem).

#### **4. Analysis of the 4th grade calculus books**

Using the same official, "Standard evaluation grid of the textbook draft" we have conducted our own evaluation of the calculus books available on the market for the 4<sup>th</sup> grade. Following the analysis we have provided a ranking of these calculus books aproved by the Minsitry of Education and Research.

**Research sample:** For our analysis we have chosen the following calculus books for the 4<sup>th</sup> grade:

- "Mathematics, 4<sup>th</sup> grade, semester I and semester II", author: Mogoş Mariana, ART Publishing House.

- "Mathematics, 4th grade, semester I and II", authors: Mihăescu Mirela, Pacearca Ştefan, Dulman Anita, Alexe Crenguţa and Brebenel Otilia, Intuitext publishing house.

- "Mathematics, 4th grade, semester I and II, authors: Chiran Rodica and Radu Mihaela Ada, Aramis Publishing House.

The evalutaion grid that have been used contains all the seven criteria named above. For each criterion a set of indicators have been included. Each indicator could obtain a maximum score of 10 points, signifying that the specific indicator is fulfilled at optimal level.

The score for each criterion is determined by the average arithmetic result of the scores for each indicators: average score of the evaluated criterion = (score for indicator 1 + score for indicator 2 + score for indicator3) divided by 3; the final score for the general quality criteria is calculated as following:  $2 \times (\text{score for criterion I} + \text{score for criterion II} + \text{score for criterion III}) + \text{score for criterion IV} + \text{score for criterion V} + \text{score for criterion VI} + \text{score for criterion VII}$ ; the final score for the general quality criteria is a maximum of 100 points.

Table 1. Analysis grid of math calculus books for the fourth grade.

I Criteria and indicators	Score by publisher		
	4th grade		
I. Scientific content of the calculus book -validity of scientific information	Intuitext	Aramis	Article
Scientific correctness and up-to-date information provided by text/ images in implicit or explicit manner	10	10	10
2. Relevance of information provided through images and text	10	10	10
Assessment/self-assessment items designed correctly	10	10	9
Criterion I average score	10	10	9,60
II. Scientific content of calculus book - didactical approach	10	9	9
1. Logical coherence of the content units of the calculus book			
2. Practical activities and appropriate examples according to national curriculum, scientific discoveries and even life situations	9	8	7
3. Visual media scientific content and message appropriate to the level of development/age of the students and to the specific of the subject matter	9	9	8
Criterion II Average Score	9,30	8,60	8
III. Teaching - learning - evaluation, optimization	9	8	7
1. The existence, weight and quality of the review exercise or review themes			
2. Content of the discipline balanced with the items of the evaluation tests, the applicability of the complementary evaluation items	9	9	8
3. Degree of use of students' previous knowledge in new contexts	10	9	9
Criterion III average score	9,30	8,60	8
IV. Skills training opportunities according to national curriculum-organisation of content	9	8	8
1. Effective learning by text systematization			
2. Objectives and competences developed and valorised from an intra, inter, multidisciplinary perspectives as well from a life experience perspective	10	9	8
3. Degree of use of active -participative methods/techniques/strategies	9	8	7
Criterion IV average score	9,30	8,30	7,60
V. Language: quality and accessibility	10	10	10
1. Linguistic coherence and development of specialized language according to le creative contexts			
2. Balanced use of new information / concepts	9	8	8

3. Titles/subtitles - relevance	10	9	8
Criterion V average score	9,60	9	8,60
<b>VI. Calculus book formatting – quality</b>			
<i>1. Technical elements – compliance</i>	10	10	9
2. Visual media - technical quality	10	9	9
3. Appropriate and attractive appearance specific to the level of development/age of the students and in accordance with the specific of the subject matter	10	10	10
Criterion VI average score	10	9,60	9,30
<b>VII. Style and originality of the text/calculus book</b>			
1. Promoting aesthetic, ethical, moral and educational values in the elaboration of the textbook	10	10	10
2. Detailing level of the contents, specified bibliographic references, mention of objectives/competences and practical objectives grouped by chapters and themes	10	9	10
3. Text correlation - visual support and correct positioning	10	10	9
Criterion VII average score	10	9,60	9,60

Source: Ministry of Education and Research.

### **Arguments specific to each criterion in the analysis of calculus books for fourth grade.**

I. Scientific content of the calculus book - validity of scientific information. The information included in the analysed calculus books for the fourth grade is scientifically correct, relevant to the specific competences included in the national curriculum for fourth grade and to the content set out in the curriculum. According to the evaluation criteria set out in the "*Evaluation Guides*" the evaluation items included in the calculus books are designed according to the objectives.

II. Scientific content of calculus book - didactical approach. In the analysed calculus books for the 4<sup>th</sup> grade one can find practical activities and examples from everyday life, all of which are directed towards achieving the skills specified in the mathematics' curriculum. At the same time, scientific content and visual media provide age-specific messages. Overall, the three analysed calculus books comply with the requirements of the subject matter.

III. Teaching - learning - evaluation, optimization. The review themes should be distributed evenly throughout the learning units, but we can see a difference in the mathematics calculus books. Intuitext Publishing House's calculus book has a much more unified structure being very easy to identify the recap and evaluation areas, while the calculus books published by Aramis and Art publishers propose for students' evaluation the sections: "What do I

know? How much do I know?" and "What do I know? How much do I know? How do I know?". At the same time, another very important aspect is the self-assessment section present only in the calculus book proposed by Intuitext and Aramis Publishing Houses.

IV. Skills training opportunities according to national curriculum-organisation of content. Text systematization requires the analysis of elements such: borders, paragraphs, tables, consistency, clear expression, bookmarks and colours. At the same time, it is very important that practical activities, objectives and competences to be predicted/explained at the beginning of each learning unit. For a more effective understanding of the content, the students need a visual support adapted to their developmental level. Explanations and captions are welcome throughout the text to increase the didactical value of the calculus books. Art Publishing House's calculus book was developed by a single specialist, this aspect could be one of the causes for the identified gaps. Nevertheless, this calculus book can be used in a class with a lower level in terms of skills of the students. We identified the learning outcomes in terms of objectives presented at the beginning of the learning units, but we have very few legends and explanations inserted into the lessons' content.

V. Language: quality and accessibility. In all 3 calculus books for to the second semester, especially within the learning units about the elements of geometry, we can find an approach centred on the applicability of the new mathematical concepts into the daily life of the students. Interdisciplinary connections are presented, for example, in order to understand the angle the students are asked to analyse the sketch of a park (Intuitext publishing house calculus book) or the location of schools on the city map (Art publishing house calculus book). The new notions are being rendered by a language adapted to their age, but still retaining the terminology specific to geometry.

VI. Calculus book formatting – quality. From the point of view of text interline spacing, we can see major differences between the calculus book of Intuitext publishing house and the calculus book of Art publishing house. ART Publishing House's calculus book for 4<sup>th</sup> grade has a lot of untapped space, providing a more visually "simple" calculus book, the fonts being larger compared to the other 2 manuals.

VII. Style and originality of the text/calculus book. Each publisher and each authors of the three analysed calculus books for the 4<sup>th</sup> grade promote the originality of their proposed calculus book. Our analysis revealed that in terms of complexity, the Intuitext Publishing House's calculus books has obtained the higher score, as it ensures the development and exploitation of the objectives and the correlation with the national curriculum. Strategies, techniques and methods are diverse: it includes self-

assessment sections, portfolio realization, teamwork opportunities, problems based on suggestive images, problems that end with a product, environmental projects, identification exercises, multi-choice exercises, graphs, tables and didactic games. Truly this calculus book is a learning instruments for the 4<sup>th</sup> grade students and an important resource for the teachers.

### 5. Final ranking

Ranking	Final score	4 <sup>th</sup> grade Calculus books for Mathematics
First Place	96,1	Mihăescu Mirela, Păearca Ștefan, Dulman Anita, Alexe Crenguța and Brebenel Otilia, (2016) "Mathematics calculus book, 4th grade, 1st and 2 <sup>nd</sup> semester", Intuitext Publishing House, Bucharest
Second Place	90,9	Chiran, R., Radu, Mihaela-A., (2016) "Mathematics calculus book, 4th grade, semester I and II ", Aramis Publishing House, Bucharest.
Third place	86,3	Mogoș, M., (2016), "Mathematics calculus books, 4th grade, semester I and II", Art Publishing House, Bucharest

### Conclusions

The 4<sup>th</sup> grade calculus books for mathematics accredited by the Ministry of Education and Research are prove to have a very good quality. The contents are very well structured, the objectives are pursued according to the curriculum developed by the Ministry of Education and Research, and the practical application exercises are structured in several forms, namely: individual exercises, pairs exercises, team exercises, multidisciplinary projects, recapitulation, evaluation and self-assessment sections. One cannot expect perfection. When a teacher chooses not to use the textbook certified by the Ministry of Education, can he/she still be sure that he/she covers the entire curriculum? Or have the students been able to acquire all the skills necessary in order to be active citizens or accomplished adults? We consider that a teacher that totally rejects the learning resources provided by the Ministry of Education and Research risks to end up in having a chaotic and unstructured teaching style, in which case the students no longer understand what the purpose of the textbooks is during the classes.

The Romanian students are obliged to carry their printed text/calculus books each day, for each subject matter. It is a considerable effort with consequences on the students' health. If the students are not required to use these textbooks, which is the point in carrying them each day? Could the digital text/calculus book solve this problem? Constantin Cucos presents the digital manual as a real challenge for the Romanian education system because there are many sociological and economic impediments. The process



it has to go through is a long-term one, namely virtualization and cultural digitisation. Arrived in this point, the digital text/calculus book should be understood as a distinct education product, not as a duplicate of the classical printed version of the text book. The integration of the contents presented in a digital manual has a complexity that does not exist in the classic manual. Here we can refer to multimedia, auditory, visual animation technologies, practically applicative games, interactive exercises etc (Cucos, 2013).

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# INVOLVING USERS OF MENTAL HEALTH SERVICES IN THE TRAINING OF PSYCHIATRIC AND MENTAL HEALTH PROFESSIONALS: A LITERATURE REVIEW

Jade Gourret Baumgart,  
Déborah Sebbane,  
Marie-Clotilde Lebas,

Laurence Fond-Harmant, Ph.D.,  
LEPS UR 3412-Université Sorbonne Paris Nord  
Directrice de Recherche. ACSAL Agence pour la Coopération  
Scientifique  
Afrique Luxembourg  
[fond.harmant@gmail.com](mailto:fond.harmant@gmail.com)

**Abstract:** INTRODUCTION The participation of users of mental health services in all projects that concern them is an important issue. Such participation is addressed here within the framework of the evaluation of the international project VETmh TuTo Erasmus+ (2018-2021). This is a European training programme for tutors and trainers of tutors in psychiatry and mental health, focused on developing the skills of young professionals. The objective of this article is to perform a review of the literature, making it possible to: 1/ highlight what legitimates the participation of users of mental health services, 2/ identify what characterises a successful participation of users in international projects, and 3/ identify the specific features and mark out the formalisation of the participation of users in the evaluation of the training programme.

METHODS An exploratory review of the French-language literature was conducted using the databases of the *Banque de données en santé publique*, Base SantéPsy and Cairn.info:

RESULTS 32 articles from scientific journals published between January 2015 and July 2020 were retained; 2 institutional documents (European Commission, 2005; World Health Organization, 2013) and the work relating to the TuTo Erasmus+ project (2014-2017) were also selected.

This review reveals the necessity of involving the users, and makes it possible to identify relevance criteria that legitimate working in a partnership between the users and the other actors for evaluating a

mental health training project, as well as quality criteria that should guide the concrete elaboration of this involvement.

**DISCUSSION** This work is a first step in the collaborative development of a protocol for evaluating the training programme VETmh TuTo Erasmus+ (2018-2021). It also demonstrates the necessity of validating a practical tool intended to guide the formalisation of the participation of users within the framework of European and international mental health projects.

**Key words:** *trainers of tutors; mental health; training; project; practical tool;*

## **INTRODUCTION**

Funded by the European programme “Erasmus+, Strategic Projects”, the VETmh TuTo Erasmus+ project (2018-2021) continues and supplements the Erasmus+ TuTo project (2014-2017). The first strand consisted of a process of training and tutoring young European psychiatric and mental health professionals, offered via traineeships in European countries for several days a year over a period of three years, in order to become acquainted with different psychiatric and mental health work contexts. The second strand is a programme for training tutors and trainers, focused on the development of practical and relational skills and the evolution of the practices of young European psychiatric and mental health professionals.

While the first strand - the Erasmus+ TuTo project (2014-2017) - was generally agreed to be a success - with 122 European professionals from psychosocial care and counselling, most of them between 20 and 35 years of age, travelling to participate in traineeships in 10 European countries -, its final evaluation noted significant variation in the quality of the follow-up that the tutors gave their tutees (Fond-Harmant & Deloyer, 2017). Firstly, the surveys and interviews conducted amongst the trainees revealed that they had to some extent the impression that their tutors were not sufficiently familiar with the project, that they all found that the tutors had different levels of motivation, that they believed overall that the pedagogical follow-up and the link between the partners of the programme and the tutors needed to be improved and deepened, and that greater efforts had to be made to further involve the tutors. Secondly, the evaluation sessions bringing the latter together revealed a certain confusion on their part regarding their role

and tasks. A significant number of them admitted that they hadn't found their place as tutors vis-à-vis the trainees.

This finding led to the project's second strand: the VETmh Erasmus+ TuTo project (2018-2021), a training programme for tutors and trainers of tutors. Concretely, European psychosocial care and action professionals wishing to become tutors are firstly recruited on the basis of voluntary participation by hospitals that are partners of the project, then addressed to the project leaders. The engaged professionals take part in a training cycle of three-day training sessions organised once a year over the course of three years. The different modules of this training course are conceived and dispensed – by teachers with experience in the fields of mental health and psychiatry – in such a way as to be simultaneously useful, complementary and flexible. Beyond a training content and a toolbox, it is more a matter of an andragogical approach aimed at raising the tutoring skills of the referents, starting from their own abilities and getting them to try the emancipatory approach that the tutees and tutors in training will be led to experience.

Mid-way through this project, the World Health Organization Collaborating Centre for research and training in mental health (WHO-CC) of Lille - the project's French partner - conducts an evaluation of this training programme for tutors and trainers of tutors in psychiatry and mental health. One of the tasks of the WHO's Collaborating Centre in France is to help the World Health Organization (WHO) to promote the participation of users of mental health services in all actions that concern them, whether in the areas of care, research or education. In coherence with the values and working methods of the WHO's French Collaborating Centre, as well as with the international and European guidelines on the involvement and engagement of affected persons (WHO, 2013; EU, 2005), this mid-term evaluation was conceived in a joint construction dynamic in order to facilitate the full participation of users of mental health services in this phase of the project. With regard to global recommendations, the WHO recommends that users be given the means to participate in research and evaluation in the mental health field (WHO, 2013, p.10).

If the participation of users had not been formalised until then, this programme - since the initial strand - is in fact being implemented with their participation. Primarily since the partner health establishments who assume responsibility for receiving trainees work with representatives of the users of mental health services. Nevertheless, the formalisation of this participation within the framework of evaluating the training programme developed together with the users of mental health services raises questions: What

legitimizes the participation of users of mental health services within the framework of European and international projects concerning them? What characterises a successful participation of users in such projects? What points of vigilance need to be known and mastered? What methods appear to be the most relevant? And, within the framework of the VETmh TuTo Erasmus+ project (2018-2021), how should this participation be formalised?

As preliminary step, this article offers a systematic review of the literature making it possible to answer the above-mentioned questions and clarify the reflections relating to the VETmh TuTo Erasmus+ project (2018-2021). It is thus expected to be able to argue for 1/ implementing an evaluative approach that includes their participation, 2/ choosing the terms for participation, 3/ marking out its formalisation. From this perspective, the purpose of this review is to draw up an inventory of the participation of users of psychiatric and mental health services.

## METHOD

This paper is a systematic review of the French-language literature. The literature search was performed on three bibliographic databases: the archive of the *Banque de données en santé publique* (BDSP - the Public Health Database), Base SantéPsy and Cairn.info.

The inclusion criteria selected scientific articles published between January 2015 and July 2020, in French, dealing with the participation of users of mental health services. The search equations were developed by articulating keywords - first defined on the basis of dictionaries of synonyms and thesauruses - with the aid of the Boolean operators “ET” (or “AND”), “OU” (or “OR”) and “SAUF” (or “UNLESS”), as well as truncation.

The exclusion criteria eliminated articles dealing with the participation of users outside the field of psychiatry and mental health as well as articles dealing exclusively with the participation of users of mental health services in their own care programme and rehabilitation process. In addition, texts other than scientific articles and editorials of scientific journals were not included.

