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CUPRINS

Special Educational Needs: A Romanian Approach

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ABSTRACT

In recent decades, the international community has been intensely preoccupied of the principle of free access to education, paying greater attention to children, students, or young people with special educational needs (SEN). Found in education specialists' attention, the concept was included in the agenda of decision makers, the inclusive education process currently being supported by several international and European documents.

Considered differentiated and adapted forms of school instruction, educational, social and medical assistance, intended for persons with SEN, special education and special integrated education in Romania is achieved based on the principle of democratic education: the access to any form of education, the right to education at all levels regardless of social or material condition, sex, race, nationality, religious or political affiliation or any other restriction that might be considered discrimination.

The purpose of this paper is to provide a comprehensive overview concerning the organization and functioning of special education and integrated education in Romania.

KEYWORDS: *special educational needs, special education, inclusive education, school integration, school inclusion*

1. THE CONCEPTUAL FRAMEWORK

For explanatory reasons we consider appropriate to define from the very outset the terms currently used in the legal framework that regulates the organization and functioning of special education and special integrated in Romania.

The normative documents to which we refer in this process are: a) The Regulation of organization and functioning of special education and special integrated [1]; b) The Methodology for organizing educational support services for students with SEN integrated in mainstream education [2]; c) The Methodology for evaluation, psycho educational assistance, educational guidance and vocational guidance of children, pupils and young people with SEN [3]; d) The Regulation on the organization and operation of the centers of resources and educational assistance from the county/Bucharest [4].

In view of the above mentioned documents, the terms have the following meanings:
✓ *special educational needs (SEN) – additional educational needs, complementary to the overall objectives of education adapted to individual features and to those characteristic of a certain deficiency/disability or disorder/difficulty in learning or in another nature as well as a complex assistance (medical, social, educational etc.);*
✓ *disability – the result or effect of the complex relationship between the health of the individual, the personal factors and external factors that represent the life circumstances of this individual. Because of this relationship, the impact of different environments on the*

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same individual with a given health condition can be very different. "Disability" is the generic term for impairments, activity limitations and participation restrictions, according to the International Classification of Functioning, Disability and Health;

✓ *deficiency – lack, loss or alteration of a structure or of a function (anatomy lesion, physiological or psychological disorder) of the individual, resulting from an illness, an accident or a disruption that prevents normal participation in society activities;*

✓ *special education – the entire process of implementing the programs, learning activities and complex support recovery-compensation (psychotherapeutic, medical, social, cultural) for persons who fail to attain independently a schooling level age-appropriate development for basic skills training to prepare them for adult life temporarily or throughout the schooling period;*

✓ *inclusive education – continuous process of school improvement, aimed at exploiting existing resources, especially human resources to support the participation in the educational process of all people of a community;*

✓ *integration (in school) – the process of adaptation of the person with SEN to school rules and requirements that follow, establishing positive affective relationships with the members of the school group (group/class) and the successful ongoing of school activities;*

✓ *inclusion (in school) – the ongoing improvement of the services offered by the schools to include in the educational process all community members, regardless of their characteristics, disadvantages and difficulties;*

1.1. Special educational needs: the international legal framework

One of the most important international agreements in which Romania is a signatory, with a major impact on local special education and special integrated, is the Standard Rules on the Equalization of Opportunities for Persons with Disabilities. The document was adopted by the United Nations General Assembly on 20 December 1993 (resolution 48/96). This document consists of 22 rules summarizing the message of the World Program of Action. Rule 6 expressly aims at the education of persons with disabilities [5]: *states should recognize the principle of equal primary, secondary and tertiary educational opportunities for children, youth and adults with disabilities, in integrated settings. They should ensure that the education of persons with disabilities is an integral part of the educational system.*

Another reference document is The Salamanca Statement and Framework for Action on Special Needs Education, adopted at the world conference „World Conference on Special Needs Education: Access and Quality" organized by UNESCO and the Ministry of Education of Spain (June 7 to 10, 1994). The meeting of more than 300 participants representing 92 governments and 25 international organizations has occasioned some recommendations on inclusive education, of reference for the entire international community.

Article no. 2 explains best the vision of this agreement [6]:

✓ *every child has a fundamental right to education , and must be given the opportunity to achieve and maintain an acceptable level of learning;*

✓ *every child has unique characteristics, interests, abilities and learning needs;*

✓ *education systems should be designed and educational programs implemented to take into account the wide diversity of these characteristics and needs;*

✓ *those with special educational needs must have access to regular schools which should accommodate them within a child-centered pedagogy capable of meeting these needs;.*

✓ *regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes , creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system.*

1.2. Special educational needs: the legal framework in Romania

In Romania, the right to education and the access to culture is guaranteed by the Constitution [7]. The right to education is ensured through compulsory general education, collage and vocational education, higher level education, as well as other forms of instruction and training. Special education and integrated special is a part of the national education system. Its stated aim is teaching, school, professional and social education, rehabilitation, recovery, adaptation and integration of children/pupils with SEN or other types educational needs [8].

Children/students with SEN operate, as appropriate, in special education units or in mainstream schools. In special education units can be enrolled children/pupils with medium disabilities/disabled, severe, critical, and associated. In groups or classes integrated into mainstream education may be enrolled children/students with disabilities, learning disorders, adjustment difficulties, integrating difficulties, as well as those with mild or moderate disabilities/disabilities.

The evaluation, psychological educational assistance, school and professional guidance/reorientation of children, pupils and young people with SEN is performed by the County Centers for Resources and Educational Assistance (CCREA)/Bucharest's Center for Resources and Educational Assistance (BCREA), by services of evaluation and school and professional guidance/reorientation, prioritizing integration into mainstream education [9]. The purpose of evaluation, psychological educational assistance, professional school orientation/reorientation of children, students and young people with SEN is to identify their specific needs and ensure optimal conditions for school, occupational and social integration [10]. The assessment may be medical, psychological, educational or social. Medical evaluation involves conducting clinical examination and laboratory investigations, if needed, to establish a full diagnosis. Psychological assessment involves determining the level of development of mental functions and processes, in order to report to existing standards. Educational assessment involves determining the level of knowledge, and the degree of assimilation and their correlation with the possibilities and the intellectual level of the child / student/young adult, the level of school and social adaptation, and identifying the problems and special educational needs. Social Assessment involves, where appropriate, the investigation of the developmental environment of the child/student/young adult: housing, food, clothing, hygiene, mental and physical security, environmental factors, and personal factors. The evaluation is aimed at the orientation of the educational decision, the proposal of formative and improvement programs for certain levels of development and establishing optimal educational services according to the needs of the child/young person with SEN [11].

2. CURRENT STATE OF SPECIAL AND SPECIAL INTEGRATED EDUCATION

We believe that through its central geographical position and demographical characteristics of the stable population, Brasov County provides representative data to support an enlightening analysis on the current situation of the special education system and special integrated in Romania. According to the latest population and housing census in 2011, Brasov

County counted 505,442 inhabitants, 72.71% in urban areas, respectively 27.29% in rural areas [12].

2.1. Brasov County school population in school year 2013-2014

According to the National Institute of Statistics, Department of Statistics Brasov, in the school year 2013-2014 the school population, including private education, was of 101,509, of which 18,123 in higher education [13]. Fig. 1 illustrates Brasov school population in pre university education.

■ Vocational and apprentice level ■ Post highschool and foremen school level
■ High school level ■ Primary and secondary level
■ Preschool level
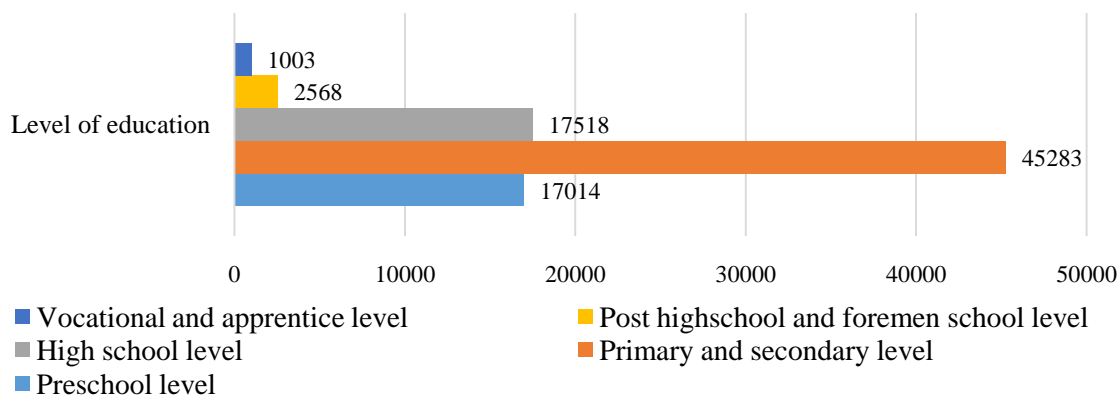
Fig. 1. The school population, on educational levels

2.2. Special education unit network

Brasov County School Inspectorate data, published in the report on the state of pre-university education of Brasov at the end of school year 2013-2014, provides information on the network of special education schools, the number of students enrolled in special education, the types of deficiencies, the distribution of pupils with SEN in years of study as well as the total number of cases investigated to guide, educational wise, students with SEN in Brasov County.

In Brasov operate six special education units: three school centers for inclusive education (SCIE), a special vocational school and two colleges. The schools listed in Table 1 cover all levels of pre-university education (preschool, primary, secondary education, vocational and high school education) [14].

Table 1. Special education units in Brasov County

Education Units	Level of Education					
	Kindergarten	Preparatory and I-IV classes	V-VIII	IX-X	IX-XII (HighSchool)	Special Technological Highschool
SCIE Braşov						
SCIE RH Braşov						
SCIE Brădet						

Codlea Special Vocational School					
Technical College „Dr. Alexandru Bărbat", Victoria					
„Aurel Vijoli" College, Făgăraș					

Schools have special education plans, curricula, pedagogical and psychological assistance programs, textbooks and alternative teaching methodologies adapted to the type and degree of impairment/disability. All these documents are approved by the Minister of Education and Scientific Research. The methodologies used in teaching special education and integrated special are adapted to the type and degree of deficiency/disability, and to the level of development and potential of the individual as well as to the learning specifics of children/pupils with SEN [15]. Each child/student benefits of a service plan and of a customized intervention program. Fig. 2 shows the percentage of the types of disabilities/deficiencies of children/pupils with SEN enrolled in special education [16].
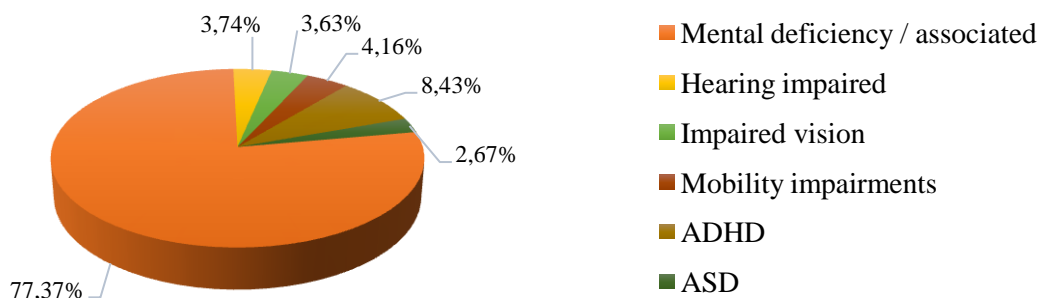
Fig. 2. Pupils with SEN included in the special education schools

2.3. The distribution of children/students with SEN integrated in mainstream education

In the school year 2013-2014, the specialized service of evaluation has investigated 740 cases: 520 certificates for school guidance for children/students with SEN within mainstream education units and 220 school orientation certificates for children / students with SEN within special education units.

The number of children/pupils with SEN in the school year 2013-2014, integrated in mainstream education, is 561. Of these, 65.24% are integrated in schools in urban areas, the difference of 34.76% are integrated in rural schools. [17]
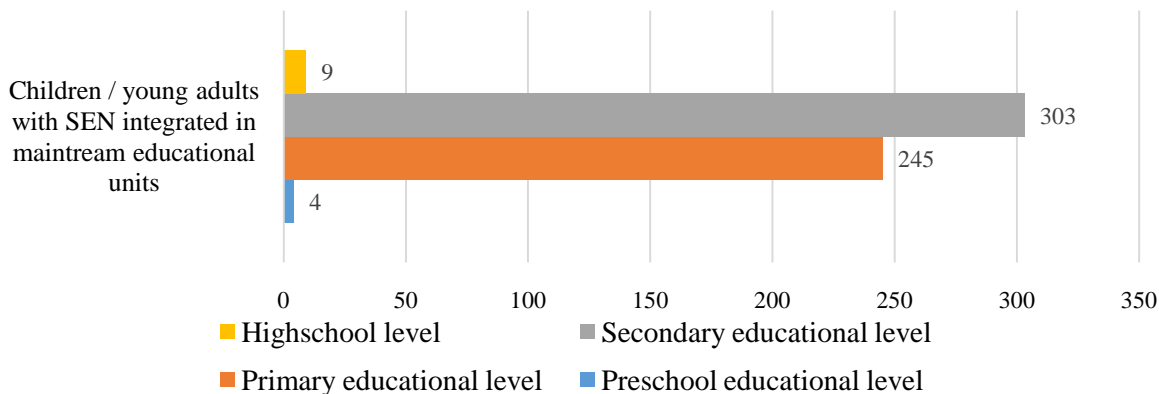
Fig. 3. Distribution of pupils with SEN on educational levels

The integrated children/students benefit of educational support services and psychological and pedagogical assistance and/or other types of educational services, where appropriate, speech therapy, physical therapy etc. Within mainstream education, specialized services needed for the integration of pupils with SEN are provided by itinerant teachers and support teachers during pre-school and throughout their schooling, in collaboration with all factors involved.

The 16 hours/week related to the itinerant teacher or support teacher are direct activity with the integrated child/pupil. The number of hours and learning disciplines involving the itinerant teacher and support teacher are agreed upon with teachers of the group/class [18].

3. CONCLUSIONS

Despite the complementarity of special education and special integrated education there are enough clues that reveal their asynchronous development, existing significant differences in the adequacy of the two subsystems to the real needs of children with SEN [19].

Special education and integrated special education in Romania, in the past 10 years, has made notable progress towards creating conditions for the integration of children/pupils with SEN in mainstream schools. Romanian Education makes efforts towards the execution of a coherent process of reform of school and education in general. Although this process is slow, the success of school integration and inclusion remains determined by many factors, the most important originating in economic, social and cultural current evolution and the future evolution of Romanian society.

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[4]   *The Regulation on the organization and operation of the centres of the county / Bucharest County of resources and educational assistance,* OMECTS nr.5555 din 7.10.2011;

[5]   *Standard Rules on the Equalization of Opportunities for Persons with Disabilities*, Adopted by the United Nations General Assembly, forty-eighth session, resolution 48/96, annex, 20 December 1993;

[6]   *The Salamanca Statement and Framework for Action on Special Needs Education*, adopted by the World Conference on Special Needs Education: Access and Quality, Salamanca, Spain, 7-10 June 1994;

[7]   *Romanian Constitution*,   http://www.cdep.ro/pls/dic/site.page?id=339,   (accessed on 10.04.2015);

[8]   Ibid 1, art. 15;

[9]   Ibid 1, art. 77;

[10]   Ibid 3, art. 3;

[11]   Ibid 3, art. 13-17;

[12]   *Population and Housing Census* 2011, the National Statistics Institute, http://www.recensamantromania.ro, (accessed on 10.04.2015);

[13]   *The school population, on levels of education*, the National Institute of Statistics, Department of Statistics Brasov, http://www.brasov.insse.ro/main.php?id=416, (accessed on 10.04.2015);

[14]   *Report on the state of pre university education of Brasov on the school year 2013-2014*, Brasov County School Inspectorate, http://www.isjbrasov.ro, (accessed on 10.04.2015);

[15]   Ibid 1, art. 34-36;

[16]   Ibid 14;

[17]   Ibid 14, p. 182;

[18]   Ibid 2, art. 7-8;

[19]   *The White Book of Special Psychology and Pedagogy education*, Special Education Department, Babes-Bolyai University of Cluj-Napoca, http://psihoped.psiedu.ubbcluj.ro/caPPS, (accessed on 12.04.2015).

Ethical and Legal Aspects of Mediation and the Involvement of Mediators in Conflicts Solution

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ABSTRACT
In time, efforts were made to create methods to solve the conflicts arising in human society. From this point of view, we took into account the discussion of certain new methods to solve different conflicts other than the regular ones. Mediation appeared as a reaction to the inefficiency of the inexistent methods of solving different types of conflicts. It is a well-elaborated process, within which the conflicting parties may express their opinions and interests. As well, mediation enables decision making within the involved group or by each individual. Moreover, this process requires the intervention of a mediator to facilitate the discussions of the parties. As mediation represents a matter involving various conflict aspects, its regulation was required by enacting certain norms. In these circumstances, the approach of the mediation issue implies a complex approach including both ethical and professional deontology notions for the mediators.

KEYWORDS: *mediation, ethics, mediator*

1. INTRODUCTION

Mediation represents an alternative method to solve certain types of conflicts. As well, it is an efficient and effective method of dispute resolution [3]. The entire approach of the mediation procedure is carried out on legal grounds by the involvement of a mediator and observing ethical principles.

Based on moral concepts, the mediation procedure enables practitioners to control both the understanding and the solution of the conflict. This is possible by means of the mediation agreement, as a result of the mediation procedure. The European Parliament and Council award to the mediation agreement the character and the power of an enforceable title [6].

According to the ethics code adopted by the Mediation Council on February 17th 2007, the mediator's conduct is stipulated by rules leading to the smooth mediation carrying out. Moreover, such rules are found in most of the national codes of the countries with experience in this field that regulate the behaviour of the mediators [6].

The mediation ethics behaviour code warrants the confidentiality of the information obtained during the mediation. Therefore, the mediator has the unconditional obligation to keep the professional secret. This one has the obligation to keep the neutrality of the information received from the point of view of an existing conflict situation. If the mediator discloses certain pieces of information without the agreement of the parties involved in the conflict, the mediator shall be legally responsible, according to the contract signed with the disputing parties;

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moreover, this undermines confidence and trust between the parties. The mediator has the obligation to avoid the debate surrounding the case, of the conflicts, of the different offers that may result of the mediation or the way the parties behaved during the conflict [4]. [*]

According to the moral behavioir norms and aiming at observing the ethical principles, the information obtained during mediation is confidential [7]. This substantiates on the existence of documents presented by the conflicting parties. All information may be received within different separated and common sessions.

The ethical principles aimed at protecting the integrity of mediation require the involvement of the mediator. From this point of view, the mediator has the obligation to protect the clients whose interests are of utmost importance for him or her. Furthermore, the mediator has the moral and professional duty to get involved and to help the parties to communicate and understand their own truth. This matter requires the non-favouring of either of the parties involved in the interests' conflict [4].

2. MEDIATORS'ETHICS AND DEONTOLOGY CODE
2.1. General Objectives of the Mediators' Ethics and Deontology Code

The main rules according to which the mediators carry out their activity are found in the code of professional ethics and deontology of the certified mediators. It includes a set of norms and features defining the quality of the professional activity. Furthermore, it meets the moral conduit principles related to mediation and the organization of the mediator profession.

The deontology norms of the ethics code related to the quality of mediator are meant to warrant the appropriate execution of the mediator's attributions by freely accepting the mediators. This condition is indispensable for the smooth carrying out of the process of conflicts mediation, with direct implications on the societial functionality.

The code of professional ethics and deontology is mainly aimed at providing conduit guidelines for the mediators in their activity. Thus, the various orientation directions of mediation included in the ethics code contribute to defending the pubic interest, as mediation is a public interest activity. Moreover, the issues presented in the ethics code are involved in promoting trust in mediation as an alternative for solving conflicts.