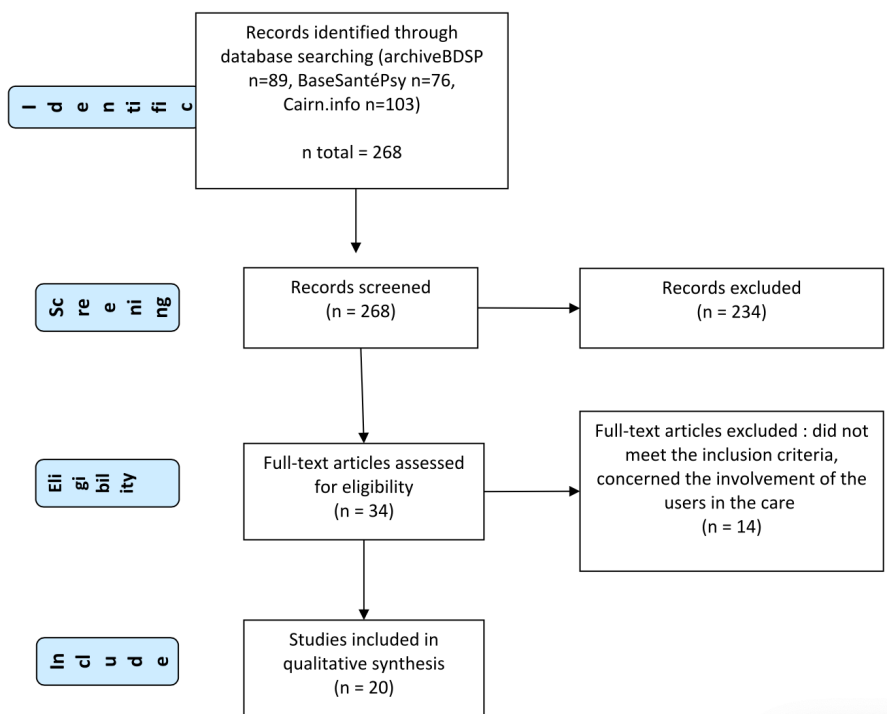
Table 1. Search method of the literature review.

database	thesaurus	search equation
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BDSP archive	yes	(participation of the user) AND (mental health) OR (psychiatry) AND (mentally ill) OR (expert patient) OR (health user) OR (care consumer) OR (mental disorder) OR (psychopathology) OR (citizenship)
Base SantéPsy	yes	(participation) And (mental health Or psychiatry Or mentally ill Or expert patient Or user Or psychiatric pathology Or psychopathology Or citizenship)
Cairn.info	no	(“participation”) AND (“mental health” OR “psychiatry”) AND (ill OR patient OR user) AND (mental illness OR mental disorder OR psychopathology) AND (democracy OR citizen*) UNLESS (handicap*)

## RESULTS

Figure 1. Flow chart of the literature review.



From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

For more information, visit [www.prisma-statement.org](http://www.prisma-statement.org).

The search made it possible to collect 268 texts. The manual sorting based on the inclusion and non-inclusion criteria led to 20 references being retained. Some of them being journals, ultimately 32 scientific articles and editorials

of scientific journals were included in the literature review. Each of these documents was carefully read and analysed.

The reading and analysis of this corpus made it possible to identify relevance criteria that legitimate the participation of users of mental health and psychiatric services beyond their care plan and their rehabilitation process, as well as points of vigilance that should guide the formalisation of the participation of every user or ex-user of psychiatric and mental health services.

## **ANALYSIS**

### **Relevance criteria**

#### **Getting persons with a lived experience of mental health disorders to participate in order to help society evolve**

Firstly, the literature presents the participation of persons with their experience of life and their experiential knowledge of mental health disorders as a lever for combating stigmatisation, discrimination and social exclusion. One of the articles recalls that stigmatisation is defined as “*the reaction of a group or of a society against different or underprivileged persons or minority groups (...) consisting of attributing a label that categorises them as deviants*” (Goffman, 1975 in Alary, 2016). In this sense, certain authors evoke the stigmatisation, firstly, to which psychological disorders are subjected and, secondly, to which persons affected by these disorders fall victim (Rhenter & Carbonel, 2015; Alary, 2016; Loubières et al., 2018). Also evoked is the stigmatisation suffered by professionals who support and accompany these persons (Alary, 2016). Professionals from the healthcare and psychosocial sector, particularly psychiatrists and psychologists, are notably concerned here.

Certain authors describe a Western society in which socially-constructed negative representations persist. Historically, for many years, a *process of exclusion of the mad, the insane, those who don't make sense, those who appear to no longer be aware of their actions* (Foucault, 1972 in Caron, 2015); and culturally, whatever the country, madness and danger have long been associated (Loubières et al., 2018). In fact, in the Western collective imagination of today, a person directly affected by mental health disorders is simultaneously perceived as disturbing or even dangerous (Alary, 2016) and presumed to be unable to defend his interests (Troisoeufs & Eyraud, 2015) or even supposedly unable to think for himself or even work or live independently (Rhenter & Carbonel, 2015). These negative received ideas have harmful consequences for any individual suffering from psychological

disorders. Indeed, access to housing, employment and leisure activities as well as the building of intimate relationships of love or friendship or the exercise of parenthood are all made far more difficult for persons with psychological disorders than for others (Loubières et al., 2018). In addition, these negative prejudices can have another harmful impact for individuals suffering from mental disorders, i.e. they can become trapped in a vicious circle of self-stigmatisation (Loubières et al., 2018). Self-stigmatisation occurs when the person concerned interiorises this set of negative prejudices, which can reduce or even destroy his self-esteem and have a harmful impact on his everyday life and rehabilitation process.

The authors mention that actions are being taken, more or less formally, to combat stigmatisation. One of them is to renew the terms used in order to speak of psychological disorders and individuals affected by these disorders. New terms are thus used to speak of them *without* participating in stigmatisation. For example, to evoke a person experiencing mental suffering, the expression “psychologically ill” replaces that of “mentally ill”, itself preceded by the terms “alienated”, “mad” and “insane” (Alary, 2016). But this type of intervention - like most of the actions recommended for combating such stigmatisation - supposedly has little impact and is not particularly long-lasting (Loubières et al., 2018). The fact is that terms from clinical psychiatry and the mental health field are used in everyday language to mock or insult (Alary, 2016). The effectiveness of this type of intervention is all the more relative since, at the same time, the negative social representations are regularly reinforced by the way mental health questions are dealt with in the media, as well as by how persons with psychological disorders and psychiatric and mental health professionals are represented in films, on television and in the media generally. In fact, this treatment and this representation arouse emotions that tend to strengthen firmly-anchored negative social representations (Loubières et al., 2018).

The authors also explain that the participation of persons directly affected by mental health disorders is more likely to make a genuine contribution to the process of deconstructing received ideas, in other words to effectively combating stigmatisation (Loubières et al., 2018). In particular since this makes it possible to reinject the human aspect into mental health questions. The fact that an individual affected by psychological disorders speaks out to tell a part of his own history relating to mental disorders can permit others to put a face to these diseases and to envisage them via a singular experience. This is an opportunity to put an end to the dehumanisation and generalisation intrinsic to the mechanisms of stigmatisation (Loubières et al., 2018). It is



also an opportunity for the individual who participates to break out of the vicious circle of self-stigmatisation.

In this logic, all situations involving persons affected by mental health disorders speaking out participate effectively in the struggle against stigmatisation and forms of discrimination, as well as for social inclusion.

Several articles also mention the healing power of social inclusion (Haliday, 2018). The participation, by helping to fight for the integration of individuals affected by psychological disorders, would also facilitate the rehabilitation process of the user who speaks out.

Secondly, the literature presents the participation of persons with a lived experience of mental health disorders as a way to effectively realise democracy in the field of health. One of the articles recalls that health democracy is defined, in France - by the *Agences Régionales de Santé* (ARS - Regional Health Agencies) - as “*an approach that strives to associate all of the actors of the health system in the development and implementation of health policy, in a spirit of dialogue and consultation*”(Arveiller & Tizon, 2016). In sum, this involves citizen participation in health policies (Arveiller & Tizon, 2016).

While Canada is presented as being a country that has taken the lead on such questions of health democracy (Arveiller & Tizon, 2016), some authors paint a more mixed picture of health democracy in the French psychiatric and mental health landscape in recent years (Alary, 2016; Arveiller & Tizon, 2016). On the one hand, the “mentally ill” became a “psychiatric patient”, then a “user of psychiatric and mental health services”, as more and more rights were attributed to him (Alary, 2016); but on the other, the ideal of health democracy - which was being built up simultaneously in the field of political democracy and social democracy (Alary, 2016) - was given short shrift, notably with respect to persons having mental health disorders (Brière, 2016).

Indeed, certain authors address the fact that the stigmatisation of which individuals directly affected by psychiatric disorders fall victim leads to discriminations, including with regard to citizenship (Loubières et al., 2018). The way society looks at mental disorders, and at the persons affected by them, as well as how other citizens treat these individuals, participate in the construction of a “second-class” citizenship for users of psychiatric and mental health services (Loubières et al., 2018).

From this perspective, the participation of persons with a lived experience of mental health disorders can contribute to achieving genuine health democracy (Chambon, 2015). The fact that an individual affected by psychological disorders is regarded as a citizen per se and that his words are heard and listened to fits perfectly within the ideal of health democracy.

Moreover, certain authors believe that this battle for the full citizenship of users of mental health and psychiatric services – which is supported by their speaking out – not only represents a fight for respect of the rights of persons with psychological disorders, but is also a struggle for respect of the dignity of these persons (Deutsch & Dutoit, 2015). Other authors go beyond merely encouraging users of psychiatric and mental health services to speak out in a perspective of full citizenship and transformation of the health system. They promote the expression of these users in a combined perspective of full citizenship, transformation of the health system as well as therapeutic transformation. It then becomes an issue of civic recovery (Pelletier et al., 2015 in Lierville et al., 2015). Participation, by contributing to the fight for full citizenship of individuals affected by psychological disorders, also facilitates the rehabilitation process of the user who speaks out.

### **Getting persons directly affected by psychological disorders to participate in order to improve their state of health and quality of life**

This literature review emphasises the positive impact that participation can have on health – both physical and mental – as well as on the quality of life – notably social – of the person who shares a lived experience of mental health disorders.

On this subject, the literature on the participation of persons directly affected by psychological disorders often uses the English term *empowerment* (Laval, 2015; Deutsch & Dutoit, 2015; Arveiller & Tizon, 2016; Alary, 2016; Letailleur, 2016; Gagné, 2016; Launay & Maugiron, 2017; Loubières et al., 2018; Trémine, 2018; Desmons, 2018; Haliday, 2018; Demailly, 2020; Troisoeufs, 2020; Loubières et al., 2020; Mccluskey et al., 2020). A number of French translations have been proposed, notably in France and Canada: “*empouvoirement, empuissancement, capacité de dire et d’agir, appropriation du pouvoir d’agir, pouvoir sur sa propre existence, autonomisation, émancipation, etc. ...*” (Laval, 2015; Haliday, 2018; Desmons, 2018). Today, experts have come to agree that the English term *empowerment* has something untranslatable in French (Haliday, 2018; Desmons, 2018); nevertheless, there is a lack of consensus about exactly how *empowerment* relates to the participation of persons directly affected by

psychiatric issues. For example, some authors emphasise the notion of *empowerment* as a positive and necessary element of the rehabilitation process, while others see it as part of a deleterious imposed imperative of autonomy (Alary, 2016; Trémine, 2018).

Likewise, when users speak out and participate in actions that concern them, they at the same time contribute to the struggle for their own integration and recovery of their full citizenship, thus supporting their rehabilitation process (Pelletier et al., in Lierville et al., 2015; Haliday, 2018). In this sense, the participation of users is essential for their well-being (Chambon, 2015). Moreover, several teams of researchers and clinicians present the positive feedback shared by users of psychiatric and mental health services when they express themselves about their participation (Rhenter & Carbonel, 2015). Some users attest to the pride and satisfaction they derive from it (Lierville et al., 2015), others associate with it the fact of having social usefulness and contributing to social solidarity (Rhenter & Carbonel, 2015). One female user of psychiatric and mental health services makes the link between the participation and taking control of her own health (Gagné, 2016).

The literature thus establishes a connection between the participation of an individual with his experiential knowledge and a possible benefit for his health - notably mental. However, the potential harm for his health is also touched on (Chambon, 2015). Indeed, if engaged for purposes of public display or without knowing the points of vigilance that govern this participation, it can prove not only ineffective but even pernicious for those involved. This is one reason why it is important to formalise the participation of users of mental health services, and all the more so in international projects, which often find themselves at the intersection of scientific and cultural issues.

### **Getting persons with experiential knowledge of psychological disorders to participate in order to improve (public) health interventions**

With regard to the participation of users of mental health and psychiatric services, virtually all works refer to the acquisition of an experiential knowledge inherent to the experience of a mental disorder (Jouet, 2000 in Lierville et al., 2015; Letailleur, 2015; Launay & Maugiron, 2017; Desmons, 2018; Loubières et al., 2018; Cloutier & Maugiron, 2016; Lamadon, 2019; Schweitzer, 2020; Demailly, 2020; Troisoeufs, 2020; Loubières et al., 2020; Niard et al., 2020). This knowledge is closely linked to the facts, firstly, of having been ill, secondly, of having been a user of services and, finally, of having recovered (Demailly, 2020). These life experiences linked to mental

disorder give the affected individual a certain amount of knowledge and abilities (Cloutier & Maugiron, 2016). Here one mentions e.g. the experience of being diagnosed, knowledge of the feeling of being overwhelmed by intense emotional suffering or symptoms that are “stronger than oneself”, knowledge of stigmatisation, or even self-stigmatisation, understanding of the life problems resulting from the mental problem in connection notably with precarity, the experience of being hospitalised, possibly without consent, the experience of being medicated, understanding of the effects of drugs (including secondary ones), understanding of relations with professionals, the experience of having come through the entire process, understanding of the obstacles, of the re-adaptation approach and the rehabilitation process, as well as self-disclosure, empathy, tolerance, flexibility (Cloutier & Maugiron, 2016; Lamadon, 2020; Demailly, 2020). These abilities and knowledge transform themselves or are converted – in the event that the individual participates in training – into competencies, in part by raising the awareness of the individual concerned (Demailly, 2020).

Such experiential knowledge that is built up in the experiences of life with a mental disorder - despite being neither scholarly, academic, scientific or learned - appears to be valuable, since it is a “know-how” that can make a useful contribution (Demailly, 2020). In practice, from the person who joins a health care team (Cloutier & Maugiron, 2016; Launay & Maugiron, 2017) to the individual who becomes part of a research team (Godrie, 2015; Mccluskey et al., 2020), without ignoring those who participate in the organisation and planning of health services (Laurent, 2015) or in the training of psychiatric and mental health professionals (Lechopier, 2015), the added-value of the participation of a user of psychiatric and mental health services has fundamentally to do with the sharing of this experiential knowledge, since that permits its expression. This knowledge contrasts with or complements the more academic forms of knowledge and the experiential knowledge of the professionals and researchers (Chambon, 2015; Loubières et al., 2018).

Thus it is the fact that the user of psychiatric and mental health services has lived with a mental disorder, and thereby acquired an experiential knowledge, that legitimates his speaking on questions relating to mental health and to persons living with psychiatric issues. Moreover, users of psychiatric and mental health services - who in France are called “peer helpers” - are called “experiential experts” in Belgium (Schweizer, 2020) and “experts through experience” in England (Langlois et al., 2017).

Besides this experiential knowledge constructed through the experiences of life with a mental disorder, the users of psychiatric and mental health services also have - like any other citizen - other types of knowledge linked to their earlier domestic, university, professional or associative lives (Lamadon, 2019; Demailly, 2020). Not to mention that the users who regularly participate in a given framework can also have other knowledge connected with their participation per se (Demailly, 2020). While this is also - in cognitive terms - experiential knowledge, to avoid confusion with the knowledge linked to the experience with mental disorders, knowledge linked to the experience of participation itself is called “action knowledge” (Demailly, 2020). While these types of knowledge deriving from earlier experiences and this action knowledge are not those which in the first place lend legitimacy to the user of psychiatric and mental health services speaking out, they will benefit from being mobilised and make a contribution within the framework of his participation.

### **Quality criteria**

#### **Monitoring certain elements in the selection of the user of psychiatric and mental health services willing to participate**

Firstly, several authors find that the participation of persons affected by psychological disorders takes the form, in part, of members of associations of users of psychiatric and mental health services speaking out. Although one of the authors affirms that these associations are now run by users themselves (Letailleur, 2016), others regret that, traditionally, they bring together more people who are close to individuals with an experience of psychiatric and mental health services than the latter individuals themselves (Brière, 2016; Alary, 2016). Indeed, these groups are generally composed of parents, brothers, sisters, children, spouses, friends and caregivers. In effect, privileging the representation of users of psychiatric and mental health services by their family and friends serves to maintain an infantile subordination of these individuals to their families (Alary, 2016). In addition, encouraging the representation of these users by representatives involved in an association tends to institutionalise the speech of the persons affected by mental health disorders (Alary, 2016). Thus, in order to give full meaning to the participation of persons affected by a mental disorder, it would be advisable to give priority to the participation of the individuals directly affected by these disorders themselves (Alary, 2016).