According to this ethics code, mediation is a voluntary way to amicably solve conflicts between two or more parties by means of a third, neutral party. This person carries out the activity according to the legal stipulations in the field related to the norms of the ethics code on the mediation process and the quality of mediator.

The professionalism of the mediators is the result of observing the legally established deontological, organization and operation norms of the profession, stipulated in the organization and operation regulation, in the ethics and deontological code and in the decisions adopted by the mediation council.

2.2. Fundamental Principles Stipulated in the Mediators' Code of Professional Ethics and Deontology

All the principles referring to the quality of mediator refer to the obligations and duties of these negotiators. From this point of view, the main obligation of mediators is to provide a smooth solution and to avoid conflict.

The ethical norms stipulate the mediator's obligation to respect and support the parties' right to make free informed decisions in order to solve their disputes. The mediator has the moral duty to inform the parties from the very beginning of mediation on the way that the mediation procedure will be carried out and on the final decision , which will exclusively belong to them.

Furthermore, we mention the possibility of the parties' to withdraw during the mediation procedure. The mediator may advise the parties on the alternatives of independent or specialized legal assistance. Yet, the mediator cannot provide legal or specialized advice to the parties. The mediators are obliged to offer assistance only if they have the necessary qualification in relation to a specific issue raised by the conflicting parties.

In a society based on justice and respect within a rule of law, the mediator has the duty of trying to amicably solve various types of conflicts, observing the ethical principles of neutrality, impartiality and confidentiality, as well as practicing non discrimination [1].

The quality of mediator is based upon these aforementioned various aspects, in addition to subscribing to the ethics norms in the field.

One of the fundamental ethical principles related to the quality of mediator is the neutrality to the conflict between the parties and the impartiality in leading the mediation procedure. Given the circumstances, mediators must be completely independent from various aspects interfering with the causes of the conflict between the parties. The mediator's independence is meant to warrant the neutrality, impartiality and equidistance to the cause, its results and the parties involved in the dispute.   To observe the professional ethics norms, the mediator shall try to avoid the creation of situations limiting the independence of the conflicting parties.

The relationship between the mediator and the conflicting parties relies on ethical principles. Taking this idea into consideration, the relation between the mediator and the parties must be based on trust, must be substantiated on ethical principles, observing honesty, sincerity, probity and the sprit of justice.

The mediator has the moral and ethical obligation to observe the professional secret. Confidentiality is acknowledged both as a right and as an absolute duty of the mediator. Keeping the confidentiality of any piece of information that arises within the mediation activity is not time limited but it represents a strictly necessary feature for the good execution of the mediation process. The idea is supported by the obligation of the mediator related to the refusal to take over cases of conflict of interests if he/she is not informed on the causes. This way the goal is to avoid circumstances that may determine deviations in the activity of the mediator from the point of view of neutrality and impartiality.

The ethics of the mediation approach also refers to the aspects related to the communication of the parties in conflict. From this perspective, the disputing parties shall be notified on the conflicts of interests and on the cause that generated the conflict. Without the agreement of the parties, the mediator must drop out the participation in the solution of the conflict of interests.

The mediators' code of professional ethics and deontology stipulates the civil, disciplinary and criminal responsibility of the mediator if the mediator is in breach of the professional obligations and according to the legal provisions set by the mediation council.

The consequences of breaching the ethical norms are the legal norms of sanctioning the mediator because of the reflection on his/ her professional probity.

The quality of exerting the profession of the mediator relies on mutual respect, equal chances, professional and procedural correctness. This idea is supported by the observance of ethical principles according to which the mediator must adopt an appropriate conduct. This is required to elevate the direct professional reputation, avoiding certain appreciation that may affect the interests of other mediation practitioners. This approach represents one of the most important ethical principles of mediation and it is applied to maintain the amiability and mutual respect between mediators [6].

2.3. Disciplinary Responsibility of Mediators

The mediators' code of professional ethics and deontology stipulates issues from the total features and norms defining the quality of their professional activity. The deviations refer to the disciplinary responsibility and the have implications on the mandatory conduct of mediators. In the same time, they aim at facilitating competent and responsible activity according to the ethics of the profession.

The deviations belonging to the disciplinary responsibility of the mediators have various orientations.

The ethical principles that can be breached refer to aspects of confidentiality, impartiality and neutrality. As well, according to the ethical principles, we must take into account the refusal of the authorities' requests of conflict mediation and the refusal to return documents submitted by the conflicting parties.

Mediation ethics includes the assistance or representation of one of the parties in conflict for a certain type of procedure whose object is the mediated conflict.

According to the principles of the mediators' code of professional ethics and deontology, if the mediator fails to observe the professional and moral obligations, measures are applied entailing disciplinary responsibility according to the severity of the deed and the circumstances of its commission. This is materialized by the legal application of sanctions whose purpose is the suspension or the termination of the mediator from further mediation activities.

2.4. Regulation of Mediation and of the Mediators' Activity

The aspects referring to the regulation of mediation and the mediators' activity also require the contribution of the enforceable laws. Together with the ethical principles of mediation, they represent a set of legal, morally substantiated regulations [7].

For the smooth function of the mediator profession, certain ethical rules and principles must be observed. From this point of view, the mediator profession includes issues referring to the carrying out of the mediation activity, the form of exerting this profession, as well as the professional office intended for carrying out this type of activity.

Considering the aforementioned ethical principles, the mechanisms for exerting the profession are individualized by their name according to the mediation procedure and to the organization and operation regulations of the Mediation Council. From this point of view, the mediation activity may be exclusively carried out according to the principles of the mediators' Code of Professional Ethics and deontology. Furthermore, the common patrimony must be exclusively meant for carrying out the professional activity, having the regime of professional service patrimony.

The ethical norms of mediation also stipulate issues related to disciplinary deviations within this vast activity.

The disciplinary deviations within mediation may be notified by any concerned party. This is possible by the involvement of the mediation council. As well, the disciplinary deviations are investigated by the disciplinary committee within the mediation council.

By the decision of the Council, the Disciplinary Committee appoints three members. It is made up of an especially assigned member of the mediation council and by two other representatives of the mediators who are randomly assigned.

The Mediation Council represents the authority keeping the records of the forms of exerting the profession, according to the mediation council organization and operation regulation.

The mediation office represents a different manner of exerting the mediator profession stipulated by law. The establishment of the mediator office shall be made according to an

incorporation deed that will be submitted to the mediation council. It may be made up of one or several associated mediators.

According to the constitutional law of free association, stipulated by the Romanian Constitution, mediators may incorporate or may adhere to local or national associations with the purpose of promoting the professional interests but also for mediating and protecting the statute of moderator.

Furthermore, according to the association right, mediators may adhere to non-governmental organizations, in the field of mediation and also to international professional associations, keeping and observing the legal norms related to mediation.

The non-governmental organizations may carry out activities in the mediation field, observing the legal provisions.

The authorization of exerting the mediator profession as well as the premises where the profession shall be carried out are legally regulated.

In addition to being the associated mediators, the mediators may also be collaborating mediators. This represents the mediators' civil professional association and it is legally regulated. Both the articles of incorporation and the memorandum of association of the professional civil association are concluded in writing between the co-associates and the previous communication with the mediation council is mandatory.

The authorized mediator, irrespective of the manner of exerting the profession, has the obligation to archive the documents and to strictly keep the books thereof. When deviations related to the smooth carrying out of the mediation procedures are found, entailing the application of disciplinary sanctions, we must take into account the existent of a precedent related to disciplinary deviations. The authorization of the mediator profession as well as of the premises he/she shall carry out the profession are legally regulated.

CONCLUSIONS

Mediation represents an alternative, efficient and effective method to solve litigations and conflicts

Due to the importance of mediation from the social standpoint, the mediators' code of professional ethics and deontology stipulates the observance of mediation and of the mediation profession exertion principles.

The mediator has the diligence and prudence obligation, without assuming an outcome obligation. From this standpoint, the solution of any conflict exclusively depends on the parties' agreement. In these circumstances, the mediator's duty is to show his ability in bringing the parties to common grounds. By his or her mission, although holding the secret of the conflicting parties, the mediator must carry out the mediation procedure by confidential communications [6].

On the grounds of the European Convention of Human Rights, the high number of conflicts to be solved in Romania compared to the stiff and troublesome procedures and to the reason of delay, is likely to affect the ability of the competent authorities to solve the case in due time and, as such, mediation represents a modern and efficient alternative [10].

Mediation is featured by simplified, quick and inexpensive procedures. Hence, in order to facilitate or support the parties' conciliation or to determine the amiable of the conflicts measures are imposed. This must be applied before starting or during a mediation approach [8].

Additionally, mediation contributes to the reduction of the economic and social costs incurred by the classic litigation the parties are involved in, taking part in the same time in the reduction of the necessary time for the conflict solution [2].

According to the ethical norms, mediation requires the approach of the equity principle, thus contribution to secrecy keeping to a large extent.

As an authorized person, the mediator has the obligation to publicly inform, while observing the ethical norms, the issues related to the provided services and the need to adopt their publicity rules set by the norms applicable to the profession [5].

The ethical principles of the mediation require accurate, real information, based on the confidentiality principle, maintaining professional impartiality, honor and probity.

The implications of mediation in social life reflect in its effects on various aspects.

The ethical issues focusing on social responsibility prevail in the debates within the Bioethics Committees of UNESCO – CIB and CIGB (the Intergovernmental Committee of Bioethics) [1].

Considering this idea, family mediation ethics is of utmost importance. Using certain approaches in the mediation process, communication between family members may be improved by decreasing the ampleness of the conflict between the parties. Solving family conflicts by mediation also represents a way that contributes to ensuring the continuity of intra-family connections [9]. The contribution of mediation to keeping the family and the integrity if the intra-family and interfamily relations are a major issue related to mediation and its social implications.

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Conflict of Interest
We report no conflict of interest.

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Looking for a Job: the Orientation Process for Persons with Disabilities

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ABSTRACT

If finding a job is currently difficult for many people, for those with disabilities it actually is a path with many obstacles. The ONU Convention on persons with disabilities rights is in line with the basic concepts of the European Disability Strategy 2010-2020, which supports programs against discrimination, and adopts equal opportunities and active inclusion as priorities. In the European and national policies for the realization of the objectives and strategies of "Lisbon 2010" and "Horizon 2020", lifelong guidance is recognized as a permanent right for every person. The main objective of the research is to develop a self-orientation online path that helps to increase and improve the match between disabled people and businesses in the country and internationally. The purpose is to collect data about each transition: from school to university, from university to the first entry into the labor market, from the first work experience to the stabilization of the employment. The collection of data will be analyzed, considering job as a means for self-realization and not only for the mere subsistence.

KEYWORDS: *disability, employment, recruiting online, lifelong guidance, self-orientation.*

1. INTRODUCTION

If finding job is difficult for many, for those with a disability becomes a path with more obstacle. Nowadays the conceptual framework of reference in the field of disability is the International Classification of Functioning, Disability and Health (ICF), which led to a reversal of the term disability from negative to positive: we no longer speak of impediments, disability, handicap but of functions, structures and activities. In this terms, disability is not a consequence of the individual's physical condition but the relationship between an individual and the context where he/she lives [1].

Job placement of people with disabilities has gone through different stages over time up to the enactment of the Law 68/99 also known as Targeted Placing [2]. Despite Law 68 has an overview of the most advanced and shall guarantee in Europe, last year Italy has been taken by the European Court for not meeting the obligations in relation to the placement of workers with disabilities [3]. There are several reasons that lead the unemployment rate of disabled workers to more than 80%, the first being the difficulty of achieve a cross demand/supply because the required tasks of the companies do not coincide with the characteristics of human resources in the area of reference (the province). According to the recent survey "Limitations in their work of people with health problems", only about the 16% of those with chronic diseases or functional difficulties works. Among those who have a disability, unemployment is between 50% and 70% in industrialized countries, with peaks of 80% in Italy, despite our legislation provides specific routes for entering the labor market [4]. The ONU Convention on persons with disability is in

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line with basic concepts of the European Disability Strategy 2010-2020, which supports programs against discrimination, and adopts equal opportunities and active inclusion as priorities [5, 6].

The technological change occurred must be take into account and, in particular, the importance of the network in the process of recruitment. As highlighted in the White Paper "Interministerial Commission on the development and use of information technology for Disadvantaged Groups", even if technology has offered new solutions to problems once insurmountable, can simultaneously generate new problems for disabled users [7]. Indeed, there is a real danger that they may be excluded from society based on information technology. On the other hand, it is possible to make Internet and network accessible to a disabled person and become an irreplaceable support for his/her guidance and employment. Some of the problems that the user with disability encounters using technology, in fact, stem from the fact that the standard products do not take into account the special needs. The limitations are not internal to technology, which is characterized by an enormous flexibility, but from the absence of requests made to the technology itself. Understand what is the right place to be assigned to a person with disabilities becomes crucial.

Within this context, orientation and job placement are taking an increasingly important role. In European and national policies of "Lisbon in 2010" and "Horizon 2020", lifelong guidance it is recognized as a permanent right of each person, which is applied in different forms and methods depending on the needs, contexts and situations [8]. The ONU Convention provides that States must "enable persons with disabilities to have effective access to technical and vocational guidance programs, to the employment services and to vocational and continuing training " [5]. From the perspective of orientation to work for people with disabilities, all those actions that lead to an "awareness of their abilities/skills" assume importance, both for the subject and for the company where he/she could usefully be added.

2. THE RESEARCH PROPOSAL
2.1 The Aim of the Research

The main objective of the research is to develop a self-orientation online path that helps to increase and improve the match between disabled people and businesses in the country and internationally, thus making the platform already launched by the start-up Jobmetoo more accessible and transparent. The national and transnational dimension provides more opportunities for interaction between supply and demand. Therefore there will be significantly greater chance to identify the best candidate. Labor mobility of persons with disabilities is another challenge to play.

In particular, specific objectives are:
- enhance existing online platform' strengths and its use by both disabled users and companies;
- develop guidance skills in disabled people who are preparing to enter the labor market, promoting the awareness of their disability's characteristics as well as of their own resources;
- increase the specificity of the matching between the professional profile of candidates with a disability and the different professional fields;
- facilitate the access to information on the obligations and benefits relating to the employment of persons with disabilities provided for in different countries, both in Europe and outside Europe;

- promote the platform's spread in foreign markets, in line with the policies of international development.

2.2 Method and Activities

The first step of the research will be to reconstruct the state of the art, collecting data, through bibliographic and statistic research. In order to identify the strengths and weaknesses of the existing online platform, the next step will be to prepare, through a precise methodological approach that uses some of the tools of social research, a qualitative and quantitative survey targeting both people with disabilities and companies.

The second step is to build a model for self-orientation collecting data following a bottom-up process:

1. definition of placement orientation's needs related to the disabled population involved in the project;
2. identification of the instruments of success in the placement orientation field that can be used according to the defined target;
3. integration of the tools, even with innovative adaptations, in guiding paths;
4. testing of those paths.

According to socio-constructivist theories, build a training means to bring out prior knowledge and preconceptions of the participants and allow a comparison according to the context, in order to encourage the creation of new ideas and solutions [9].

Considering the progressive socio-economic changes that led to highlighting the importance of "soft skills" in the labor market, the model will include activities that serve in the development and maturation of self-management's skills in lifelong guidance's process, especially for persons with a functional, sensory or intellectual impairment [10, 11].

Once implemented and tested the online self-orientation model, we will evaluate the results and validity of the pilot project, identifying both qualitative and quantitative outcomes Finally, after analyzing the collected data, we will select the case studies that revealed statistically significant findings. Based on this part of the research we will develop recommendations for good practices, also presenting at conferences and congresses both nationally and internationally, thus promoting the enhancement of the platform within the European context.

3. RESULTS

Research is currently in progress: started in November 2014, it will end in November 2017.

We created a questionnaire based on existing research in the field of job placement. The purpose of the questionnaire is to monitor the career and employment status of university students and graduates with disabilities and identify their needs related to work. The questionnaire was tested by a consultation of experts in disability services, guidance and placement at the higher education level. The questionnaire has been sent to students and graduates of Macerata University enrolled in the 2000/2001 academic year to currently, for a total sample of 117 people. Additional participants were being identified to join the survey collaborating with other Universities in Italy.

These are the specific areas of the final version of the questionnaire:

- General Information
- Disability
- Education
- Careers

- Work Experiences
- Needs work-related

This step of research will be necessary to the implementation of further actions, such as the following:

- create an online self-orientation model that assists in improving the matching between people with disabilities and local businesses, transforming disability job placement from a legal obligation to a valuable, productive resource;

- produce a survey on the platform that allows members to check the effectiveness of the same, both in terms of creating the personal profile of skills and in reference to real working solutions;

- bring out improvements and new solutions in companies through the inclusion of people with disability in different professional fields, according to their specific profile. If a company begins to take into account the unique needs and experiences of persons with disabilities, it is very likely the perspective and attitudes towards persons with disabilities will change/improve. The worker with disabilities will be seen as a resource of competitive advantage and not an inconvenience or a person hired by statutory obligation.

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Assistive Technology Student Demonstrators Developed in a Project-Based Learning Approach

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ABSTRACT

As a part of their educational program, the students in Biomedical Engineering and Mechatronics bachelor programs are required to develop projects for disabled people. The project activity is organized on teams, based on a Project Based Learning approach, focused on real-world topics and professionally relevant problems. This approach promotes creative and efficient design experience which led to the development of functional prototypes currently used as demonstrators for students. Thus the project activity provides support for an original educational infrastructure. The paper gives details about specific aspects of project activities and presents examples of student demonstrators developed in the field of Assistive Technology and Rehabilitation Engineering.

KEYWORDS: *Preoject Based Learning, Assistive Technology, Student Demonstrators.*

1. INTRODUCTION

In order to provide an adequate response to the various instances in which people that suffers due to diminished function (congenitally, inherited, or as a result of an external factor), Rehabilitation Engineering and Assistive Technology employ a wide range of solutions.

These representative components of Biomedical Engineering encompass varied knowledge from many areas of study, through a harmonious collaboration between individuals specialized in medical and engineering disciplines. As a basic principle, to correctly identify the most appropriate way that lost functions might be compensated, an extensive morphological and functional clinical trial has to be undertaken in order to establish the residual functionality, but the precocity, complexity, continuity, technicality, morality and legality of the procedure are also important success factors [1], [2].

Training engineers in Mechatronics and Biomedical Engineering raise challenging tasks related to interdisciplinary knowledge in the field of biosystems, especially human beings, in order to imagine and design innovative products and procedures. Based on our previous international experience, gained by carrying several educational European programs [3], [4] a new project based learning approach was implemented.

2. PROJECT BASED LEARNING APPROACH

As a part of their educational program, our students in Mechatronics, as well as those in Biomedical Engineering program are required to develop projects with various topics in the field of Rehabilitation Engineering and Assistive Technology.