Secondly, several authors describe the negative impact that participation can also have on the health – physical and mental – as well as on the quality of

life – notably social – of the person sharing a lived experience of mental health disorders.

The authors primarily highlight the stress that such participation can generate for this individual (Lierville et al., 2015; Godrie, 2015). For example, one of the articles tells the story of a person having experience of life with a mental illness and who intervenes as a peer-helper (Lierville et al., 2015). He notes that every occupation generates stress, and that this one – his participation as a peer-helper – is no different; and he points out that it is obviously more difficult to work on the basis of his experience. Thus such participation, as a potential source of stress, risks putting the individual's physical and mental health - as well as his socialisation - to the test.

The authors also evoke the array of negative emotions that participation is capable of stirring up in a person carrying experiential baggage of psychological disorders, and the emotional fatigue it can produce (Lierville et al., 2015; Godrie, 2015). Whatever framework he speaks in, the participant is, one way or another, led to rethink his experience in connection with the mental disorder. For example, one of the articles recounts the case of an individual with experiential baggage linked to mental disorders who takes part in a research project (Godrie, 2015). Within this framework, he is integrated into a team of researchers as peer research agent and assigned to analyse the stories of individuals having a similar experience to his own. One of his colleagues says that *reading a summary or listening to a recording would make him relive old memories, so that it was necessary for him to go out and take a walk or smoke a cigarette; it got so he couldn't sleep at night, it all reminded him of what he'd experienced and he was plunged into what had caused his suffering, or he was forced to face hard truths about his own existence*. Thus it appears that participation, because it can emotionally immerse the individual in memories linked to his own experience of mental health disorders and be a source of emotional fatigue, threatens to be physically and mentally exhausting and to have negative consequences on his socialisation.

In addition, the authors address the feeling of sham and betrayal that participation is capable of generating in a person with lived experience of mental disorders (Godrie, 2015). In line with the theory of double consciousness (Smith, 1990 in Godrie, 2015), individuals affected by mental disorders who express themselves regularly in one of the participation frameworks have the ability to see things from the point of view of the oppressed group - persons suffering from psychological disorders - and from the point of view of the dominant group - persons who are not suffering from

them. From the perspective of integrated outsiders (Collins, 2004 in Godrie, 2015), individuals affected by psychological disorders are simultaneously *outside* the world of health care or intervention, because they belong to the group of mental and psychiatric patients who were not traditionally associated with it, and *inside* that world, because they nevertheless do have access to it and contribute the experiential knowledge they have acquired. Although it is precisely through this understanding of the two worlds - sometimes referred to by the term “bilingualism” (Lamadon, 2019; Schweitzer, 2020) - that the participation of users of mental health and psychiatric services is relevant in term of improving public health interventions, this can also generate negative externalities. Indeed, this ambivalence can not only engender a feeling of being a sham vis-à-vis the persons amongst whom the individual speaks out, as well as a feeling of betrayal vis-à-vis others affected by psychological disorders; but it can also cause a weakening of the identity or identity confusion. Moreover, this ambiguity can have the consequence of changing his status in the eyes of some of his peers - persons affected by psychological disorders - who might make him feel that he no longer belongs to their universe. It thus seems that participation, because it can make the individual lose a part of his identity, risks having negative repercussions on his mental health as well as on his socialisation.

The literature thus establishes a link between the participation of an individual with an experiential knowledge of psychiatric issues and the risk that he decompensates and relapses. Although participating can, in some cases, be salutogenic for the user involved – notably in terms of his mental health – in other cases it can be harmful. In order to minimise the risks of decompensation and relapse, it would therefore probably be wise to favour participation by those who are well along in their rehabilitation process. Moreover, several authors offer possible definitions of rehabilitation (Davidson et al., 2005; Loubières et al., 2020; Beetlestone, 2010 in Loubières et al., 2020; Niard et al. 2020; Whitley & Drake, 2010 in Niard et al., 2020), that goes beyond stabilisation and distinguishes itself from cure - a term that relates more to the development of the disease than to the development of the person. In brief, rehabilitation can be defined as a non-linear process of transformation or changes, simultaneously internal and external, which fundamentally consists of passing from “doing poorly” to “being better” and which is manifested by the “individual’s recovery of his ability to act and his capacity to enjoy life”. Rehabilitation is simultaneously clinical, functional, social, physical and existential.

Likewise, although the literature shows that it is desirable to leave the talking to individuals having direct experience of life with a mental disorder and who are at an advanced stage in their rehabilitation process or even fully recovered, it also indicates that it is preferable to give the word to users of psychiatric and mental health services who are not already too much in demand, notably in order to guarantee representativeness (Lierville, 2015).

Moreover, several authors address the fact that users of mental health services undergo self-development through the participation itself. The main types of training courses accessible to French users of mental health and psychiatric services are recalled (Gross, 2020; Troisoeufs, 2020; Niard et al., 2020). For example, the “Peer Health Support Workers” programme sponsored by the WHO-CC and integrated into the Health and Social Sciences course at the University of Paris 13 is presented (Gross, 2020; Troisoeufs, 2020; Niard et al., 2020). For some, it can prove relevant, depending on the context, to favour the participation of these trained (ex-)users of mental health and psychiatric services. For other authors, in certain participation frameworks, it can prove just as relevant *not* to recruit only trained users (or even not to allow trained users to participate at all), precisely in order to guarantee representativeness. In the final analysis, the important thing is to get “*good representatives of users of mental health services*” in terms of *a priori* objectivised characteristics (Chambon, 2015).

### **Assuming one’s organisational responsibility notably vis-à-vis the user of psychiatric and mental health services who participates**

Certain authors evoke the organisational responsibility that is incumbent on any institution that gets persons who are living or have lived with mental health disorders to participate (Lierville et al, 2018). They explain that the structure can be guilty of shortcomings in the exercise of this responsibility and so it is up to the institution to organise, through various measures and according to different terms, the participation within it of persons living or having lived with psychological disorders. From the same perspective, some authors identify elements that were able (or which threaten) to compromise the participation of users of mental health services (Godrie, 2015; Letailleur, 2016), while other authors formulate recommendations to avoid such stumbling blocks (Haliday, 2018).

It therefore appears not only necessary to take a certain number of measures vis-à-vis the user who is willing to participate in whatever framework, but also indispensable to set rules with regard to the individuals who will interact with the participating user, notably when this participation is anticipated to be long term.



Firstly, it would be appropriate for every user of mental health or psychiatric services who participates to be taken on according to a formalised recruitment process, and that the reasons for his selection be explained to him (Godrie, 2015; Letailleur, 2016). A formal recruitment process makes it possible not only to guarantee the adequacy between the needs inherent to the participation framework and the user's different types of knowledge, but also to reinforce the legitimacy of the user to participate - both in relation to the individuals that he will be led to interact with and vis-à-vis himself.

Then, it would be fair for a user of mental health and psychiatric services who participates to be compensated - indemnified in the case of a one-off participation (Godrie, 2015; Letailleur, 2016). This demand is made notably by users of mental health services (Gagné, 2016). A fair compensation makes it possible simultaneously to give recognition to the expertise contributed by the individual (Letailleur, 2016) and to help mitigate the situation of precarity.

Finally, it would be relevant for the participating user to be adequately prepared and accompanied in order to successfully implement the various activities deriving from his involvement (Letailleur, 2016; Lierville et al., 2018). For example, in certain participation frameworks, courses on speaking in public are offered for users who are interested (Guézennec and Roelandt, 2015). Also, it would be relevant that the professionals who work with an (ex-)user of mental health services are also themselves prepared for the participation of the user and accompanied throughout this participation. Indeed, several authors explicitly describe how a user of mental health and psychiatric services can experience participation in research work done by professionals from psychiatric departments in hospitals (Mccluskey et al., 2020). One trend (amongst others) is identified and presented: destabilisation. Professionals can be destabilised by the participation of a user for several reasons. For example, because they do not know the user in question and his experience, or because they consider that the knowledge acquired from the lived experience with a mental illness is not of equal value to other forms of knowledge. It would therefore appear essential to prepare the professionals for the participation of a user and also to accompany them throughout this participation. It is important to enable professionals and users to meet and get to know one another (Langlois, 2017) - and for the professionals to listen to and hear the words of the users, despite the fact that they may be demanding, defensive or oppositional (Loubières et al., 2018). Indeed, the freedom of users of mental health and psychiatric services to get their voices and their experiential knowledge heard depends on the position

that other actors adopt vis-à-vis them and the relations they establish with them (Clément, 2011 in Letailleur, 2016).

Besides the introduction of these measures and modalities which fall under the organisational responsibility, it appears essential that all institutions involving persons who are living or have lived with mental health disorders ask themselves about the meaning that they give to this participation and respond to this question collectively (Loubières et al., 2018): why do we adopt this approach, what do we imagine is to be gained from it, what are we expecting from it, how far are we willing to go with it?

### **DISCUSSION/CONCLUSIONS**

With regard to the European and international projects for the promotion of mental health - and notably the training programme VETmh TuTo Erasmus+ (2018-2021) - this summary of the literature makes it possible to highlight relevance criteria that legitimate the involvement of users of mental health services, outside of any legal obligation. Indeed, the active participation in these projects of persons directly affected by psychological disorders is said to be relevant in several regards. Firstly, because it contributes to the evolution towards a European and international society that is more inclusive and democratic. Secondly, since it could improve the state of health and the quality of life of European and world citizens who participate in these projects. Finally, because it would help to improve the (public) health interventions implemented in Europe and the world, with the ultimate goal of improving the state of health and quality of life of individuals affected by psychological disorders. Besides these relevance criteria, this summary of the literature at the same time makes it possible to identify quality criteria that should guide project leaders in permitting the involvement of users within the framework of European and international mental health projects. Thus, within the framework of formalising the participation of directly affected persons in this type of project, it appears important to carefully monitor a certain number of criteria when selecting users, but also to assume the organisational responsibility which is incumbent upon institutions that undertake in work that they wish to be conducted in partnership with persons affected by psychological disorders. In this sense, a collective reflection on the meaning of the participation of users of health services in the project in question, formalisation of a process for recruiting users willing to participate, the remuneration - or indemnification in the case of a one-off participation - of participating users and the preparation and accompaniment of these users and of individuals with whom they will interact are all elements that will facilitate a successful participation.

On the basis of the lessons drawn from this review of the literature - and notably the relevance and quality criteria identified - and in light of the international and European recommendations (European Commission, 2005; World Health Organization, 2013), it firstly appears highly important, and even urgent, to formalise the participation of users of mental health services in the mid-term evaluation of the VETmh TuTo Erasmus+ project (2018-2021). From this perspective, it is important to think about the modalities of participation in the evaluation, developed together with users. In a second step, it seems opportune - for example, for the continuation of the VETmh TuTo Erasmus+ programme (2018-2021) or within the framework of elaborating a third strand of the “*TuTo project*” - to reflect on an even more active participation of (ex-)users of mental health services. Users with a lived experience of mental health services and psychological disorders might take part in the programme as trainers of the tutors - alongside teachers having experience in psychiatry and mental health. They might also take part in this project as co-tutor - in support of the young professional trainee in psychiatry and mental health, and complementary to the experienced professional tutor in those areas.

In addition to following the European and international recommendations on the involvement of users of mental health services in projects concerning them, this would make it possible to verify and support the quality criteria that this preliminary work has identified. This could serve as a basis for developing a practical tool to guide the formalisation of the participation of users within the framework of European and international actions or projects to promote mental health. The project leaders could therefore refer to it: respect of the recommendations in the implementation of their projects would make it possible to ensure an efficient participation of users in the field of mental health intervention.

This literature review presents certain limits that should be explicitly mentioned. Firstly, a very wide range of terms are used to speak of the participation of users of mental health services. Consequently, and although the work on constructing search equations from the dictionaries of synonyms and thesauruses strove to take this reality into account, this paper cannot claim to be exhaustive. Secondly, only documents in French were included, so the international scope of this review is relatively limited.

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## EDUCATIONAL ASPECTS ON THE PHENOMENON OF PARENTAL ALIENATION IN THE COURSE OF A DIVORCE PROCESS- QUALITATIVE STUDY

Alina SIRBU<sup>1</sup>, Ph.D.,  
Mona VINTILA, Ph.D.,  
Roxana TOMA, Ph.D.,  
Otilia Ioana TUDOREL, Ph.D.,  
Department of Psychology, West University of Timisoara,  
Romania  
\* [mona.vintila@e-uvt.ro](mailto:mona.vintila@e-uvt.ro)

**Abstract:** *The purpose of the study is to offer educational information on this new, but very hot topic, which is frequently present in our everyday life, affecting parents and children involved in the process of divorce. Little is known about this phenomenon. This qualitative study follows the experience of parenthood for a research group of 20 subjects (ten mothers and ten fathers) who were unable to have normal relationships with their children due to the phenomenon of parental alienation. Data was collected using the narrative method and semi-structured interviews. Processing brought to light four main themes that dominate the lives of these parents whose children refuse all contact with them: the experience of having failed as a parent, a loss of relationship with the child as a result of the harsh intervention of the alienating parent, interference by the mother-in-law to undermine their parental role, and a feeling of hopelessness and powerlessness arising from the perception that there are major deficiencies in the judicial, social protection and mental health systems in Romania.*

**Keywords:** *parental alienation; qualitative study; alienating parent; parental role*

### I. Introduction

After a married couple separate, parent-child relationships go in one of two directions: either the child maintains normal relations with both their parents, or, due to their being caught up in the continuing state of conflict that persists between the parents even post-divorce, their relationship with one parent is affected.

The specialist literature shows that authors speak with one voice when describing the post-divorce effect on the parent-child relationship, even though a number of different terms are used to refer to it, including parental alienation syndrome (Gardner, 1985, 1987, 1992, 1998a, 1998b, 2002, 2004, 2008), alienated child (Fond-Harmant & Gavrilă-Ardelean, 2016; Kelly & Johnston, 2001), parental alienation (Johnston & Kelly, 2001; Johnston 2003, 2004; Baker, 2005, 2007, 2010, Baker & Darnall, 2006, 2007; Baker *et al.*, 2011, 2012; Kelly, 2010; Ben-Ami&Baker, 2012; Godbout & Parent,2012; Viljoen & van Rensburg, 2014;Lowenstein, 2015, Schwartz, 2015, Baker & Verocchio, 2016; Rowlands, 2018, Balmer, Matthewson & Haines Bernet, 2018), families with an alienated child (Lavadera, Ferracuti, & Togliatti, 2012, *apud* Friedlander & Walters, 2010; Gavrilă-Ardelean, 2008), relationships of domination (Biolley, 2014). It is however clear that parental alienation is the term most frequently employed in the specialist literature to describe the way the parent-child relationship is affected post-divorce or post-separation. It proves to be even more necessary to be careful in the choice of words/terms used by professionals among each other and in communicating with other professionals: lawyers, judges or with the parents. In the last case the terminology should be adapted to the the parents' educational level, cultural and social background etc. (Goian, 2004; Goian, 2010; Goian, 2012).

When parental alienation occurs, we may identify a dichotomy of roles: the alienating parent (ally parent, preferred parent), and the alienated parent (target parent, rejected parent). The alienating parent (Lavadera *et al.*, 2012) is the parent who deliberately and intentionally intervenes in the child's relationship with the other parent with the aim of severing the relationship between the two of them. The alienated parent (target parent) (Baker and Darnall, 2006; Lavadera *et al.*, 2012, *apud* Baker, 2007) is the parent with whom the child refuses to interact, as a result of the deliberate intervention of the other parent (Biolley, 2014), even if prior to the divorce/separation this parent was perceived by the child as a good parent.

Study of the specialist literature shows that there are certain psychological traits that each type of parent possesses. While none of the parental typologies referred to above has been diagnosed with any form of psychopathology on Axis I (Lavadera *et al.*, 2012), it has been found that fathers involved as agents in the process of parental alienation are very rigid, tend to exert pressure on others to behave as they wish (overly constraining), and have difficulty in expressing affection, while mothers who alienate are insecure (Lavadera *et al.*, 2012). The same authors state that alienating parents are psychologically much more defensive than non-alienating ones and that they tend to be more rigid and less able to foresee the consequences of their actions (Siegel & Langford, 1998). In couples where parental



alienation takes place, parents have a tendency to accuse each other of being irresponsible, murderous or dangerous (Lavadera *et al.*, 2012).

Summers & Summers (2006) introduce the term of narcissistic alienating parent (NAP). A parent of this kind is someone extremely focused on their own ego who finds it difficult to conform to the standards and rules of society, who lies and manipulates, who is seriously deficient in the ability to show positive reactions of empathy to their own child, and the kind of parent who systematically deceives the child with promises and turns them into a little abuser (“little abuser proxies”) who acts in the parent’s name (Summers & Summers, 2006).