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The supervisors seek to capture the students' interest by real-world and professionally relevant issues, suitable for one semester project. Over the years, the projects' themes were individual or for teams of two or three students. In the last case, the project has begun with learning to work in project-group. To the one-way traditional lectures, various information resources were added (scientific papers, articles, brochures, catalogues, patents, etc.).
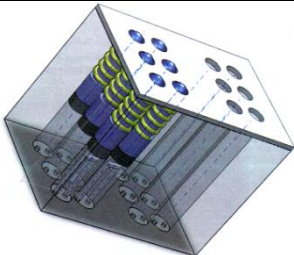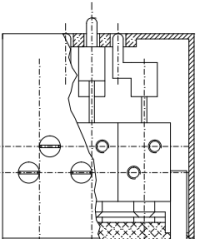
The students had some freedom regarding the schedules and the ways to solve the problem, but certain steps had to be performed: identification and familiarization with the problem to solve, specifying demands and required performances, knowledge acquisition about the impairments, disabilities, handicaps and patients capabilities and limitations, analysis of the design possibilities and final design specification.
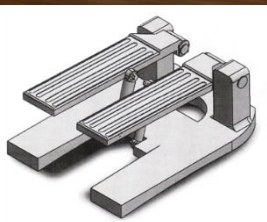
The impact of the discussed methodology is represented by the improved efficiency and increased complexity of the projects. Thus, this type of design experience led to the development of functional prototypes. Our goal is to use these prototypes as demonstrators for the students, therefore have to satisfy following requirements [5]: safety operation, allowing individual and group experiments, structure and operation in accordance with students' background and target competences, design in accordance with the ergonomic rules referring to the visual sense, hearing, noise and manual tasks, permitting a wide spectrum of learning experiences, facilitating the understanding the studied phenomena, in a well-defined manner. In this way, the project activity provides support for an original educational infrastructure.
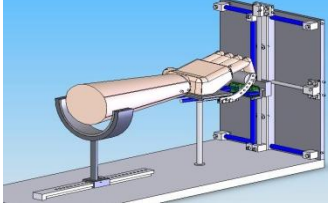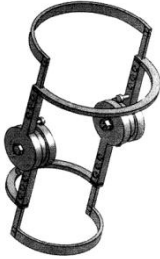
3. EXAMPLES OF REPRESENTATIVES PROJECTS

A wide range of topics are proposed for projects: prosthetic and orthotic systems, exercisers, components of the robotic systems for physiotherapy, systems for recovery of sensorial functions and others. Table 1 presents examples of student projects, developed later as useful demonstrators.

Table 1. Student projects examples

No.	Image	Description
1		***Solid-fluid thermally-transformation actuated Braille display*** This project employs a tactile display element composed of a paraffin actuator; the task was to study how a paraffin actuator might be miniaturized in order to fit in a standard Braille matrix, to design the heater control circuit and to write the program that drives it.
2		***Electromechanical Braille display*** This constitutes another approach that aims to restore the ability to read various texts output from a computer; it is composed of six small solenoids, each actuating a rubber pin; the project included mechanical and electric design, as well as a programming step.

3		**Intelligent blind stick** It is equipped with ultrasonic sensor that takes information about the environment; information is processed and is delivered to the user through the handle (vibrations) or acoustically. The wheel offers information about the surface on which the user moves.
4		**Anthropomorphic hand with hybrid actuation** The multi-fingers anthropomorphic artificial hand is based on two d.c. servomotors for the thumb actuation and four differential shape memory alloy actuators for the actuation of other fingers. These are represented by shape memory helical springs antagonistically operated.
5		**Electric Hook for upper limb prosthesis** The electric hook is suitable for wrist disarticulation amputation. Its mechanism is provided with two fingers simultaneously actuated by a d.c. motor, a reducer and a simple and light weight twist-drive transmission.
6		**Hand orthosis** The active hand orthosis assists the prehension and pronation-supination of the forearm. Two d.c. motors disposed on the forearm actuate the appropriate mechanisms. A control system based on mioelectric signals is implemented.
7		**Orthosis for tremor suppression** It is an upper limb orthosis, attached to the hand and forearm, in order to suppress the hand tremor; it is used by the patients with Parkinson disease. Its operation is based on fluid viscous force.
8		**Stepping machine** This project had the aim to familiarize the students with the general problems encountered in the design of an exercise-oriented machine; this particular solution provides an active as well as a passive training program, making use of Arduino controlled stepper motors.
9		**Lower limb rehabilitation device** The solution provided here consists of a foot stand that move linearly along the longitudinal axis and an upper leg stand that oscillate freely.

10		*Wrist exerciser* It offers the possibility to adjust certain dimensions to each user. The equipment meets passive movement's requirements: variable stroke and speed motor assist the user in the passive mode for flexion-extension and abduction-adduction of the hand, allowing various and useful exercises.
11		*Wearable wrist exerciser* Wearable wrist robotic exerciser passively moves the hand in flexion-extension and abduction-adduction. A 2 degree of freedom mechanism is actuated by two d.c. motors and a control system based on a microcontroller allows adjusting the exercises characteristics for each patient.
12		*Knee orthosis* This device has the purpose to assist a person that has impaired movement of the knee joint; the aim is to stabilize and maintain the orthostatic position, and, as needed, to allow the flexion-extension of the knee, in different activities (e.g. sitting on a chair).
13		*Gait-assistance system* The goal of this project was to devise an exoskeleton that is able to assist the standing and gait. It is actuated by four direct current servomotors; the task included the design of the control circuit and the program thereof.
14		*Lifting device attached to a wheelchair* It is a simple and compact system attached to a wheelchair backrest in order to support the body weight. The device consists of a d.c. motor, a screw transmission and an elevator frame with straps and corset

4. CONCLUSIONS

Engineering education in Biomedical Engineering and Mechatronics is strongly supported by experimental learning. Therefore is absolutely necessary to use laboratory equipment and demonstrators which provide the students with the challenge of implementing the relevant concepts and open new perspectives.

Our proposal consists of development useful student demonstrators based on project based learning approach. As supervisors, we have proposed community oriented real-life problems specific to Assistive Technology and Rehabilitation Engineering to be solved individually or in project teams. The applied methodology has enabled the development of

interdisciplinary and more complex projects as well as practice-relevant functional and realistic prototypes.

Although the teamwork projects demands a higher degree of supervision and an assessment of both group and individual performances, we consider that the teamwork is the learning experience which better prepares students to apply their knowledge and skills to real-world situations.

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Innovative Assistive and Rehabilitation Robotic Systems

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ABSTRACT
Assistive Technology and Rehabilitation Engineering consist in application of science and technology for more effective rehabilitation processes and reintegration of the disabled in family and society. This paper presents few innovative systems belonging to robotics, developed for maximizing the functional capabilities of people with different disabilities. Different types of original upper limb exercisers, exoskeleton-type wearable rehabilitation systems for upper limb, a complex system for mobility and posture are described in terms of their destination, structure and functional parameters.

KEYWORDS: *Assistive Technology, Rehabilitation Engineering, Exerciser, Mobility Aid.*

1. INTRODUCTION

National, European and worldwide statistical data reveal a process which is becoming more evident, at the same time, more pronounced, of increasing the percentage of older adults (over 65 years), as well as, the real need of the elderly for high - performance technical support in assisting them. On the other hand, there is a large number of people with special needs (impaired, disabled, handicapped) and the costs of their reintegration into society and family are less than the cost of their institutionalization.

As a result of complex rehabilitation and assistance approaches, the patients gain greater independence in all activities, improved safety conditions, which means a substantial increase in their quality of life. Among the basic attributes of rehabilitation and assistive processes, there are also performance characteristics of the equipment, so it is recognized that these processes are more effective as the equipment is more efficient. In this regard, we emphasize the great potential that mechatronic systems offer in Biomedical Engineering, especially in Rehabilitation Engineering and Assistive Technology [1], [2].

2. ASSISTIVE AND REHABILITATION ROBOTICS

With the increased demand for assistive technology for the disabled and elderly, service robotics should have a potentially major contribution to make. Generally, a service robot operates semi- or fully autonomously to perform services useful to the well-being of humans and equipment, excluding manufacturing operations. Both, professional and domestic service robotics, contain robotic systems with a wide variety of targets: cleaning, inspection, maintenance, construction, defense, rescue, security, personal transportation, domestic tasks, entertainment, medical (surgery, therapy, rehabilitation), assistance and special purposes [3].

The Rehabilitation Robots are dedicated to clinical therapy in neuro-motor rehabilitation and training, including robotic systems for gait restoration and robots for upper extremities therapy. The Assistive Robots improve the quality of life of disabled and elderly people, mainly

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by increasing personal independence. They contain prosthetic devices and artificial limbs, orthotic devices and exoskeletons, robotic mobility and manipulation aids, personal assistants and smart living spaces, [4].

In order to improve the quality of life, assistive and rehabilitation robots cooperate with a user in the user's environment. Their basic functions are: physical assistance, recovery of motor functions, safety, monitoring, social companion, communication. As a consequence, the operation workspace of these robots (domestic environment) is unstructured and variable, so a high degree of adaptability is essential for task execution. It is not recommended to adapt existing robotic solutions, designed for industrial purposes, to rehabilitation and assistive problems., thus is a real need for innovative systems.

3. THE DEVELOPED ROBOTIC SYSTEMS

Previous activities of our group have developed a strong sense of empathy with the specific needs of older people and those with disabilities, which led to a deep understanding of their functional limitations, essential to carry out research in this area. Several prosthetic and orthotic systems have been proposed, new exercisers have been developed, wearable exoskeleton-type systems have been investigated and mobility aids have been designed.

3.1. Wrist exerciser

Figure 1a presents the CAD model of an exerciser, dedicated to passive flexion-extension and abduction-adduction movements of the hand. The mechanical part of the exerciser is based on a 2 DOF mechanism, actuated by two actuators which are placed in accordance with the biomechanical axis. The geometrical characteristics of the exerciser are based on anthropometric data of the hand, wrist and forearm. The functional prototype (Fig. 1b) could be programmed by the therapist with the exact exercise each patient need. The relevant data are stored and then analyzed by the therapist [5].
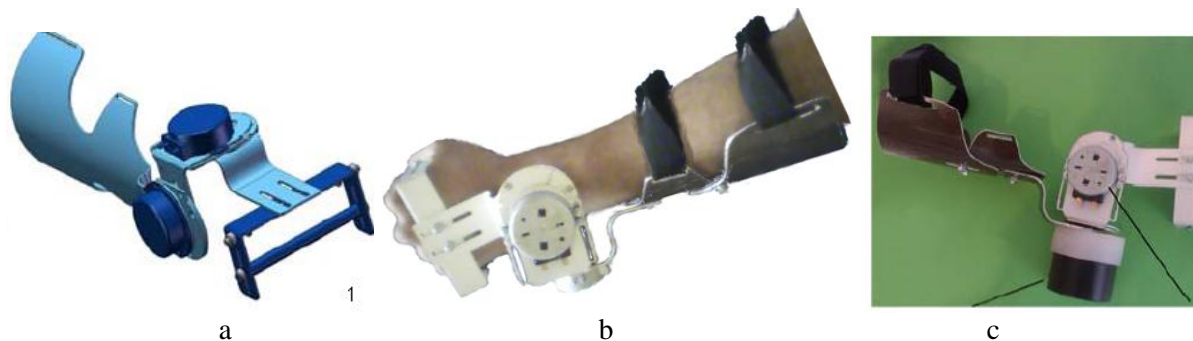
a   b   c
Fig. 1. Wrist exerciser

A substantial improvement of such exerciser is represented by adding a brake for *active with resistance* movements of the hand, in the wrist joint. The property of the electrorheological fluids (ERF) to change their shear stress in respect to electric field intensity was valorified, as in Fig. 1c which shows an ERF brake mounted on the wrist exerciser, instead of the actuator. The ERF brake design is based on the principle of hydraulic clutches, which is determined by the torque transmission between two disks through a viscous fluid. After development, the brake was tested with commercial ERF and laboratory developed ERF. The maximum brake value is 177.5 [mNm] and was obtained for Reslinol 415/GE16 commercial ERF at 6.6[kV] activation voltage [6].

3.2. Wearable exercisers

The shoulder and elbow joints are addressed by the two degrees of freedom exoskeleton, given in Fig. 2. For shoulder and elbow flexion-extension movements (Fig. 2a), based on the structural scheme given in Fig. 2b, has been developed the CAD model of a semi-portable exoskeleton type system (Fig. 2c), which is fixed to the seat and is attached at the same time, to the upper limb. Its role is to recover both mentioned movements of the arm and forearm and as an upper limb trainer. The structural elements for the arm and forearm, the actuators at the shoulder and elbow joints (fitted with gearboxes) and the attachment to the seat are highlighted. The modular structure, the adjustment possibilities and ease of adaptation to the attachment are major advantages of the system.

a   b   c
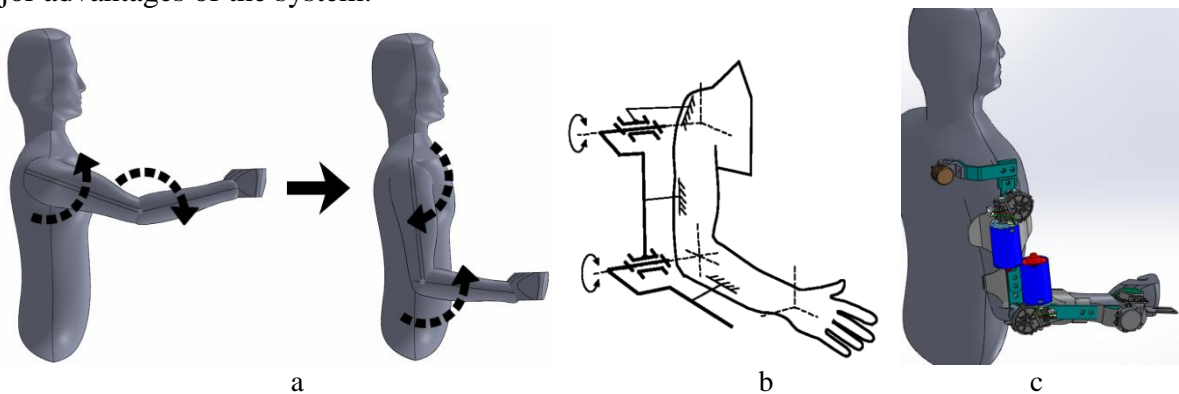
Fig. 2. Shoulder and elbow exerciser

Based on the structural scheme presented in Fig. 3a, in which the anatomical movements at shoulder, elbow and wrist are emphasized, the CAD model of the wearable exoskeleton with six degrees of freedom was developed (Fig. 3b). The experimental prototype, without wrist module, is shown in Fig. 3c [7]. The model of such an exoskeleton equipped with a linear damper based on ERF is presented in Fig. 3d. It is intended to *active with resistanc*e flexion-extension of the forearm.

a   b   c   d
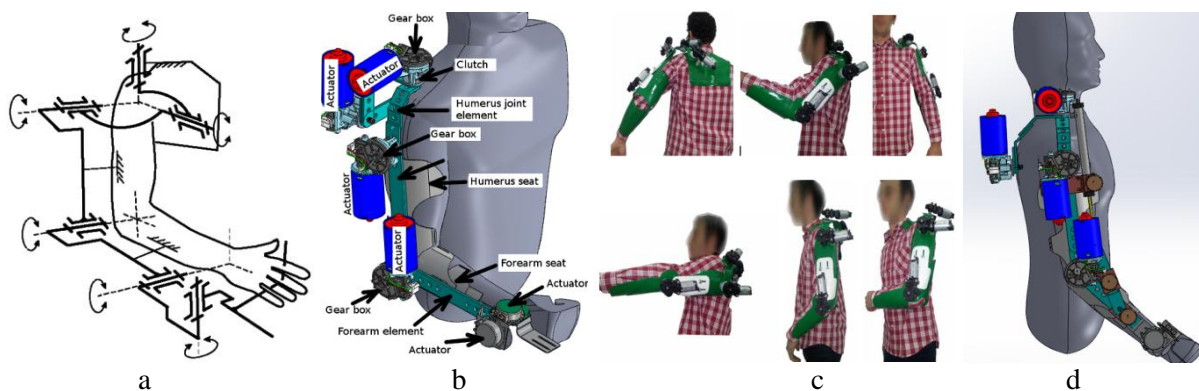
Fig. 3. Upper limb exoskeleton

3.3. Assistive and rehabilitation robotic system

The objective of our research team was to cover several functions: assisting and maintaining the biped posture, assisting the transfer from a position to another, assisting and training the gait, ensuring mobility as a wheelchair [8]. Thus, the system is designed for two

operation modes: first is the mobility mode and second is gait trainer mode, both with capabilities for transfer. Figure 4 gives the sequences of work phases: positioning the system and standing up (Fig. 4a), user rotation (Fig. 4b), stand up phase (Fig. 4c) and mobility aid (Fig. 4d). The subject is seating and starts the use of the system in order to ensure the mobility (as a wheelchair) or the system starts to move to ensure the gait recovery (Fig. 4e).

An experimental prototype was developed (Fig. 4f). For vertical and horizontal positioning, linear electric actuators are implemented, while the rotation of the user around its axis is realized by rotational actuators. The control of the system was divided into two units: the command for the drive wheel system – a joystick-based module operated by the right hand, and the command for the position of the user in respect with the system – a group of switches operated by the left hand.

a   b   c   d   e

f

Fig. 4. Assistive and rehabilitation robotic system

4. CONCLUSIONS

The developed rehabilitation and assistive robotic systems are characterized by structural strength and safe operating regimes. Their low costs are achieved by modular structure. The systems have acceptable controls and user interfaces is minimal. The design of the proposed systems aimed to ensure energetic autonomy and possibility to personalize for each user's needs. Further improvements will lead to better maintenance of good health, increased safety, and encouraged independence.

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Easy-E – Home Schooling in Electronic Devices and Circuits

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ABSTRACT

Students with special needs often require special teaching tools; physical and sensory impaired students can benefit from using computer-aided assessment methods that address their fully developed abilities.

Easy-E is an assessment software tool designed to improve the learning abilities in the field of basic electronics. The friendly user interface provides easy access to all sections (circuits with diodes, resistors, capacitors, operational amplifiers). Theoretical presentations, schematics, waveforms, and transfer characteristics are available and the user can change the values of components and signal parameters.

The acquired knowledge can be tested, in the Test section. The tests cover the entire area, and consist of ten multiple choice questions.

The proposed software tool is a standalone application with low computational requirements, which can be used for both online and offline learning. Due to the fact that our tool offers theoretical fundamentals, active learning through solved problems and final testing, it can be seen as a complete instrument for home schooling in the field of basic electronics.

KEYWORDS: *active learning, electronics, home schooling, Matlab, software tool, testing.*

1. INTRODUCTION

The popularity of computer assisted learning and testing tools has increased together with the aggressive intrusion of the Internet and smart phones in our daily lives. Students seem to be more attracted to studying using advanced technological tools, which boost the learning experience [1].

Active learning significantly expands the educational opportunities for various groups of students, both the strong and the weak ones [1]. The students build their own knowledge acquirement system, through learning skills, exploration, feedback evaluation, and reflection, based on their own experience [2], [3].

Computer assisted learning and testing requires a shorter time than traditional methods, when it comes to understanding new and/or difficult concepts, and the allocated time can be self-imposed. The structure of the study material is rigid and sequential for traditional methods, whereas for computer assisted learning, the student can go back and forth through the study material. Another major advantage of using computer assisted learning and testing is that it enhances the development of critical and creative thinking, which is not a priority for traditional learning methods. Moreover, the student's involvement in the learning process is higher for computer assisted methods, because the student interacts with the software tool in real time, and any changes that he makes will have an instant effect.

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Computer assisted software tools are also suitable for physical and sensory impaired students [4], because they do not require physical attendance in the class/lab and there is no need for an instructor, which would be compulsory for traditional methods. However, active learning methods, integrated in computer assisted tools, can become a part of the lectures, making them more attractive to students, as stated in [5].

Open source software tools designed for active learning and testing various subjects and/or skills are either available online or inside university locations. The electronic devices and circuits domain is one of the most exploited, when it comes to software tools, because the basic concepts are fairly easy to understand, and the learning process can benefit from graphical visualization. Currently available software tools for electronic devices and circuits can either be circuit simulators (online: PartSim®, CircuitLab®, Circuit Simulator Applet by Paul Falstad, etc., or offline: OrCAD®, Cadence®, etc.) or online lessons (LearnElectronicsOnline.com, 101science.com, etc.) and custom designed e-learning platforms, such as UCOMoodle® [6].

More than often, the circuit simulators are isolated from the theoretical concepts, making it difficult for a student to fully comprehend certain aspects. Ideally, the circuit simulator part and the theoretical background should be merged, so that the student is able to acquire both theoretical and practical knowledge, simultaneously.

The aim of this paper is to present *Easy-E*, a home schooling software tool, designed for the study and assessment in the field of basic electronic devices and circuits. The outline of the paper is as follows: Section 2 describes the structure of the application, Sections 3 and 4 present the active learning and testing part in detail, and Section 5 concludes the paper.