Balmer *et al.* (2018) state that alienating parents have been described as narcissistic, paranoid and with cognitive disturbances and also as people who find it hard to relate to their families of origin (Balmer *et al.*, 2018, apud Baker, 2005a, 2006, Ellis & Boyan, 2010, Kopetski, 1998a, 1998b; Lorandos, Bernet and Sauber, 2013; Rand, 1997a, 1997b).

Alienated parents are described as rigid and lacking the skills needed for an effective parental style, emotionally detached, distant, passive, and with some problems in handling their feelings (Balmer *et al.*, 2018, apud Baker & Andre, 2008, Drodz & Olesen, 2004, Friedlander & Walters, 2010, Gottlieb, 2012, Johnston, 2003; Rand, 1997a, 1997b; Godbout & Parent, 2012; Kelly & Johnston, 2001). Although earlier studies state that alienated (target) parents have an ambivalent attitude to their need to have a relationship with their children (Balmer *et al.*, 2018, apud Baker & Andre, 2008; Friedlander & Walters, 2010), Balmer (2018) states that alienated parents do nevertheless display a great need to be involved in their children’s lives (Balmer *et al.*, 2018).

A study by Sîrbu and Buică (2019) demonstrates that there are no significant differences in personality structure, in terms of the BIG FIVE model, between alienating and alienated type parents. The results also indicate that both for alienating type parents and for alienated type parents there were significant correlations with post-traumatic stress disorder (Axis I) and with masochist type personality structure (AxisII) (Sîrbu, Buică, 2019).

Parental alienation has significant effects on all members of the family, but these are most serious for the alienated parent (the target/rejected parent). He/She may even go through a genuine “post-traumatic stress syndrome” (Biolley, 2014), experiencing high levels of anxiety and depression (Baker, 2010, Balmer *et al.*, 2018), frustration, stress, fear, feelings of loss, weakness, helplessness and rage as a result of constant interaction with the alienating parent (Balmer *et al.*, 2018, apud Baker, 2010a; Baker & Andre, 2008; Baker & Darnall, 2006; Vassiliou & Cartwright, 2001). Going through this process of parental alienation also

involves the alienated parent in a number of unavoidable personal expenses that can leave them both emotionally and financially exhausted (Balmer *et al.*, 2018; Gavrilă-Ardelean, M., & Gavrilă-Ardelean, L., 2017).

Research in the specialist literature suggests that mothers are more predisposed to become alienating parents while fathers experience parental alienation more frequently and more intensely (Balmer *et al.*, 2018, *apud* Bow, Gould, & Flens, 2009; Ellis & Boyan, 2010; Gardner, 2002; Johnston, 2003; Meier, 2009; Nichols, 2013; Rand, 1997a, 1997b; Vassiliou & Cartwright, 2001, Ellis, 2005). Recent data published in a study by Balmer (2018) show that mothers are more predisposed to experience a more severe degree of exposure to parental alienation than fathers (Balmer *et al.*, 2018). The same study also shows that fathers are more aggressive in their attempts to weaken the mother's authority in front of the child (Balmer *et al.*, 2018).

Three studies that investigate the parental experience of parents who could not have normal relationships with their children have been identified as of particular relevance to this research project. One is that by Vassiliou and Cartwright (2001) of a sample composed of an alienated mother and five alienated fathers; it states that these parents' experience was characterised by their experiencing negative feelings and suffering both emotional and financial losses (Vassiliou & Cartwright, 2001).

Kruk (2010) carried out a study of fourteen women who had lost custody of their children following a divorce. The major themes highlighted were attachment and loss, the injustice of the legal system against mothers who fail to match up to the ideal of motherhood, physical and emotional violence within the family, the phenomenon of parental alienation and refusal of access to children, social stigma, poor access to services, and financial loss (Kruk, 2010).

In the third place, Finzi-Dottan *et al.* (2011) carried out a qualitative study on a sample of ten Israeli mothers whose children refused to have any contact with them. This piece of research highlighted as a major theme "fusion versus detachment", which was divided into four sub-themes: marriage that provides the illusion of escaping from an abusive home, the birth of a child as compensation for the chaotic experiences of one's own childhood, the abusive husband who exploits women's feelings of failure as mothers, and the husband and mother-in-law who drive away the mother (Finzi-Dottan *et al.*, 2011).

As may be observed, the phenomenon of parental alienation involves both mothers and fathers as alienated parents, which means that it is necessary to investigate it in its effects on both categories of parents.

## **II. Aim of the study**

The purpose of this qualitative study is to examine the experience of motherhood and fatherhood for alienated mothers and fathers who, despite having joint custody with the other parent, were unable to continue to maintain a normal relationship with their children because they came up against the latter's categorical refusal to have anything more to do with them.

### **III. Methodology**

#### **4.1. Participant**

The study involved 20 Romanian participants, ten mothers and ten fathers, with a mean age of 37.5. They qualified for inclusion by:

- Being part of a couple who were divorced or going through a divorce;
- Having at least one child with their partner;
- Identifying themselves as going through a situation of parental alienation (the impossibility of having a normal relationship with their own child because of the deliberate interference of the other parent).

Of the 20 parents, 18 had custody (nine men and nine women, 90%) while for two of them (one man and one woman, 10%) custody of the child/children had not yet been agreed because the divorce process was still ongoing. 18 parents had the right to have the child/children living with them (four fathers and 14 mothers, 90%), while for two subjects (10%) it had not yet been agreed where the child/children should live because the divorce process was still ongoing.

Female subjects represented 50% of the total sample (mean age 35.9) and displayed the following features:

- Marital status: nine mothers were divorced (90%), one going through a divorce (10%);
- Number of children: five mothers – one child (50%), three mothers – two children (30%), two mothers – three children (20%);
- Age of children: between one year old and 17;
- Custody: nine mothers had custody (90%), while in the case of one mother custody had not yet been agreed because she was still going through the divorce (10%);
  - Domicile of child/children: five mothers (50%) had won the right to have their children living with them (but this was not the case, even though there was a court ruling that they should), four mothers (40%) did not have the right to have the child living with them, and in one case (10%) the child's domicile had not yet been fixed by court ruling as being with either parent since the divorce process was not yet finalised.

Male subjects represented 50% of the total sample (mean age 39.1 years) and displayed the following features:

- Marital status: nine fathers were divorced (90%), one going through a divorce (10%);
- Number of children: nine fathers – one child, (90%), one father – two children (10%);
- Age of children: between four and 12;
- Custody: nine fathers had custody (90%), while in the case of one father custody had not yet been agreed because he was still going through the divorce (10%);
- Domicile of child/children: nine fathers (90%) were did not have the right to have the child living with them, while in the case of one father (10%) the child's domicile had not yet been fixed by court ruling as being with either parent since the divorce process was not yet finalised.

Between them, the 20 subjects had 28 children, 16 boys and 12 girls. The women had 17 children, 11 boys and six girls, while the men had 11 children, five boys and six girls.

All 20 parents said that they had been extremely involved in their children's lives before the divorce, with mothers regarding themselves as primary attachment figures for their child/children while fathers stated that they had been active participants in their children's lives through being directly involved in everything connected with their upbringing and care.

All 20 parents reported that post-divorce they had had no further contact with their children, with the latter refusing to be in contact with them for periods ranging from six months and three years. Not one of the parents had contact with their child, either directly (face to face meetings) or indirectly (by telephone or online) during the time the research was being carried out.

Subjects were selected from among people who had taken part in a process of psychological assessment requested by the court with a view to dissolving the marriage (divorce), fixing custody arrangements and/or establishing the child's/children's domicile. The psychological assessment carried out in the course of the psychological assessment showed that in terms of personality type, 13 subjects (65%, six men and seven women) were compulsives while seven subjects (35%, three women and four men) were combined histrionic-compulsives.

All subjects gave written consent to participate in this research project, the data needed for which were collected in the course of the psychological assessment.

#### **4.2. Method**

The investigative method employed was the qualitative-phenomenological one particularly useful when researching sensitive subjects (Renzetti & Lee 1993; Thoresen & Øverlien 2009) and areas in which, since there is little theoretical basis, further work is needed (Rosenblatt & Fischer 1993). To be an alienated parent who has lost contact with their own children implies profound feelings of pain and of life no longer having meaning, besides also tending to lead to sufferers being stigmatised by society. Assessing the specialist literature shows that this area has been too little studied up to now. Research studies that do address it rely on small targeted samples made up of limited numbers of informers who are “rich in information”, so that representativeness occupies the foreground to the detriment of depth (Patton 2002; Creswell 2007).

Data was collected using the narrative method and the semi-structured interview, directly and face to face with the subject, as a separate step in the psychological assessment procedure. Each subject was interviewed separately by a principal clinical psychologist and responses were transcribed verbatim. The conversation with each subject lasted two hours.

The first step involved the use of the narrative method, with the subject using their own words to give information about their own childhood, their couple relationship (how the married couple was formed and how it ceased to exist), and about the process of parental alienation to which they had been subjected and the deterioration of their relationship with their child/children.

The second step involved the semi-structured interview, for which an interview guide was prepared, along the lines of the research carried out by Vassiliou & Cartwright, (2010) and Finzi-Dottan *et al.*, (2011). The structure of this interview guide took as its starting-point the nine categories of subjects to be found both in the specialist literature (Vassiliou & Cartwright, 2001, Finzi-Dottan *et al.*, 2011) and in clinical practice, as follows:

1. Shared characteristics of people who face the phenomenon of parental alienation (experience of divorce, violence, or parental alienation in their own families of origin);
2. Shared themes or problems found in the couple relationship that contribute to its breakdown;
3. Shared themes in participants’ perceptions of the process of parental alienation;
4. What the child needs in order to cope better with the situation created by their experience of their parents’ divorce;
5. The subject’s perception of the process that led to the child’s refusal to relate to their parent;
6. The subject’s feelings towards the estranged child;

7. The impact of parental alienation on their feeling of identity as a parent;
8. How the subject perceives their future life in the role of parent;
9. Changes the subject would make if they had the opportunity to do things differently in their couple relationship so as to prevent it ending as it had done.

#### **IV. Results**

##### **4.1. Data analysis**

Data analysis was performed in an inductive way in conformity with the phenomenological paradigm (Moustakas 1994), the intention being to understand the lived experience of each alienated parent. Two clinical psychologists read each of the transcribed interviews in its entirety for this inductive assessment. The data was organised under the themes that emerged from the descriptive accounts, with each of the psychologists keeping their interpretative notes separate. Following this procedure gives the study greater credibility (Lincoln & Guba 1985).

In order to increase the credibility of the interconnected codificators, the thematic content analysis was carried out separately by each psychologist (Schwandt 2007), both for the content and for the interpretations of different cases given. Subsequently, the two psychologists compared and examined their individual assessments, discussing discrepancies and seeking common ground, thus increasing the degree of consistency between the evaluators. Systematic analysis of data based on the participants' accounts maintained the credibility of the research study (Lincoln & Guba 1985).

Qualitative analysis is an important method that makes it possible to observe the experience a person has been through and their point of view regarding the situation without the interference of external assumptions (Sutton & Austin, 2015). Phenomenology is concerned with studying experience from the perspective of the individual, assumptions, and customary ways of perceiving. Epistemologically, phenomenological approaches are based, in a personal paradigm, on knowledge and subjectivity and underline the importance of personal perspective and interpretation. As such, they are important in providing an understanding of subjective experience, as through them one obtains knowledge about people, their motivations and actions and the viewpoints they come to adopt as a result of the large volume of assumptions they assimilate and the conventional wisdom they encounter (Lester, 1999).

##### **4.2. Findings**

The results of the study demonstrate the following points:

- a) Those who face parental alienation in their families after the breakdown of their marriage are people who in their families of origin had to

face divorce (85%), conflicts between their own parents (70%), parental alienation (70%), or physical violence between their parents (60%);

b) Common issues and problems in couple relationships that contribute to their breakdown are damaging levels of conflict pre- and post-divorce (100%), delaying the decision to break up/divorce (100%), involvement of the mother-in-law (90%), infidelity (75%), and physical violence (55%);

c) Common themes in participants' perception of the process of parental alienation are the turning of the child into an ally of the alienating parent (100%), feelings of powerlessness on the part of the alienated parent in relation to their own child (100%), negative feelings (rage and a need for revenge) on the part of the alienating parent against the alienated parent (100%), along with a the excessive leniency of the Romanian legal system towards the actions of the alienating parent and the inadequate understanding of the phenomenon among mental health and social protection specialists (90%)

d) As perceived by the alienated parent, what the child needs in order to cope better with the situation brought about by their parents' divorce are joint custody (90%), a conflict-free relationship between their parents (85%), and their continuing to live in the home to which they are used (80%);

e) The subject's perception of the process that led to the child's refusal to relate to the parent is that the reasons behind this reaction are the clear intervention of the alienating parent in the relationship between the child/children and the alienated parent (100%) and intervention by the mother-in-law (90%);

f) The subject's feelings towards the estranged child are unconditional love (80%) and ambivalence (20%);

g) The impact of parental alienation on subjects' feelings about themselves as parents is reflected in their experiencing such emotions as low self-esteem and self-confidence (90%), a feeling of disappointment in relation to their performance as a parent (85%), feelings of sadness, hopelessness, lack of energy and trust, sleep disturbance and loss of appetite, pessimistic thoughts about their life in the future and problems in imagining that future (85%), self-accusation and self-blame, feelings of a lack of personal worth and of having failed catastrophically in their role as a parent (85%), an inability to take action sooner to oppose the negative influencing of their child by the other parent (75%), negative labelling and criticism from society (50%, exclusively for female subjects);

h) The way subjects perceive their future lives as parents demonstrates that the alienated parent sees their future relationship with the child in a pessimistic way (85%), as a consequence of emotional, physical and financial exhaustion, but that they do not give up trying to re-establish a

normal relationship with their child/children – persevering with legal procedures, visiting the child at school, sending letters and messages, attempting to make contact on the telephone, and going to see the child in public playgrounds (100%);

i) The changes the alienated parent would make if they had the chance to handle their couple relationship differently in order for it not to end as it did are not marrying the same type of partner (100%), initiating moves to separate from the former partner sooner (90%), and seeking early psychological help (85%).

Analysis of results demonstrates the existence of four themes that dominate the lives of parents involved in the process of parental alienation, from the point of view of the alienated parent. These are (a) experiencing a sense of having failed as a parent and having negative emotions that affect their well-being, (b) losing their relationship with the child as a consequence of the harsh intervention of the alienating parent (c) the interference of the partner's family of origin and the undermining of their parental role (d) a perception that there are serious gaps in the Romanian legal system and that specialists in the mental health and social protection systems have insufficient knowledge about parental alienation.

#### **(a) Experiencing a sense of having failed as a parent and having negative emotions that affect their well-being**

Our study results show that the alienated parent, whether male or female, experiences a feeling of powerlessness in relation to their own child/children and is over-indulgent towards them for fear of angering them and losing their relationship with them. The child is thus the one who fixes the rules of interaction with the alienated parent, who accepts the treatment meted out by the child. The present study also shows that these parents, whether male or female, experience disappointment in relation to their performance as parents, believing that they were incapable of setting boundaries at the right moment in their relationship with their child/children, for fear of being regarded as unloving parents, which made them unable to take earlier action to resist the negative influencing of the child by the alienating parent. These results resemble those reported by Finzi-Dottan *et al.* (2011) and by Vassiliou and Cartwright (2001). The results also demonstrate that the alienated parent experiences low self-esteem and self-confidence, which is in harmony with the findings of Warner (2005) and Middleton (2006), and also that alienated parents exhibit depressive emotions, have difficulty in imagining the future, and experience a constant feeling of sadness (echoing the research findings of Baker (2010), (Biolley, 2014) and Balmer *et al.* (2018). It is likewise observable that alienated parents tend to be self-accusatory and self-blaming, which echoes what



Finzi-Dottan *et al.* (2011) found, and that they experience negative labelling and social ostracism, once again inharmony with the findings of Finzi-Dottan *et al.* (2011).

The words that best describe this theme in the context of the study are *failure, disappointment, fear, regret, depression, sadness, inability, lack of trust, lack of worth, bad parent, and lack of boundaries.*

Mrs P. describes her experience as a parent after approximately three years of no longer having had a normal relationship with her nine-year-old son as follows: “He doesn’t want to see me and I can’t do anything. I go to the school every week and stand outside, watching him through the playground fence playing with his classmates. If he sees me, he shouts at me and calls me a fool, telling me that he never wants to see me again. I feel completely powerless. When I manage to see him at closer range, I only tell him I love him. And when I go away, I cry. I feel I’m a failure as a mother, I ask myself where I went wrong. I know it’s not his fault, because he’s my darling and I love him, and I know that his dad and his dad’s mother tell him all kinds of horrible things about me. I am heartbroken and my life has no meaning since they took him away from me.”