2. DESCRIPTION OF THE APPLICATION

Easy-E is a home schooling application, developed using the Matlab integrated environment. The application is designed to facilitate the learning and testing process of stay at home or physical and sensory impaired students, that want to acquire knowledge in the basic electronic devices and circuits field. *Easy-E* was built as a standalone application, with low computational requirements. The user-friendly interface provides easy navigation.

Easy-E is structured into two parts, *Active learning* and *Testing* (Fig. 1). The *Active learning* section contains chapters, while the *Testing* section consists of randomly generated tests, with multiple choice questions.

The main interface of *Easy-E* is presented in Fig. 2. The user can select either *Active learning* or *Testing*; both sections are always available, that is, the user is not required to go through the learning part before testing, although it is highly recommended.

3. EASY-E ACTIVE LEARNING

When the user accesses the *Active learning* section, he can further select one of the four chapters: switching circuits with diodes and resistances *(DR switching circuits, Two-port and multi-port networks)*, switching two-port networks with diodes and capacitors *(DC switching two-port networks),* comparators with operational amplifiers *(Op-Amp comparators),* and amplifiers with operational amplifiers *(Amplifiers with Op-Amp)*, with one or more subchapters each, as depicted in Fig. 3.

Fig. 1 – Easy-E structure
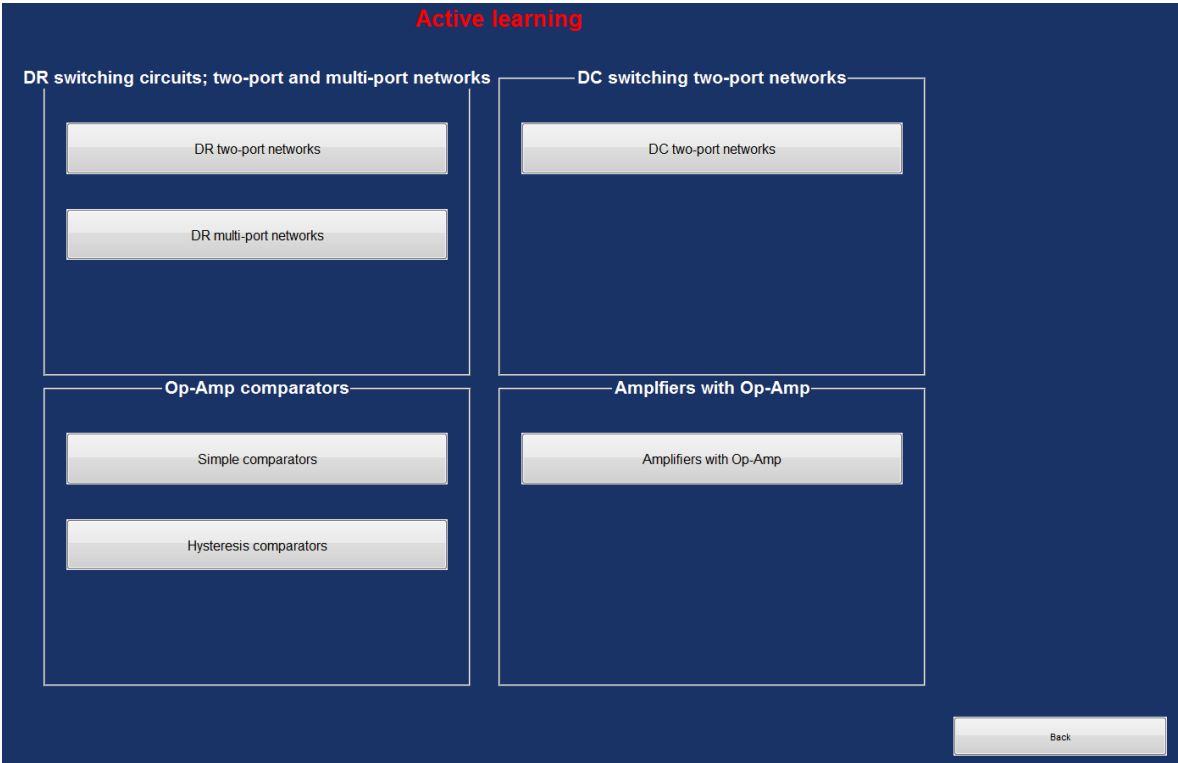
Fig. 2 – Easy-E main interface/screen
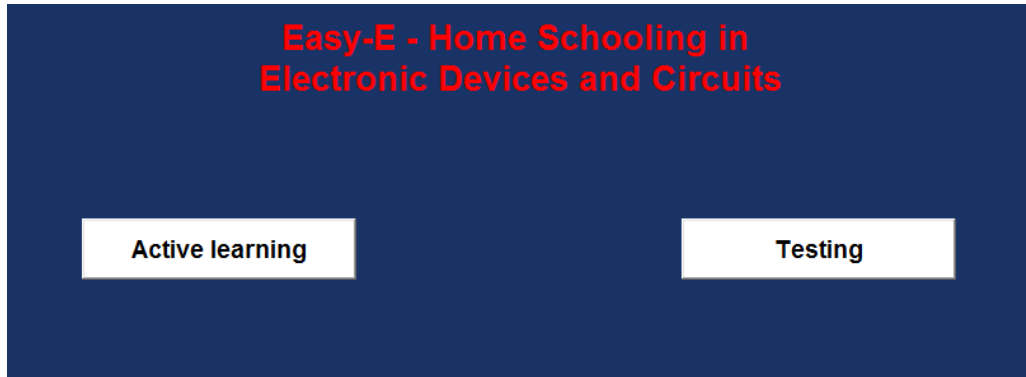
Fig. 3 – Easy-E *Active learning* section

The subchapters are activated by pushing their corresponding button. Theoretical presentations, circuit diagrams, waveforms and transfer characteristics are available for each subchapter. There is no predefined order for the chapters, so the user can access them, however he sees fit. The *Back* button, in the bottom right part of the window, takes the user back to the main window.
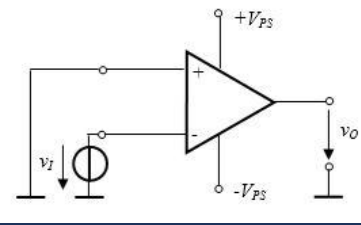
As an example, the *Simple comparators* subchapter is detailed (Fig. 4). The red button in the upper right corner, *Theoretical presentation,* provides basic theoretical aspects, in a *.pdf* file, which can be useful, especially if the user intends to obtain a deeper understanding of the subject. The questions below the circuit diagrams refer to all and any circuit. The user can attempt to answer these questions by himself, using the concepts and relationships from the *Theoretical presentation.* Any of the four available circuits can be selected, by pushing the *OK* button, which will open the answers window (Fig. 5). Here, the user can both see the static type answers (like for question *a) What is the application of the circuit?*), and can input various values for the amplitude of the input voltage, the power supplies and the threshold voltage. The effects of the changed values instantly appear on the waveforms and transfer characteristic (Fig.5).

In *Easy-E,* the user can input new values (for the amplitude of the input voltage, the power supplies and the threshold voltage), as many time as he wants, until the subject of the chapter/subchapter is fully understood.

4. EASY-E TESTING

The *Testing* section consists of randomly generated tests, with ten multiple choice questions each, covering the entire subject area available in the *Active learning* section.

The first questions of a test are presented in Fig. 6. The questions can either be purely theoretical (e.q. *What is the application of the circuit?*), may require short computations or a choice between given plots (waveforms, voltage transfer characteristics). The questions are very similar to the ones met in the *Active learning* section.

Fig. 4 – Easy-E *Active learning* – example from the Simple comparators subchapter
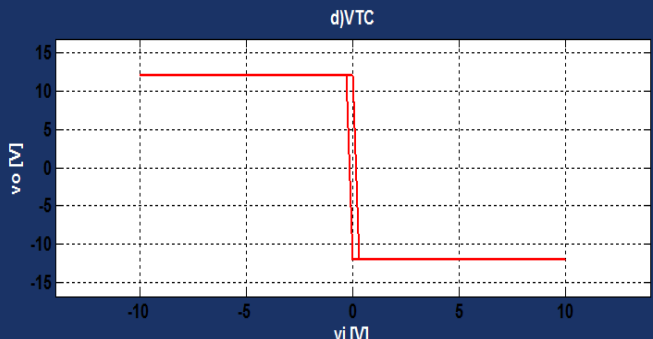
Fig. 5 – Easy-E *Active learning* – example from the Simple comparators subchapter: user input and voltage transfer characteristic

Fig. 6 – Easy-E test question example
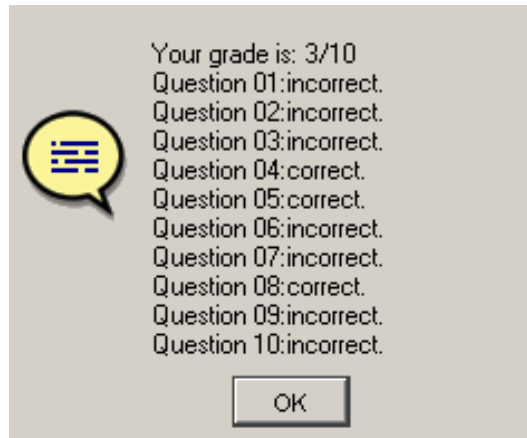
Fig. 7 – Easy-E test feedback example

When a test is completed, a window displaying the results appears (Fig. 7); here the user can see the final grade, as points out of 10, considering 1 point for each correct answer, and 0 points for an incorrect one.

The status for each answer can be seen, so that the user will be able to evaluate their own knowledge level and to identify the chapters/subchapters that are not fully understood.

5. CONCLUSIONS

Computer assisted tools are more and more present in the learning and testing processes, as they bring multiple advantages over traditional methods, such: adaptive learning, self-imposed amount of study time, development of critical and creative thinking. Also, these software tools do not require physical attendance in the class or in the lab, and there is no need for an instructor.