Mr N. describes his experience of being an alienated parent as follows: “I haven’t hugged Ana since she was three. Now she’s five. Every time I go to see her at the kindergarten, she stares at the ground and refuses to say a word. She won’t say anything and I don’t know what to do. If I get too close to her, she runs away and cries, and even the kindergarten teacher won’t let me near her, because she’s under orders from my ex-wife and says she doesn’t want to get in trouble with her. I took the court papers to the head teacher to prove we have joint custody, but it got me nowhere. I feel sad, disappointed and sometimes depressed. I no longer have any confidence in myself and I don’t know if I was a good father. Before the divorce, she used to jump into my arms and be pleased to see me when I got home from work. Now it seems as if I’m the person in the world she’s most afraid of.”

#### **(b) Loss of relationship with the child as a result of the harsh intervention of the alienating parent**

Our study results show that alienated parents grasp that the occurrence of the phenomenon of parental alienation is due principally to the deliberate intervention of the alienating parent and also to their feelings and needs, these feelings taking the form of anger and a need for revenge. Intervention by the alienating parent takes the further form of turning the child into an ally of theirs who joins them in breaking off relations with the alienated parent. These results are in agreement with those reported by Vassiliou and Cartwright (2001) and Finzi-Dottan *et al.* (2011), whose research projects demonstrate that the alienating parent intervenes in a

harsh and deliberate way in the relationship between the child/children and the alienated parent to bring about a deep rift in the relations between them (Vassiliou and Cartwright, 2001; Finzi-Dottan *et al.*, 2011).

The words that describe this theme of the study are *influence, loss of control, revenge, ally, powerlessness, helplessness, anger, weaponised child*.

Mrs M. describes as follows how her ex-husband intervened in her relationship with her son, now aged 17: *“I was a housewife, I never went out to work because I had three children. Alex is the oldest and I always had a special relationship with him. I love them all the same, but he was the one who awoke maternal feelings in me. When he was little, everything was OK, even though my ex-husband used to put me down in front of the children. Alex didn’t seem to notice, but when he got bigger he started using exactly the same expressions as his father. He claimed I was stupid, uneducated, uncivilised and an unnatural mother (because I was supposed not to have given him his medicine when he was ill as a small child). It all came to a head at the point when he came to tell me he and his father were divorcing me. He was 14 when he said that. My ex-husband used to treat me very badly; he didn’t hit me, but he subjected me to verbal humiliation, and Alex started doing the same. After the divorce he told me I wasn’t his mother anymore and his father was in the right and I was a failure and he didn’t want to see me again. And that’s how he behaved. For three years now I’ve had almost no news of him; he doesn’t want to speak to me anymore. And his father tells him he’s treating me just right, because I don’t deserve my children.”*

This is how Mr A. relates his experience in his relationship with his child after his divorce: *“Tibi doesn’t want to come near me. He’s six now, but he refuses to see me because he knows I definitely want to kill him. That’s what his mother has told him. That I wanted to kill him before he was born. That it’s my fault his grandfather died. That I’m a murderer and won’t be satisfied until I’ve killed everyone. Before the divorce he enjoyed going out for bike rides with me, playing with Lego with me and joining me in my after-lunch sleep. Now he calls me a murderer. These are not the words of a child of six. His mother has told me that she won’t give up until she’s completely destroyed me. The child is hers, she’s his mother, and I need to disappear from their lives.”*

### **(c) Interference by the partner’s family of origin and undermining of the parental role**

With reference to this theme, study results show that it is perceived by participants as a major factor in destroying the alienated parent’s relationship with the child. Mothers-in-law are perceived by both female

and male subjects as being extremely interfering, and such interference tends to provoke parental alienation. Whether this interference takes place in a subtle way, the professed motive being to help the married couple, or in a harsh way, through criticism of the subject and undercutting their role as a parent, the effect of such behaviour is to provoke the phenomenon of parental alienation. These findings support the results of Finzi-Dottan *et al.* (2011), which demonstrate that mothers-in-law, by undermining the mother's maternal role, intervene in her relationship with the child, which implicitly tends to provoke parental alienation.

Words that highlight this theme within the study are *interfering mother-in-law, intervention, suffering, pain, loss.*

Mrs P. says that her relationship with her daughter was deeply influenced in a negative way by her former mother-in-law: "After I gave birth, she moved in with us. I didn't want this, but my husband brought her. She lived with us for three months, night and day, and after that she came every day until we got divorced. She taught Sofia to call her 'Good Mother'. She didn't use to criticise me directly in front of Sofia, but she had a subtle way of making me feel deskilled. Every day I felt that little by little I was losing my child. Sofia became very attached to her and after the divorce she didn't want to come with me. She stayed with her father and grandmother in my former home. *There was absolutely no way I could take her with me. Now she doesn't want to see me. She says that I left her father and that I am a bad mother. In six months I've seen her only once, and that was at the birthday party of some mutual friends. She ran away from me to her grandmother, who picked her up and told me in front of her that I was traumatising the child and that I had better leave.*"

Mr I. describes the way the dynamic of his relationship with his child changed after his former mother-in-law moved to his home: "*She played the victim all the time, but did absolutely everything Vlad wanted. He was two and my wife had to go back to work. The child had no boundaries set for him at all, he used to do exactly as he pleased, and when I tried to put some limits on his behaviour my ex-wife would intervene and undermine my authority. My mother-in-law also made my wife believe I was involved with a neighbour. That's where all the trouble started. There was nothing between us, but my ex-wife was very easily influenced and believed everything her mother told her. Sometimes I think my ex-mother-in-law's aim was to destroy my marriage. I couldn't take it any longer and I moved out. Now I haven't seen Vlăduț for almost a year. He's five, I won joint custody, but his mother says he doesn't want to see me. I tried to take him away by going there with a court official, but my ex-mother-in-law was there; she hit me and called me a murderer in front of the child, who was absolutely terrified. I'm at my wits' end.*"

**(d) The perception that there are serious deficiencies in the Romanian legal, mental health and social protection systems**

A major theme highlighted by this study is the disappointment alienated parents feel regarding some serious deficiencies in the Romanian legal system. Although the great majority of participants in the study had joint custody, and some of them also still had their children living with them, not one of them had been able to have a normal relationship with their child/children. Their frustration sprang from the fact that even though they had been to court and won a legally binding ruling regarding the way they should continue to have a relationship with their child, the alienating parent had interfered to prevent this, despite the fact that such behaviour was in no way legally sanctioned. A further disappointment has to do with the fact that mental health system specialists and those working in the social services are insufficiently informed about parental alienation. At the point when the alienated parent seeks help from these services they come up against extreme rigidity and a lack of support. These findings are consonant with those of Gardner, 1991, 1992; Clawar & Rivlin, 1991; Dunne & Hedrick, 1994; Girdner, 1985, and Vassiliou & Cartwright (2001).

Words used to describe this theme by participants in the study are *lack of trust, injustice, pessimism, exhaustion, poorly trained experts*.

Mrs H. describes her disappointment with Romanian justice: *“I’m at my wits’ end. I’m exhausted from every point of view – mentally, emotionally, financially. I won all the cases in all the courts: the magistrates’ court / higher court, the Court of Appeal. I’ve got custody and the right to have the child living with me. I’ve been trying to get him away from his father for three years. And nobody does anything. They won’t help me in the least. He was six when we got divorced. My husband cheated on me with his secretary and I didn’t want to stand in his way, I left and took the child with me, but I let him visit him a week later, because I thought it was normal that the child should have contact with his father too. He never brought him back. I have never seen him again and I’ve not been alone with him for three years. Now the child is afraid of me. I’ve been to Child Protection, the Town Hall, to NGOs, but no one can do anything. I’m desperate. I’m dying with the law in my hand, no one does anything to him. He laughs in my face and defies me. I’ve got a definitive, irrevocable court ruling and a fat lot of use it is to me. During these three years he’s brainwashed my child, who now sees me as a monster.”*

Mr L. says that his experience with the legal and social services systems has left him with a bitter taste in his mouth: *“I’m furious, I no longer know what I can try. I’ve got a definitive joint custody ruling and visiting rights laid down by the court and I haven’t seen my child for a year*

*and a half. It's a scandal. She doesn't want to let me see him, because – she says – he doesn't want to see me. I've been to the police, I've been to Child Protection, I've made submissions to the Ministry of Justice. No one does anything. And I see the years passing and my child doesn't know me. He was three when we separated. Now he's four and a half and all he knows about me is what his mother tells him. I don't think it's right. But I'm not going to give up. My child needs to know that he's got a father who loves him!"*

## **V. Discussion and conclusions**

The aim of this research study was to examine the experience of parenthood for mothers and fathers who are unable to have a normal relationship with their children as a result of the phenomenon of parental alienation. Analysis of the results of the study demonstrated that there are four themes that dominate the lives of parents involved in the process of parental alienation from the perspective of the alienated parent. These are experiencing a sense of failure as a parent and negative emotions that impact their well-being, losing their relationship with their child as a result of the harsh intervention of the alienating parent, the interference of the partner's family of origin and the undermining of their parental role, and a perception that there are serious deficiencies in the legal system in Romania, along with insufficient knowledge about parental alienation among specialists working in the mental health and social protection systems.

With reference to the experience of a sense of failure as a parent and negative emotions that impact their well-being, the study results show that the alienated parent experiences a number of negative emotions, including low self-esteem and self-confidence, constant sadness, depression, self-blame and self-accusation, and disappointment in regard to their performance as a parent. This disappointment comes both from the impossibility of setting clear boundaries for the child, for fear of making them angry, and from the fact that they were not able to act sooner to prevent the child being negatively influenced by the alienating parent. All these results are in harmony with those reported in the specialist literature (Vassiliou & Cartwright, 2001; Warner, 2005; Middleton, 2006; Baker, 2010; Finzi-Dottan *et al.*, 2011; Biolley, 2014; Balmer *et al.*, (2018).

As regards the alienated parent's loss of their relationship with the child as a result of the harsh intervention of the alienating parent, our study results show that alienated parents are aware of the fact that parental alienation is largely caused by the deliberate intervention of the alienating parent and also owes something to that parent's feelings and needs, these feelings being ones of rage and a need for revenge, but that it also results from the child being turned by the alienating parent into an ally of theirs who plays his/her part in

breaking off relations with the alienated parent (results which echo those of Vassiliou and Cartwright, 2001).

When it comes to the interference of the partner's family of origin and the undermining of the subject's role as a parent, the study results show that this is perceived by participants as a major factor in breaking the alienated parent's relationship with the child. Mothers-in-law are perceived by both female and male subjects as being extremely interfering, and this interference provokes the onset of parental alienation. Our result in this regard are in harmony with those of Finzi-Dottan *et al.* (2011) and Gardner (1992, 1998).

A major theme that emerges from this study is the disappointment alienated parents feel about the existence of serious deficiencies in the Romanian legal system. 90% of subjects said that although they had won custody of their children through definitive court orders, they were unable to have a normal relationship with them as a result of the phenomenon of parental alienation, and that neither the courts nor the social services nor mental health experts had been able to identify constructive ways forward for them. More than that, 50% of subjects stated that although they both had custody and had won the right to have the child living with them – rights awarded by a definitive court ruling – in fact they had had no kind of relationship with their child/children (for periods ranging from six months to three years) and had no way of bringing further legal pressure to bear on the situation. All these parents stated that they had addressed themselves both to the courts and to the branch of the social services concerned with children's rights but had not been given any support that had actually remedied the situation. The bodies that provide social services blame a gap in the law that prevents them from intervening in an effective way to prevent and combat parental alienation. This is why an alienated parent who seeks help from these services comes up against so much rigidity and lack of support. These findings agree with those of Gardner, 1991, 1992; Clawar and Rivlin, 1991; Dunne and Hedrick, 1994; Gardner, 1985), and Vassiliou and Cartwright (2001).

In conclusion, our study results show that there are no significant differences between mothers and fathers in the way they perceive and experience parental alienation in the role of alienated parent. The experience is a devastating one for both, with effects on their self-perception and self-confidence, on the way they perceive their strengths as a parent, and above all on the way they feel when, with every day that sees no change in their position, they slowly but surely lose more of their connection with their child/children and their chances of having a normal relationship with them. The campaign of denigration that the alienating parent wages against them, with the harsh and interfering way they interpose themselves between the

alienated parent and their child/children, mean that the image the child has of that parent becomes increasingly distorted, which implicitly means that he/she is deprived of the chance of building and experiencing an authentic relationship with their mother or father. All these forms of denigration are the more frustrating for the alienated parent the less there is of a well-founded basis for them. These alienated parents were, until a certain point in time, authority figures for their children, involved in an appropriate way in their upbringing and education and not exhibiting dangerous or incorrect behaviour towards them. One of the most painful things these parents experience is their consciousness that the gap in their child/children's life/lives left by their absence, plus the negative image they have of them, may have a serious negative impact on the future development of these young children.

This qualitative study demonstrates that there are common themes and perceptions that alienated parents share, even though they have never met in real life and have not told each other their personal experiences. This indicates the existence of a number of aspects that are general characteristics of the phenomenon of parental alienation, aspects that can make a contribution to defining and highlighting this phenomenon, the ends in view being both identification and prevention.

## **VI. Limitations and future research directions**

This project is the first piece of research carried out in Romania to have studied, from a qualitative point of view, the impact of parental alienation on the alienated parent by means of assessing the situation on the ground and gathering responses from 20 people in situations of alienation with regard to their own child. In addition, in relation to gender, this is a qualitative study that brings together responses from equal numbers of alienated fathers and alienated mothers, in an attempt to capture any gender-dependent differences in perception. Earlier research studies focused exclusively on women, on mothers (Kruk, 2010, Finzi-Dottan *et al.*, 2011), or, if they took both genders into account, did not have the same number of participants from each (Vassiliou & Cartwright, 2001 – five fathers and one mother).

While the results obtained in the present study did not indicate any marked differences between how mothers and fathers perceive the effects on them of parental alienation, this work opens up the way for future research projects to look at issues regarding different perceptions of alienation depending on the gender of the parent.

One of the significant limitations of the study has to do with its sample size, which means we must be cautious in interpreting and generalising the results. Given the sensitiveness of the subject, it was quite hard to identify

potential participants and to obtain the agreement of very many of them to participate.

This being a qualitative study, it lacks the objectivity of empirical quantitative studies; such objectivity would have made it possible to make comparisons with subjects who had ended their couple relationships in a non-conflictual and amicable way and to establish whether significant differences could be identified between these two categories of subjects. However, it is known that qualitative studies could lead to a better understand of the concept (Swami et al., 2020), in our case, the parental alienation. A further limitation is the fact that the subjects in the sample all live in Romania and suffered the consequences of the joint custody enforced by Romanian law – a point that means that we need to be extremely cautious about applying these results to people in general. Also, our study had samples were self-selecting which can reduce the generalizability of the findings(Swami et al., 2019).

This study can be a jumping-off point for future studies aiming at analysing the impact parental alienation has on the alienated parent in terms of its effect on their psychological well-being, since, at least at the level of day-to-day practical reality, situations of this kind are becoming increasingly common in Romania.

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## CONTRIBUTIONS OF EARLY EDUCATION TO THE DEVELOPMENT OF THE EMOTIONAL INTELLIGENCE OF PRESCHOOLERS

**Iulia Ramona HERMAN, PhD**

**“1 December 1918” University of Alba-Iulia**

[iulia.herman@uab.ro](mailto:iulia.herman@uab.ro)

**Abstract.** *This article aims to highlight the importance of developing emotional intelligence in preschoolers. Issues addressed in the concept of emotional intelligence include: expressing emotions, understanding emotions, managing emotions and their importance in the child's development. We also emphasize the role of attachment in the relationship between child and caregiver, as an essential element of education and emotionally healthy development. The paper also indicates that caregivers influence children's emotional development, representing for them a model, a "coach", of preschoolers' responses and behaviors. For educators, it is presented how they can perceive and process in a social context, the affective manifestations, the negotiation skills and the expectations of the children, with whom they interact in kindergarten. Thus, the first aspect of this paper refers to previous studies in the literature on the development of emotional intelligence, such as expressing emotions, understanding and managing them, the second aspect presents the role and implications of the child-educator relationship in the emotional development of preschoolers. suggests strategies to promote emotional development in preschoolers. The conclusions point out that it is important that during early education, teachers identify children at risk of emotional development retardation and learn to properly recognize and manage the problems of these preschoolers in the stages of developing emotional skills.*

**Keywords:** *early education; emotional intelligence; attachment relationships; the child-educator relationship; emotional development strategies.*

## **1. Introduction**

There are numerous theoretical and empirical works, which emphasize the role of a malfunction of the caregiver-child relationship in the further development of socio-emotional difficulties of the child (Robinson, Emde, Korfmacher, 1997). For emotional development, it is necessary to have relationships with caregivers, but also with colleagues of the same age, because they provide different experiences and serve separate functions. The relationship between the caregiver and the child offers the latter comfort, safety and protection in the first years of life, but also the basic social skills that are so necessary for a harmonious development (Hartup, 1989), (Sroufe, 1997).

Relationships with colleagues, on the other hand, are contexts in which children practice their acquired skills in the relationship with the caregiver, with people who are more or less similar to him and become small masters in the complexities of cooperation and competition (Hartup, 1989). In essence, the relationship between the caregiver and the child is a training ground for emotional skills, which are then transferred to the relationship of preschoolers with other children.

The two types of relationship are closely related to social development, because emotions are expressed not only in a social context, but also in the matrix of care and dedication relationships (Sroufe, 1997). Through this we find that the child's ability to cope effectively with his social life is largely a result of experiences in relationships with loved ones (Hartup, 1989).

## **2. Previous studies and research on the importance of developing emotional intelligence in preschoolers**

We understand emotion as an organized reaction to an event that is relevant to individual needs, goals, and interests and is characterized by a psychological, experiential, and obviously behavioral change (Robinson, Emde, Korfmacher, 1997; Sroufe, 1997). From this perspective, a child's emotions have two functions: the motivational one and the communication one. As a motivational factor, emotions determine the child's behavior. For example, a preschooler approaches a new phenomenon, provided it is not interpreted as a threat; however, avoidance results if the interpretation is associated with a threat. Children use the communicative function of emotions to get others to respond to their needs. These include both words and tears or smiles (Robinson, Emde, Korfmacher, 1997).

Although the child has a particular set of skills related to his emotional life, the other people in his life play a role in developing his emotional skills. These have to do with the innate differences and the first care that created the early adaptation of the child (Vaughn, Stevenson-Hinde, Waters, Kotsaftis, Lefever, Trudel, Shouldice, Belsky, 1992).

## **2.1. Emotional expression**

The ability of children to express emotions effectively is a point of reference for social interactions. A child's social competence is assessed according to the type, frequency and duration of emotional expression. If a child expresses constantly and for a long time

nervousness, this suggests that the social partners will be discouraged from continuing to interact with him. The reason is that experience and emotional expression affect the child's behavior, which in turn provides information to potential social partners about the continuation or cessation of interactions with him (Denham, 1998).

In most cases, children are sensitive to others, are aware of the perspective of others and show altruistic attitudes (Mussen, Eisenberg, 1997). At the age of two, provided an emotional security and a relative experience of emotions, (Strayer, 1980) children are able to interpret, for the most part, the emotional states of others, to experience these emotional states as an empathic response (especially in case of negative emotions) and try to alleviate the emotional discomfort of others (Eisenberg, Fabes, Miller, Shell, Plumlee, 1990).

At the age of 3, the context and identities of the social partners become determinants of the type of emotion expressed. Children have the ability to alternate mode and expressiveness according to situational requirements (Malatesta, Culver, Tesman, Shepard, 1989). Children also learn to adopt rules of behavior (eg, expressing emotions appropriately culturally), to substitute, mask, minimize, or maximize their emotional expressiveness in accordance with certain situations and for the purpose of self-preservation.

Three-, four- and five-year-olds express a wide range of emotions and can use appropriate labels for those such as upset, sadness, happiness, so that they can differentiate their feelings. During the kindergarten years, children's emotional states are situation-specific and can change as quickly as they move from one activity to another. As they grow from three to five years old, they experience an increasing internalization and a better ability to regulate their own emotions. Thus, as they develop, they accumulate new language and cognitive skills and learn to manage their emotions and express how others feel and feel.



The emotions of three- and four-year-olds are largely externalized. At this age, children begin to understand the different emotions they feel, but are struggling when it comes to adjusting them or identifying and describing them. Their emotions are closely related to the events and feelings that occur at that time (Hyson, 1994).

Also, three- and four-year-olds have difficulty separating feelings from actions. The moment they feel something, they express themselves. Postponement of gratification and controlling impulsive feelings is often a real challenge. Therefore, their natural curiosity often brings them problems. At the age of four, children often use physical means to resolve conflicts, instead of verbally negotiating needs. Teaching preschoolers the right means to express personal emotions is a "milestone" in their evolution. Conflicts that occur between two children out of a desire to take an object are common, so it is important to be taught in different socially acceptable ways to resolve the conflict (Brownell, Hazen, 1999).

At the age of three, children experience extreme emotions. When they are upset, they express their emotions through personality crises or physical manifestations. The same goes for the moments when they are happy. At the slightest stimulus, they express themselves through uncontrolled laughter and / or giggles of joy, and once they begin, they are hard to stop. At the age of four, they understand that expressing extreme emotions can have an effect on others. Right now they are developing a sense of humor, and sometimes they will laugh just to make others laugh. Children begin to understand the nature of a joke, the fact that sometimes people say certain things in order to be funny. Preschoolers can say the same old-fashioned riddle or the same joke a thousand times and laugh heartily every time. At the age of three, children begin to have fears that they can identify. They want to sleep with the light on or they will never go to a dark cellar alone. They continue to be present at the age of four, but they begin to understand that the dream is different from reality and can distinguish between what they did and what they only dreamed they did.

Four-year-old preschoolers begin to understand that others have feelings (Denham, 1998) and how others feel. Separation from parents or caregivers can sometimes be difficult, especially in kindergarten, and can cause emotional stress (Denham, 1998). At the age of three, children are less interested in playing with other children and are much more excited to spend time with their caregiver. For four-year-olds, the fear of alienation is generally short-lived and harder for parents to digest than for the child.

Five-year-olds begin to manage their emotions and express their feelings in socially acceptable ways. At this age, children begin to separate their feelings from actions (Denham, 1998).

Five-year-olds manage to postpone their wishes. They learn to wait their turn for a toy or listen when someone talks and begin to internalize socially accepted behaviors, and when they see something they want, they ask (Greenspan,1989). If they are told that they are not allowed to receive anything, whether we are talking about disappointment or anger, they learn to deal with these feelings. Although at this age, curiosity is very strong, they begin to understand the limits of curiosity. Instead of simply taking his colleague's train, they ask if they can see him.

Physical aggression and temper tantrums begin to disappear. As children can express their feelings in words, the behavioral expression of emotions begins to dwindle. At this age, they often use associations with unpleasant things to name a thing or colleague they don't like, with the first forms of bullying appearing. At the same time, children learn to differentiate between different types of emotions, being able to identify facial expressions that show that someone is happy, nervous, sad or just disappointed.

Five-year-olds are very funny, loving and affectionate. They like to laugh, to make others laugh, they discover jokes, but they still don't understand the logic needed to make their own funny jokes. Crying becomes a specific situation. At this age, children can control their tears resulting from physical pain or frustration and if they have been injured by a colleague. Such incidents tend to be increasingly rare.

In the early days of kindergarten, some children may break up with mothers with tears in their eyes, tears due to fear of the unknown. But these tears do not last long. It is rare for a five-year-old child to cry for more than a month from the beginning of kindergarten.

## **2.2. Understanding emotions**

It is important for preschoolers to understand the emotions of playmates, because it gives them the ability to perceive the communicative function of the emotions they or another person feels. Understanding emotions serves as a function of survival. Subjectivity and meaning are important elements in understanding emotions, because they explain why a particular emotion is triggered in similar situations and at the same time explain the differences in emotional expressiveness (Sroufe, 1997). Understanding causal factors in emotional situations improves in the preschool period. Children begin to use information in their daily lives, to understand the underlying emotions — fear, anger, sadness, and happiness — and why they occur (Dunn, Hughes, 1998). They can also talk about their feelings because they understand the causal complexities of emotions. Through their own experiences and increased social sensitivity, children develop the ability to evaluate the

emotions of others, even when they are less obvious, to recognize different emotional experiences, to manage their own emotions, to experience several emotions simultaneously (Denham, 1998). ).

Children need to experience, on a moderate level, a variety of emotions in order to build social patterns about emotions. First, they reflect and make judgments about their own emotions. It is important to allow children to experience emotions by encouraging positive ones and helping them learn to manage negative ones in socially acceptable ways (Denham, 1998).

### **2.3. Emotion management**

An important part of emotional skills is managing emotions. Both negative and positive emotions can overwhelm the child's resources, and when this happens, the child's behavior and / or thoughts may become disorganized. When this happens, the caregiver usually reassures him. Another common manifestation of children overwhelmed by emotions is a passive, withdrawn attitude. In such situations, caregivers try to encourage or stimulate the child through play (Robinson, Emde, Korfmacher, 1997).

Children's ability to manage the "emotional turmoil" that accompanies social interactions is fundamental to growth and the ability to interact and relate to others (Thompson, 1990). The way children express their feelings is related to the assessment of their social skills by people in their social life. Thus, in the learning process, in order to get along with colleagues of the same age, the child is forced to regulate his emotional expressiveness (Denham, 1998). In the beginning, caregivers are the ones who have almost all the responsibility of keeping emotional expressions at a tolerable level. Over time, the child begins to play an active role in the adjustment process, responding to caregivers and finally, asking for help in management through deliberate efforts, such as crying or seeking comfort in the arms of the latter. The caregiver is the one who "trains" the child in the management of internal tensions (Denham, 1998, Sroufe, 1997).

### **3. The role and implications of the child-educator relationship in the emotional development of the preschooler**

The problem explored in this chapter is how the relationship between caregiver and child affects the child's emotional development and need to form social and emotional relationships with others (Caldwell, Ricciuti, 1973; Bowlby, 1969). The quality of the relationship between the two has been conceptualized in terms of the attachment relationship that offers the following hypotheses:

- a. Different levels of quality of care lead to differences in children's expectations regarding the caregiver's dependence and responsibilities;
- b. These differences in expectations have a large subsequent impact on emotional expression, understanding of emotions and later on managing emotions (Sroufe, 1997).

The quality of the child-educator relationship also influences children's strategies and behavioral patterns in their interaction with caregivers. The child who has a relationship that gives him the feeling of security with his caregiver, initiates a positive interaction with the latter, moreover, he responds positively to his initiatives. On the other hand, the child who has a relationship with his caregiver, which is not based on safety, leads to various strategies from ignoring the caregiver's behavior and intentions, accentuating the expression of negative emotions - to ensure that the caregiver remains closed, and up to hostile actions directed at the caregiver (Fox (Ed.), 1994).

The educator-child relationship influences emotional development and the need to form emotional and social relationships with others (Caldwell, & Ricciuti, 1973), (Bowlby, 1969), depending on the model taken by caregivers, their educational capacity and the way whether or not to respond to stress signals and children's needs (Feldman & Rime, 1991). These processes also influence children's emotional development through distortions in emotional expression and emotion management (Sroufe, 1997).

### **3.1. Modeling and emotional development in the context of the child-caregiver / educator relationship**

Children's expressiveness reflects the total expressiveness of caregivers (Cummings, Cummings, 1988). For example, caregivers who often express anger are more likely to have children who also express anger, because by modeling, caregivers give children information about the nature of emotions, their expressions, and how they have to deal with their own emotions. the emotions of others (Thompson, 1990). By exemplifying a wide range of emotions, caregivers implicitly teach children those emotions that are appropriate for specific situations, but also common behaviors related to these expressions. This example of adults also provides an emotional environment to which the child is exposed (Denham, 1998).

### **3.2. Emotional training and development in the context of the child-caregiver/educator relationship**

Educators encourage children's exploration and direct understanding through verbal communication with them of the experiential meaning of emotions

(Thompson, 1990). Caregivers who talk about emotions and stimulate this ability in children, help them to express ideal patterns of emotion and separate the impulse of behavior (Denham, 1998).

### **3.3.Contingent response and emotional development in the context of the child-caregiver/ educator relationship**

Caregivers' emotional and behavioral reactions to children's emotions help them to differentiate between emotions. These reactions can be important ways to teach children that there are behaviors appropriate to different moods and which events may or may not deserve emotional expression (Denham, 1998). Caregivers also use direct commands and emotion instructions in their speech about emotions, such as language guidance and socialization. Moreover, educators contribute, by managing the information given to the child, to the potential emotional events in his life (Denham, 1998). Caregivers can also be generous or punitive in their responses to children's emotions. When caregivers assist the child in maintaining positive affect as a valid and worthwhile issue, it promotes integrated, emotionally balanced emotional development. This helps children cope with strong emotions (Denham, 1998). On the other hand, caregivers who are punitive and ignore or deny the child's emotional expression fail to take advantage of emotional moments as a chance to approach the child or help him or her learn lessons about emotional competence (Goleman, 2005).

Therefore, the question of the significance of children's emotional development for educators arises. The answers are primarily about helping educators understand that preschoolers are emotionally sophisticated, for example, that preschoolers can be empathetic and caring for others. It also means that educators can identify those children who do not have the necessary skills for a positive social interaction with colleagues, as well as their inability to express and regulate their emotions in their interactions with colleagues. Last but not least, that educators can and should talk to children about their emotional problems.

Understanding the educator-child relationship helps educators understand that the caregiver-child relationship influences the child's emotional perceptions, negotiation skills, emotional regulation, and the transfer of expectations. It also helps teachers to understand that children who have a relationship with their caregivers, who provide them with security and emotional balance, can show both negative and positive feelings in all situations. On the other hand, the emotional manifestations of children who do not have a safe relationship with their caregivers, tend to be compromised because they tend to inhibit their feelings and display a state

that is inconsistent with the feelings they have or may have. Such children tend to exaggerate in the affective manifestation (Crittenden, 1992). What are the expectations created in the relationship between the child and the caregiver which are transferred to other relationships? This question emphasizes the influence that the child's expectations have on others, which determines the child to approach social partners, having relational prejudices.

All other relationships in which the child is involved are approached with a negative expectation, as if the child is seeking confirmation of these expectations. If the social partners behave in a consistent manner with the child's negative expectations, then it is likely that the child will behave in a manner, that will be interpreted as that of a socially incompetent person. On the other hand, if the social partners do not feed the child's negative expectations, then the child's expectations are provoked by a different source of information, and this could result in an attempt to change the child by trying to assimilate into his perceptual world, new information about the relationship with others. This information, once assimilated, lays the groundwork for a new relationship notion with that person. It is as if the child records memories of different relationships and plays different roles depending on the social situation.

For teachers, this means that they must be available and receptive to the needs of all children in the class. When they respond constantly, then they help children develop alternative worldviews and relationships. Being at the same time empathetic, they teach children that emotional experiences should not be overwhelming, but rather, they can be controlled. Over time, children will be able to adjust their emotions with little or no help.

#### **4. Strategies to promote emotional development in preschoolers**

Apart from the primary caregiver (parent or parents) and other people can have an influence on the emotional development of the child. The teacher can develop a positive relationship with a child and thus support the development of the preschooler's emotional skills. During the interactions with the children, the teachers must be open to the transactions that take place, because as there are changes in the children's development, there will be changes in their relationship with the children. However, the affective basis of these relationships continues to involve the desire for closeness in times of stress, on the one hand, and feelings of trust, on the other. (Hartup, 1989).

We present here some strategies, which educators can use to promote emotional development: (a) the stage of gratitude, (b) the stage of feelings,

(c) affective activities, (d) emotional management techniques, and (e) solving social problems.

*The stage of gratitude.* Teachers can set a time period, other than the group time, to help children express their feelings. This allows children to show their gratitude or appreciation for those they perceive to be very kind to them. It also encourages the building of relationships in which children express their affection in relation to others.

*Exploring feelings.* This stage includes inoculating ideas about primary emotions. The goal is to let the children talk as much as possible about the causes of their emotions, what they do when they experience these emotions, what they can do to make these emotions go away, and what they think another child might do in the same situation. By labeling their feelings, they begin to understand how others feel and how each emotional stage influences their thinking. When children make the connections between emotions and reason, they will understand that the way they feel will largely determine what they do.

*Exploring affective activities.* A teacher can do many activities so that the children show their affection for each other. An educator can invite the children to sit down and choose a numbered card. The number on it represents the number of children with whom he must shake hands or hug or give them a kiss on the cheek. The goal is to teach children how to learn to be friends and express their emotions correctly (Twardosz, Nordquist, Simon and Botkin, 1983).

*Emotional management techniques.* The purpose of this strategy is to teach children the skills of self-regulation and monitoring of negative emotions when they feel overwhelmed by them by creating a quiet space in a corner of the room (Denham, 1998). This can be a corner where children can go to calm down when they experience strong emotions. What the educator needs to remember is that he should try to calm the child down. The goal is for this corner not to be used as a place of punishment or timeout, because the actions of the educator are very important at this stage.

Addressing the solution of social problems. This method aims to help children analyze and solve effective interpersonal problems. It also involves an empathic component, through which children come to realize the effects that their actions have on others. Conflict means that children must learn to communicate, negotiate, compromise, and interact (Camras, 1980). Two approaches can be used. The first involves the use of dolls and role-playing games to teach children how to solve interpersonal problems without resorting to aggression. The second approach is to allow children to try to resolve conflicts on their own when a misunderstanding occurs. Whichever

of these approaches is used, the goal is to get the children to come to the educator to tell them how they resolved the conflict, so that he or she can use this opportunity to give the children feedback and promote positive interaction between colleagues (Killen, Turiel, 1991).

## 5. Conclusions

Because of the verbal limitations of preschoolers, emotions are important social signals that preschoolers express in their relationships. Educators need to recognize the importance of emotional skills for a competent social attitude in young children and find ways to cultivate it. It is also important that during early education, teachers identify children at risk of delayed emotional development and learn to recognize and properly manage the problems of these preschoolers, in the stages of developing emotional skills.

Children's emotional development has long-term implications for adaptation to preschool and school. Discontinuities and blockages in early emotional development are often predictors of behavioral problems manifested in the first and second part of childhood (Cicchetti, Ganiban, Barnett, 1991). Children who understand emotions and how these emotions are expressed, are able to empathize with other children who may be in difficulty. They are also able to express in words what they feel.

Children who are emotionally competent are considered by their peers to be better and more fun playmates. They can strategically use expressiveness to achieve their social goals and are advantaged when they respond correctly to the emotions of others while playing and at the same time can be more pleasant (Walden, Field, 1990).

The important conclusion is that educators contribute to children's emotional development by correctly identifying clues and their sensitive response. Educators' consistent and correct responses teach children how to regulate their emotions (Robinson, Emde, Korfmacher, 1997) and contribute to competent emotional behaviors throughout life.

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## **CHILD ABUSE IN IGBOLAND OF NIGERIA: INFLUENCE OF CULTURE ON PARENTING STYLES**

**Benedict Chidi UGWUANYI<sup>1</sup>,**  
**Università Pontificia Salesiana, Roma,**  
**ototo4u@yahoo.com**

**Zbigniew FORMELLA, Ph.D.,<sup>2</sup>**  
**Department of Psychology, Faculty of Educational Sciences, Pontifical**  
**Salesian University of Rome - Italy**  
**[formella@unisal.it](mailto:formella@unisal.it)**

**Krzysztof SZADEJKO<sup>3</sup>**  
**Istituto Superiore di Scienze dell'Educazione e della Formazione**  
**“Giuseppe Toniolo”, Modena,**  
**sciadeico@libero.it**

**Abstract:** *Child abuse is an international problem that happens everywhere including Igboland of Nigeria. Nigeria has three major ethnic groups, Hausa, Yoruba and Igbo. Igbo parents are known for their love for children but there are cases of child abuse in different families in Igboland. This research explains the ugly phenomenon of child abuse and the concepts that surrounds the problem. The goals of this study were to explore how Igbo culture influences parenting and how some parenting styles can cause child abuse and neglect. A research was carried out within Igboland of Nigeria. A sample of 510 Igbo parents voluntarily completed an anonymous questionnaire. The results reveal the fact that culture influences both the parental styles and the parental perception of child abuse. The issue of child abuse and neglect was expounded in the light of ecological systems theory of Urie Bronfenbrenner.*

**Keywords:** *Child abuse; culture; ecological systems theory; Igbo parents; Parenting Styles*

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<sup>1</sup>Università Pontificia Salesiana, Roma, ototo4u@yahoo.com

<sup>2</sup>Università Pontificia Salesiana, Roma, formella@unisal.it

<sup>3</sup>Istituto Superiore di Scienze dell'Educazione e della Formazione “Giuseppe Toniolo”,  
Modena, sciadeico@libero.it

## INTRODUCTION

Thomas Gordon in his famous book *Parent effectiveness training* stated that “when people become parents, something strange and unfortunate happens. They begin to assume a role or act a part and forget that they are persons. Now that they have entered the sacred realm of parenthood, they feel they must take up the mantle of parents. Now they earnestly try to behave in certain ways because they think that is how parents should behave” (Gordon, 1970, 13). Notwithstanding the fact that parenting job seems to be difficult and challenging, it is expected that a parent should show love and affection to the child. Parental love, care and affection, play a big role in the psychological development of the child. Parents are supposed to make the home the safest place for the child (Formella& Ricci, 2010). Unfortunately, some parents abuse their child (Ugwuanyi&Formella, 2018; 2019).

Therefore, the purpose of this research work is to see the link between culture, parenting styles and child abuse. We will explain how it influences each other by using UrieBronfenbrenner’s (1979) ecological systems theory as our principal theory of reference. We will equally present the research that was carried out in Igboland of Nigeria. This will serve as a holistic approach to the problem of child abuse in Igboland of Nigeria. The child in Igboland lives within the environment and UrieBronfenbrenner repeated in most of his works that “the psychological development of the child is enhanced through his involvement in progressively more complex, enduring patterns of reciprocal contingent interaction with persons with whom he has established a mutual and enduring emotional attachment” (Bronfenbrenner, 2005, 34).

The theory sustains that “the ecological environment is conceived topologically as a nested arrangement of concentric structures, each contained within the next. These structures are referred to as the *microsystem*, *mesosystem*, *exosystem*, and *macrosystems*” (Bronfenbrenner, 1979, 22). It was later that he added another system by name chronosystem. In a nutshell, *microsystem* involves the structures and processes taking place in an immediate setting containing the developing person; *mesosystem* comprises of the linkages and processes taking place between two or more settings containing the developing person, *exosystem* encompasses two or more settings that do not involve the developing person, but in which events occur that affect, or are affected by, what happens in the setting containing the developing person, *macrosystem* refers to the pattern of ideology and organization of the social institutions common to a particular culture or subculture (Bronfenbrenner, 2005). Chronosystem on the other hand, “permits one to identify the impact of prior life events and experiences, singly or sequentially, on subsequent development” (Bronfenbrenner, 2005, 83).

The child makes the first contact with the parents in the microsystem and other systems especially the macrosystem which dwells on culture, directly or indirectly influences the parent-child relationship. A poor parent-child relationship leads to abuse. Within the ecological systems theory, there are other aspects like acceptance of physical punishment, unwanted pregnancy, socio-economic status, Igbo family tradition, etc., which affects the relationship between the parent and the child (Ayinmode&Adegunloye, 2011). Understanding child abuse (Wolfe, 1999) especially from the ecological perspective helps one to see the context in which child development and child abuse take place (Ugwuanyi&Formella, 2019).

For the sake of clarity, it is important to state that “parenting style can be described as all strategies (behaviours, attitudes and values) parents use to interact with their children and influence their physical, emotional, social and intellectual development”(Darling & Steinberg, 1995, 488). *This work recognises four parenting styles which are described in as follows:* “authoritative parents are high on both demanding and responsiveness; authoritarian parents are high on demanding but low on responsiveness measures; indulgent parents are high on responsiveness and low on demanding measures; and uninvolved parents are low on both demanding and responsiveness measures” (Ayinmode&Adegunloye, 2011, 60). Having explained our theory of reference and other key concepts, let us approach the methodology of our research.

## **METHOD**

The main objective of our research was to explore how Igbo culture influences parenting and how some parenting styles can cause child abuse and neglect.

The target of the research was the Igbo parents in Nigeria. The parents were chosen because the first impact of the child is in the microsystem of the ecological theory of Bronfenbrenner (1979). The parents happens to be the major persons to influence the child in this setting. We were not excluding other systems in his theory because they are considered as external influences on the child. Parents influence on the children are seen in the family, schools were they serve as teachers and guardians in the community (Formella, 2019). It is worthy to note that parents create the environment where the child is raised. Therefore, the parent can equally abuse the child for some reasons; parenting style, parent having a history of child abuse, cultural influence, etc. To this effect, approved questionnaires were used to accomplish and realize our subject matter.

## **Measures and procedure**

Our research instrument was composed of different tools; the first is the socio-demographic profile. The second includes the questionnaire that studies perception and childhood experience of maltreatment (*PCHEMQ- Perception and Childhood Experience of Maltreatment Questionnaire*). It is used to measure the five types of child abuse and neglect; (Physical abuse, Emotional/Psychological abuse, Sexual abuse, Child neglect and Child labor) (Bammeke&Fakunmoju, 2016). The third tool is PS-FFQ (*Parenting Style Four Factors Questionnaire*). It is an empirical tool which aims at identifying four parenting styles like authoritarian, Authoritative, Permissive and Uninvolved (Shyny, 2017). The fourth is the questionnaire that studies the Igbo culture. We constructed the questionnaire and it was based on the culture of Igbo people.

The questionnaires were distributed in Igboland, it was not done through computer assisted techniques. Even though it is a good means to reach to a lot of people. Though some factors like limited access to internet were considered before adopting manual distribution. Basically, we distributed the questionnaires with the help of four other Nigerian professors teaching in different universities. The respondents were asked to fill the questionnaires with either a pencil or a pen because it was a paper type. By this we mean that the questionnaires were printed on paper. Again, the study population did not encounter much problem in responding to the questions. In fact, they responded within a short period of time. It took majority of the respondents 15-20 minutes to complete the questionnaires but they were others that took up to 15-40 minutes to complete.

## **Subjects**

Our sample was composed of 509 parents: 248 are males (48,7%) while 261 were females (51,3%). The age group in our questionnaire was distributed according to the following ages: 20-30 years (25%), 31-40 years (36%), 41-50 years (16,7%) and those over 51 years (22,4%). The Igbo people are the ethnic group of South-eastern Nigeria. The geopolitical zone is currently made up of five states: Abia (11,8%), Anambra (17,3%), Ebonyi (12,2%), Enugu (47,2%), and Imo states (11,6%). The number of children for each family was divided in these groups: 1 child (20,6%), 2-3 children (42,4%), 4-5 children (27,1%), 6-7 children (9,4%), and over 8 children (0,4%).

## **RESULTS**

### **Differences in social demographic profiles of the sample**

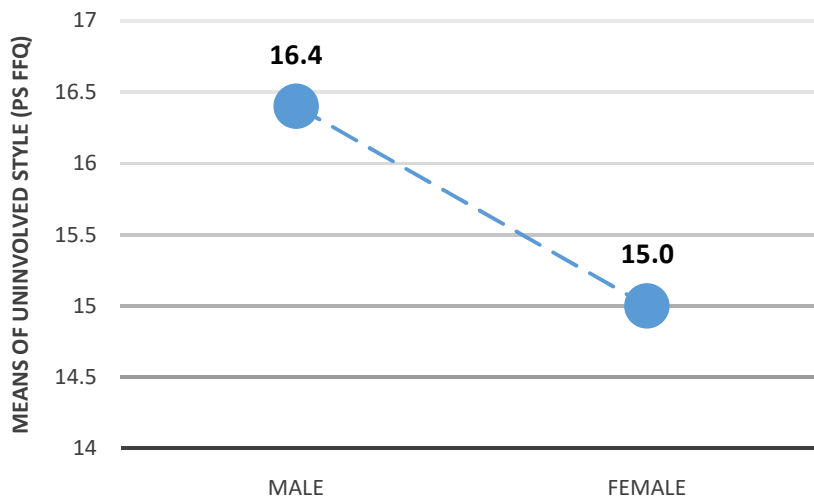
During the data analysis, one of our first questions concerned the presence or absence of differences in the socio-demographic characteristics of the sample. With regards to gender, our curiosity aimed to understand if

male respondents, as compared to female respondents, were more involved in sexual abuse. ANOVA analysis was performed to test whether or not the means of several groups are equal or they differ significantly.

**Table 1.** ANOVA table. Gender differences (p<.05)

	<i>F</i>	<i>Sig.</i>
Physical Abuse Opinions (PCHEMQ)	,083	,774
Child Neglect Opinions (PCHEMQ)	,060	,807
Psychological Abuse Opinions (PCHEMQ)	,051	,822
Sexual Abuse Opinions (PCHEMQ)	1,157	,283
Child Labor Opinions (PCHEMQ)	,089	,765
Authoritarian Style (PS FFQ)	,825	,364
<b>Uninvolved Style (PS FFQ)</b>	<b>7,175</b>	<b>,008</b>
IGBO as value	,004	,948
IGBO Parent transmitters of culture	,042	,839
IGBO Permissive style in IGBO culture	,599	,439

**Graphic 1.** Mean plot. Gender differences: Uninvolved style (PS FFQ) (p<.05)



As can be seen from the graph, there is a significant difference between males and females. In the case of observed variable, it appears that in "Uninvolved style" males are significantly more "uninvolved" than females. The graph gives us a clear picture of the result. Graph 1 shows that males have 16.4 and the females have 15.0. In this case, the males have

significantly higher mean than the females. Therefore, the males are more associated with uninvolved style. Male have higher score in uninvolved style comparing to female.

**Table 2.** ANOVA table. State differences (p<.05)

	<i>F</i>	<i>Sig.</i>
Physical Abuse Opinions (PCHEMQ)	,682	,605
Child Neglect Opinions (PCHEMQ)	1,825	,123
Emotional/Psychological Abuse Opinions (PCHEMQ)	1,158	,328
Sexual Abuse Opinions (PCHEMQ)	1,019	,397
Child Labor Opinions (PCHEMQ)	,559	,692
Authoritarian Style (PS FFQ)	1,595	,174
<b>Uninvolved Style (PS FFQ)</b>	<b>3,622</b>	<b>,006</b>
IGBO as value	1,378	,240
IGBO Parents transmitters of culture	1,534	,191
IGBO Permissive style in IGBO culture	2,040	,088

**Graphic 2.**Mean plot. State differences: Uninvolved style (PS FFQ) (p<.05)

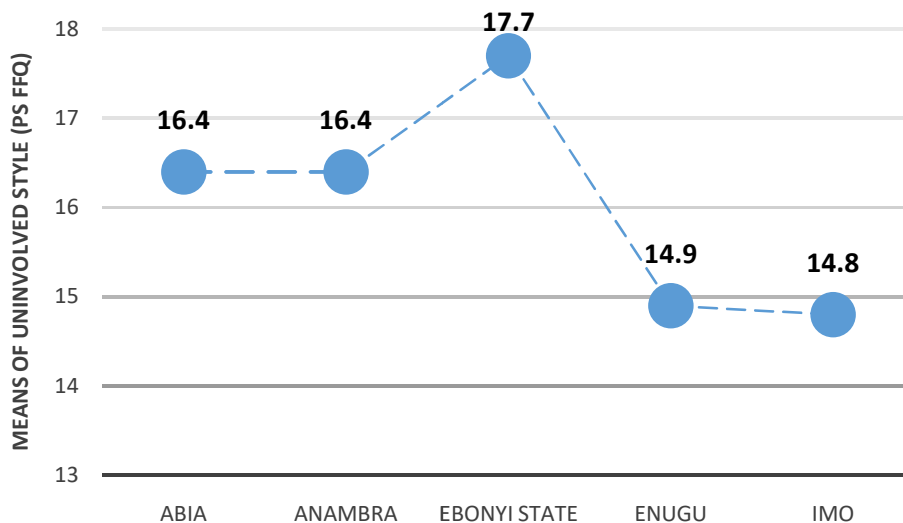


Table 2 shows that only uninvolved style of parenting is statistically significant. As can be seen from graph 2, there is a significant difference between Ebonyi state and two states, Enugu and Imo. In the case of observed variable, it appears that in "Uninvolved style" parents from Ebonyi state are significantly more "uninvolved" than parents from Enugu and Imo state.



### Cultural influence on parenting styles

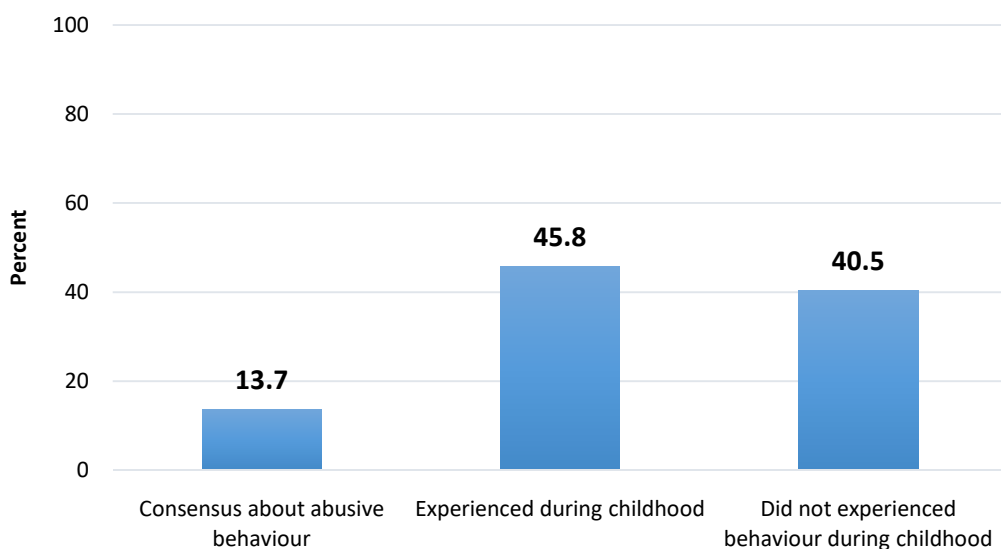
Our research did not dwell only on the differences in socio-demographic profile, we formulated also the following hypothesis:

*Hypothesis 1: Parents who experiences verbal abuse during childhood are more likely to abuse their child verbally and physically.*

In verifying this hypothesis, we concentrated on the experience that Igbo parents had during childhood and the possible effect it is having on them as parents. It's like looking at the past and comparing it with the present. This is possible because in the questionnaire, there were measures where respondents were expected to state their experience during childhood. For a better understanding of the verification of the hypotheses, we will present below diagram, ANOVA table and the mean plot.

The diagram presents the distribution of Perception and childhood experience of maltreatment (PCHEMQ).

**Diagram 1.** Distribution of answers: “Verbally abusing, cursing, or calling a child horrible names” during childhood



The diagram shows that parents who gave their consensus that it is an abusive behavior were 13,8% of our sample, those who experienced it were 45,8%, while those who did not experience it were 40,5%. In the case of observed variable, it appears that in the measured variable "verbally abusing, cursing, or calling a child horrible names", the percent of those who experienced it during childhood was higher.

Subsequently, the differences between the two groups were verified: those that experienced a particular abuse during childhood and those who did not experience any abuse during childhood. Here our focus was on the

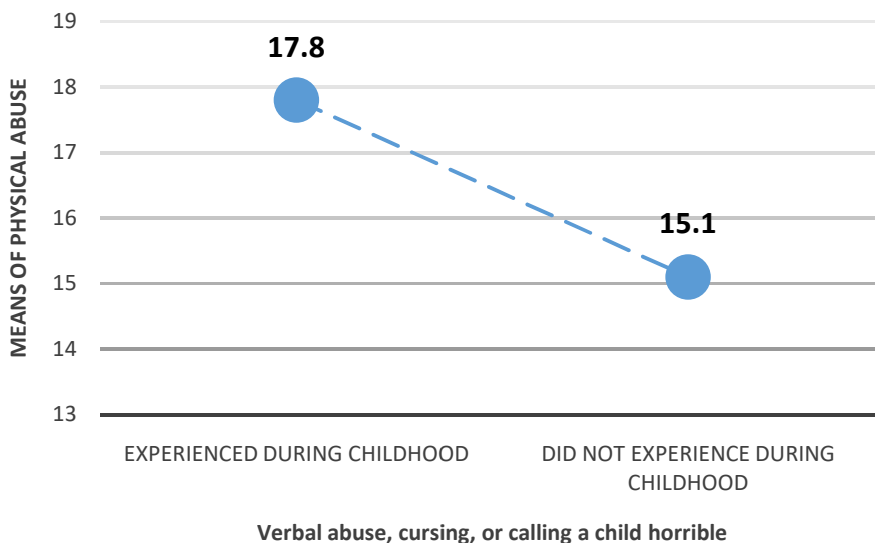
experience of verbal abuse, cursing or calling a child horrible. The ANOVA analysis was performed.

**Table 3.** ANOVA table. Differences between Parents who experienced and who did not experience "verbal abuse, cursing, or calling a child horrible", during childhood(p<.05)

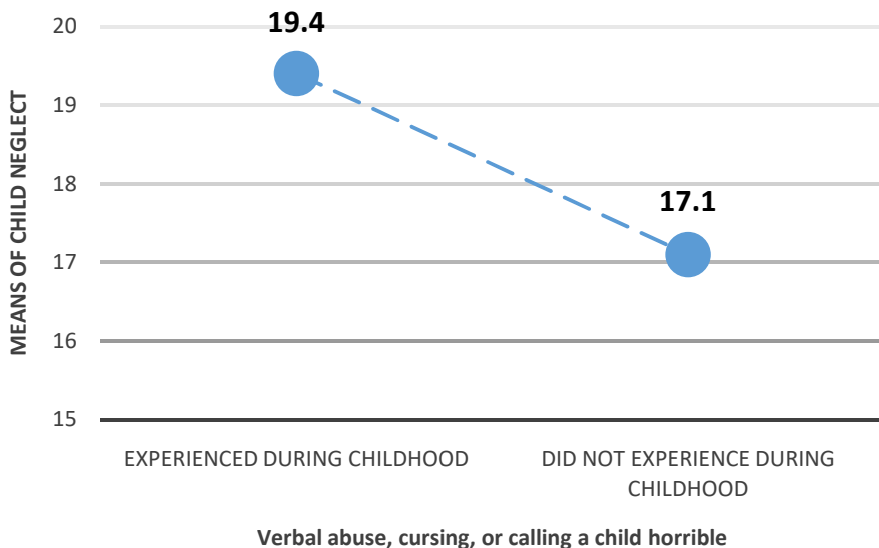
	<i>F</i>	<i>Sig.</i>
<b>Physical Abuse Opinions (PCHEMQ)</b>	<b>33,221</b>	<b>,000</b>
<b>Child Neglect Opinions (PCHEMQ)</b>	<b>17,182</b>	<b>,000</b>
<b>Emotional/Psychological Abuse Opinions (PCHEMQ)</b>	<b>55,808</b>	<b>,000</b>
Sexual Abuse Opinions (PCHEMQ)	1,990	,159
<b>Child Labor Opinions (PCHEMQ)</b>	<b>16,144</b>	<b>,000</b>

As emerged from the analysis, statistically significant differences have emerged in four variables: Physical abuse, Child neglect, Emotional/psychological abuse and Child labor. The graphs below represent the differences between two groups.

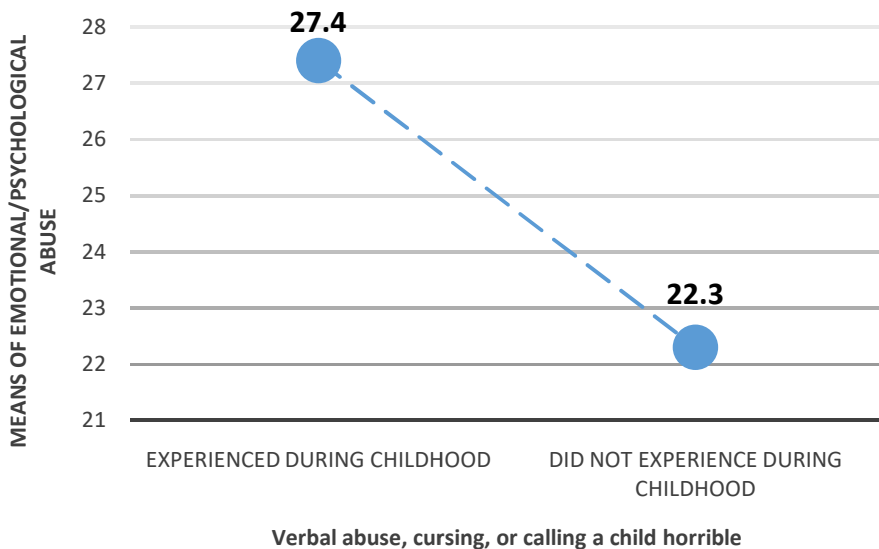
**Graphic 3.** Meanplot. Differences between parents who experienced and those who did not experience “verbal abuse, cursing, or calling a child horrible” during childhood: Physical abuse (p<.05)



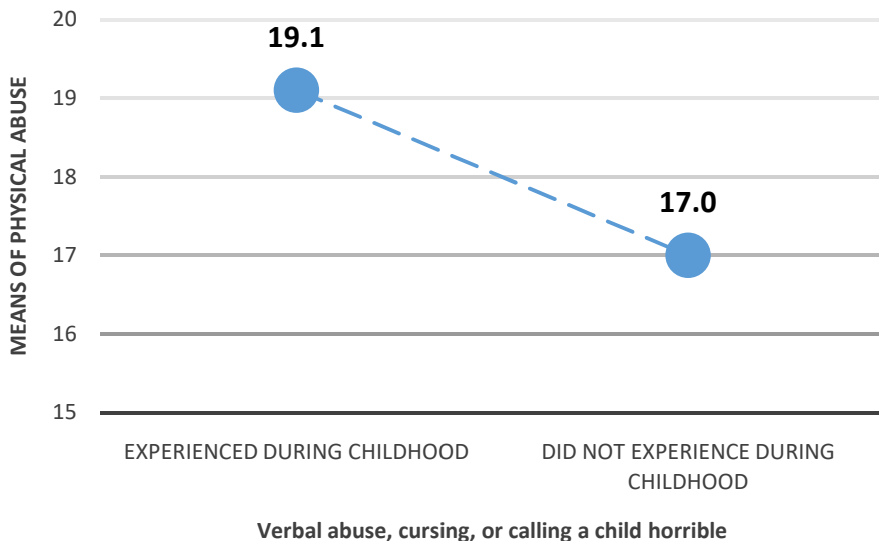
**Graphic 4.** Mean plot. Differences between parents who experienced and those who did not experience “verbal abuse, cursing, or calling a child horrible” during childhood: Child Neglect (p<.05)



**Graphic 5.** Mean plot. Differences between parents who experienced and those who did not experience “*verbal abuse, cursing, or calling a child horrible*” during childhood: Emotional/Psychological abuse ( $p < .05$ )



**Graphic 6.** Mean plot. Differences between parents who experienced and those who did not experience “*verbal abuse, cursing, or calling a child horrible*” during childhood: Child labor ( $p < .05$ )



From the ANOVA analysis, emerged statistically significant differences between those who experienced and those who did not experience verbal abuse, cursing, or calling a child horrible during childhood. As can be seen from the graphs, in all four variables those who experienced this abuse during childhood had a higher mean than those who did not experience it. Therefore, we can confirm the hypothesis that parents who experienced verbal abuse during childhood are more likely to abuse a child verbally and physically.

We proceeded with the analysis, performing the correlational analysis. The goal was to establish whether there are possible connections among Authoritarian and Uninvolved style and variables of Perception and Childhood Experience of Maltreatment Questionnaire (PCHEMQ).

This second specific hypothesis stated that:

*Hypothesis 2: The authoritarian and uninvolved styles used by parents increase the risk of psychological abuse, sexual abuse and child labor.*

Two questionnaires were used to test this hypothesis: Parenting Style Four Factors Questionnaire (PS-FFQ) and Perception and Childhood Experience of Maltreatment Questionnaire (PCHEMQ).

**Table 4.** Correlation table

	Physical Abuse	Child Neglect	Emotional/ Psychological Abuse	Sexual Abuse	Child Labor
Authoritarian style	-	-	.11*	.10*	.09*
Uninvolved style	-	.16**	.14**	.17**	.19**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

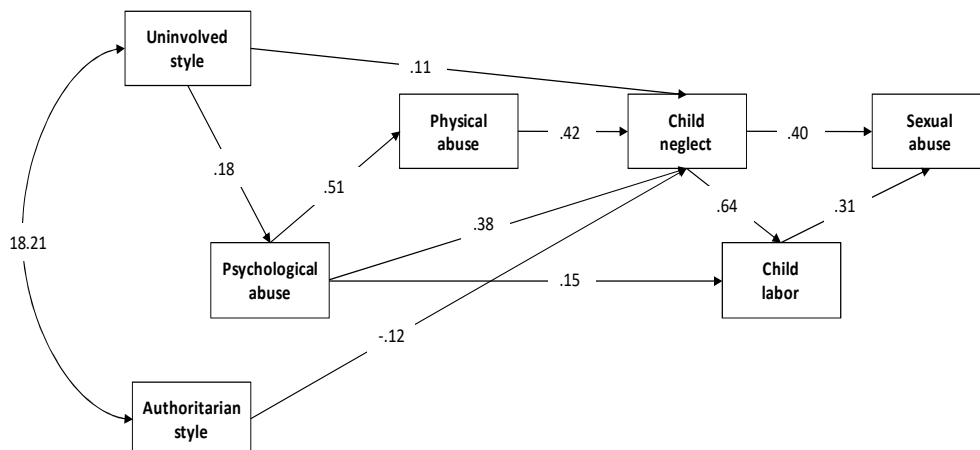
A significant positive correlations were found between Authoritarian style and Emotional/Psychological abuse ( $r = 0.11$ ,  $p < .05$ ), Sexual abuse ( $r = 0.10$ ,  $p < .05$ ) and Child Labor ( $r = 0.09$ ,  $p < .05$ ). Correlations were slightly higher for Uninvolved style and Child neglect ( $r = 0.16$ ,  $p < .01$ ), Emotional/Psychological abuse ( $r = 0.14$ ,  $p < .01$ ), Sexual abuse ( $r = 0.17$ ,  $p < .01$ ) and Child labor ( $r = 0.19$ ,  $p < .01$ ). No significant relationships were noted between Physical abuse and both Authoritarian and Uninvolved style, and between Authoritarian style and Child neglect.

Even if the correlations were not very high, results can confirm that there is link between variables of *Parenting Style Four Factors Questionnaire* (PS-FFQ) and *Perception and Childhood Experience of Maltreatment Questionnaire* (PCHEMQ), except Physical abuse.

### **Path Analysis. Link between uninvolved parenting style and child abuse**

Here our scope is to test, estimate the direction and intensity of the links between both parental Authoritarian, Uninvolved styles, the risk of Psychological abuse, Child labor, Sexual abuse, and above all, to provide information on the causal processes. To this effect, structural equation models (SEM) have been constructed (Graphic 7). AMOS software (the SPSS additional package) was used in the construction of the models. The models were tested using the maximum likelihood criterion. The multi-equation approach was chosen because it is more suitable for providing a representation of real processes, even if there are simplified. Each of these equations expresses the causal link between the exogenous variables (Uninvolved style and Authoritarian style,  $Covariance = 18.21$ ) and the endogenous variables (Physical abuse, Child neglect, Psychological abuse, Child labor, Sexual abuse).

### **Graphic 7.** Path analysis. Structural Equation Model (SEM)



On the Graphic 7, each vector indicates the direction of the influence of one variable on another and its standardized coefficient B describes the weight of this bond.

The model reported the following values: Chi-square = 14,0 (df = 10, p = .17); Good Fit Index (GFI) = .990; Normed Fit Index (NFI) = .993; Relative Fit Index (RFI) = .986; Comparative Fit Index (CFI) = .998; Root Mean Square Error of Approximation (RMSEA) = .028. The last one, RMSEA coefficient, is one of the most sensitive indicators of the goodness (stability) of the model. It is generally assumed that an RMSEA value of approximately .05 or less indicates a good stability of the model in relation to the degrees of freedom. Statisticians claim that a value of about .08 results in a reasonable approximation error, but also suggest not to assume a model with the RMSEA value greater than .10. Furthermore, the values GFI, NFI, RFI and CFI indicate a very good model when they approach 1 (Browne & Cudeck, 1993). In our model, the RMSEA coefficient is <.05 and values of the model fit coefficients are very high, therefore it can be assumed that it has reached its capability to effectively express theoretical concepts with good stability.

From Path Analysis, it can be deduced that Uninvolved style has a direct impact on Psychological abuse and Child neglect. The Child neglect variable was found to be a mediator variable between two parenting styles and Child labor as well as Sexual abuse. Child labor also appears to be a mediating variable between Psychological and Sexual abuse.

All the elements contained in the SEM model reveal the presence of a psychological mechanism, which describes that the two parenting styles, in particular the uninvolved one, can affect the abusive treatment of the child. In other words, it seems that the parents of our sample, who experienced an abusive behavior from the parents during their childhood and currently are inclined to emotional indifference towards their children, are more likely disposed to adopt abusive behavior towards them.

## CONCLUSION

The issue of child abuse was expounded in the light of Urie Bronfenbrenner's ecological systems theory. Bronfenbrenner's theory is an analytical tool for understanding individual development within complex social systems. Every child develops within many deeply interconnected rings of influence, much like the way a stone dropped into water is connected to and surrounded by concentric rings. The interconnected rings encircling the developing person includes the five systems proposed by the ecological theory (Kraus, 2008).

The empirical study was addressed to investigate the problem of child abuse in relation to the experience of parents during their childhood. We found that parents who experienced verbal abuse during childhood are more likely to abuse their own child verbally and physically. It was also found that parental Authoritarian and Uninvolved styles can increase the risk of psychological, sexual abuse and child labor.

We are aware that this study has both strengths and limitations. However, considering it as an exploratory study, we have identified some new open questions. We are concerned to know if we will get the same result in the other ethnic groups in Nigeria. We have to bear in mind that Nigeria is made up of three major ethnic groups, Yoruba, Hausa and Igbo and over 250 other ethnic groups. Each ethnic group has its own language, culture and unique way of life. It would be interesting to carry out the same research in Yoruba and Hausa land, and see if the results would be the same or different from what we have in Igboland. The outcome of each research will help the psychologist to suggest some possible ways of preventing child abuse. However, true child protection starts with you. It comes from awareness, garnering knowledge of what comprises child abuse. Having a good understanding of child abuse and neglect. Again, it comes from the willingness to act when we see or suspect abuse (Daly & Wright, 2017).

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