Easy-E is a home-schooling software tool, implemented in Matlab, and designed for learning and testing in the field of basic electronic devices and circuits. The application's purpose is to facilitate the learning and testing process of stay at home or physical and sensory impaired students. The user-friendly interface provides easy navigation through the sections of *Easy-E.*

Easy-E is structured into two parts, *Active learning* and *Testing*. The *Active learning* section contains four chapters, with theoretical presentations, circuit diagrams, waveforms and transfer characteristics. The user can interact with the application by changing component and voltage values; all the changes are instantly reflected on the waveforms and transfer characteristics plots. The *Testing* section consists of randomly generated tests, with multiple choice questions that cover all the chapters from *Active learning,* and provides feedback regarding the user's level of understanding.

Easy-E is a comprehensive instrument for home schooling in electronics devices and circuits, as it provides theoretical knowledge, active learning through examples, and testing through randomly generated questions.

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Advantages and Limitations of Using Access Technologies by Visually Impaired

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ABSTRACT

In a world where knowledge and digital inclusion causes a strong informational openness and democratic and social problems in companies, there are situations where the use of technology is necessary for full participation. Some digital divisions are clearly discriminatory, such as disability. The universal design encourages professionals to shift their attention from the user to a broader stereotype, based on reflections on product potentials. Un users to respect the principles of universal design in proving the effectiveness of access technology, as useful and accessible for all users. An example is the books in DAISY format, which originally was audio books, later annexing their electronic format and to broaden the users.

The aim of the research is to identify the use of the latest access technologies, and the differences between them and traditional methods of study and information access.

At the same time, we focused attention on identifying the actual level of independence in communication and information, the advantages and disadvantages of access to information, due to use access technologies. We try also to identify and leverage the programs most commonly used by people with visual disabilities and the difficulties in operating them.

KEYWORDS: *Disability, visual impairment, Access Technologies.*

Inclusive Technology and Universal Design

Currently, knowledge and digital inclusion causes strong opening information, but also democratic and social problems in companies, there are situations where the use of technology is necessary for full participation. Some digital divisions are clearly discriminatory, such as disability - in which an individual is denied participation because of the existence of deficiencies.

The technology is an extension of user human-computer interaction is regarded as a merger. Through interaction with information systems and technological components, users become more or less adapted to the context, with all its aspects as language, skills, culture, sight and hearing. Introduce the idea of universal design useful product for any user, regardless of age, culture, ability, physical ability etc. Description Universal design refers to a number of issues that such a system should include, for example degree of flexibility, clearly defined interfaces and using existing standards and principles. "Universal design is the creation of products and environments that can be used by all people, to the greatest extent possible, without the need for adaptation or special design". Universal design encourages professionals to shift their attention from the user to a broader stereotype, based on reflections on potential users. If the needs of users are not included in the usual design, the solution can be conceived as universal as possible.

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Adaptations can then design a complement[†]. Design universal access technologies complement and vice versa. Taking into account the principles of universal design [‡], producers of educational software facilitates TA usual and renders information in accessible formats (audio, Braille, pulses) persons with disabilities. The same is true for designers of websites. If they would implement W3C accessibility standards[§], inaccessibility web pages would be removed (actually noted after the present study), people with disabilities in general, especially visual impairments, thus having access to information present on the internet in a non-discriminatory manner. A product, respects the principles of universal design in proving the effectiveness of access technology as useful and accessible for all users. An example are the books in DAISY format [**], who initially audio books were subsequently annexing their electronic format and to broaden the users.

Specific Access Technologies

Access Technology is any strategy or device that allows a person with a disability receives to overcome the limits of deficiency [††].

The term refers to access technology hardware and software with which a person with a disability, if our visual impairments can use Information Technology or the computer with everything related to it, including the internet and communication services relating thereto. Features access technologies are:

- facilitates the person with visual impairments access to information that previously had no access to independent;
- allow the formation of new skills such as to facilitate the social and professional integration;
- allows tasks relatively independently and at a pace similar to that of a person without disabilities;
- supports educational activities and social interactions.

Access technologies are known as assistive technology or adaptive technologies. Among the major access technologies for people with visual impairments can remember: screen readers (screen reader), magnifiers (larger screen or screen magnifier), text recognition applications, Braille equipment (Braille printers, Braille display) equipment for the production of tactile images, digital equipment orientation and mobility.

Purpose and research objectives

The aim of the research is to identify the use of the latest access technologies, and the differences between them and traditional methods of study and information access. Track and identify current level of independence in communication and information, the advantages and disadvantages of access to information, due to the use of access technologies and leverage the programs most commonly used by people with visual disabilities, and the difficulties in operating them.

[†] Miriam, E., Stenberg, N., *Appraising and Evaluating the Use of Daisy, For Print Disabled Students in Norwegian Primary – and Secondary Education*. Departament of Informatics, University of Oslo, 2007

[‡] http://www.design.ncsu.edu/cud

[§] http:// www.w3c.org

[**] http://www.daisy.org

[††] http://phoenix.easterseals.com

Description of the study group

In the research participated voluntarily a total of 20 visually impaired people with a mean age of 22.

People involved in the research presented in this study are 10 students, eight persons, a jobless person and a pensioner. The average age of a lot is of 22 years (18-26 years). The plot is relatively homogenous in terms of gender, were included in the study 11 boys and 9 girls.

Batch ophthalmic diagnostics are: atrophy of the optic nerve, glaucoma, myopia, congenital cataract, secondary glaucoma, congenital leucom, bilateral total corneal leucom, secondary glaucoma, cataract, blindness accidental bilateral cataract, aphakic, astigmatism, nystagmus, strabismus, myopia and congenital nystagmus.

Subjects following professions: analyst programmer, social worker, electrician (retired), teacher, pedagogue, psychologist, editor, and translator masseur.

Research methodology

This research is a qualitative, seeking access technologies graduation importance in the structure of independence to the visually impaired person using the computer for research, information and communication. For data collection objectives in accordance with the method we used semi-structured interview[‡‡]. Semi-structured interview includes a set of questions and interview guide was used as the following themes: access technologies, use of the Internet, using software programs, identify how the transition did from old to new technologies access technologies, gained independence in terms of access to information and study. The interview consisted of 38 questions, such as: open answers questions and answers questions on a Likert scale. The collection of information was done through direct talks with subjects as through telephone and email.

Research results

After analyzing the responses by visually impaired persons studied, the number who began working at computer immediately moment when they attended a presentation of these technologies was 10, even if part (3) wanted to emphasize the high cost to purchase a good computer. Those who failed to purchase a computer occasional call to other people. In general, using computer for various activities is not limited to use only at home but also at school (10), Service (8) or elsewhere (2). Time spent for various information and communication activities differs considerably from novices (4) experts (16). Time spent at computer novices on average 4-5 hours a day and learning activities that include new knowledge, is close to that of experts or 5-6 hours, except those who use the computer and service (2). It identified the following areas of interest: literary, educational, news, media, computer access technology, politics, entertainment, fashionable, various health information, legislation, scholarship, astronomy, natural medicine, paranormal etc.

All subjects use the Internet mainly for communication via email, chat and telephone programs, mailing lists. Besides the communication services offered by the Internet, people with impaired studied using other services, such as Internet network management, design of websites accessible programming, file transfer and shopping.

Everyone in the study using the screen reader Jaws. Four of the respondents use other screen readers and to enable them to use another operating system, but can play certain

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[‡‡] A. Baban., *Metodologia cercetării calitative.* Presa Universitara Clujeana, Cluj-Napoca, 2002, p 53

information in a different style ear. Regarding other access technologies, they can name a few products such as screen readers (8), magnification (3) Braille display (1).

Using the keyboard does not raise any of the respondents, but one does not use all your fingers to type and write speed is high in the case of 14 persons, 5 persons satisfactory and only one person typing slowly.

Subjects believe that recent access technologies can help the blind in its activities at work, school, study, communication, information and recreation, each reference to their field of activity and interest, but also how they can help blind people in other fields.

The transition from old methods of information access to new technologies was the transition from access point and huge volume, the keyboard and bytes, the transition from lecturer to self-guidance. By scanning printed information, finding information on the Internet, the computer will replace Braille format which is very expensive, difficult to maintain and access.Formatul electronic permite astfel nevăzătorilor acces la diferite informaţii, după cum reiese din răspunsurile date de aceştia. The electronic format allows access to different information so blind, as is apparent from the replies given by them. Using electronic text offers the advantage of faster information flow management, quicker access to different areas of interest, communication and reading.

Those who still use Braille format (3) have access to a Braille printer in the different NGOs or special schools. Translations of information in Braille format is used only when it is a summary. The audio format is commonly used digital format, although people say they have renounced investigated audio books on tape reading. If the format materials for students should be in the majority in Braille, audio and enlarged for students in electronic and audio material is the best solution. The time given during the study had no access to technology access increased from an average of 3 hours per day, less than 6 hours.

The help they received from another person access technologies consisted of guidance in using the screen reader, explaining the positioning of the keys and the correct positioning of the fingers, describing the information on the screen. A major issue that was raised related to how programs are designed, web pages, because of too many graphical elements undefined. Software programs used by respondents are: word processing, email, browsing, scanning, and multimedia to a lesser extent, requiring spreadsheet programs. Despite the difficulties imposed by design to software, these programs use audio editing, programming, statistics, design of websites, games accessible to blind people. The lack of available documentation and corresponding amounts described difficulties in using such software.

1.1 Using the computer allows a visually impaired people access to activities that can operate on the computer, just like a person without disabilities. Develop an information guide on how society working on the computer of a sighted person could cause the company to change their attitude in terms of access to education and training.

Conclusion

Access technologies is an important point in the independence of access to education and training by a person with visual impairment. The approach that we have taken, we aim to highlight the relation between access technologies and recent previous methods of accessing information, trying to emphasize the individual characteristics of people with visual impairments and problems faced by them. It is also essential to give particular people who have visual remnants, in order to acquire the skills needed to use magnifier.

An access technology is an important means of access to information, and this permits a re-training and education in the area of people with visual impairment. The approach that we have taken have sought to highlight how access technologies supporting these people and what are the particular aspects that distinguish them from those without deficiency in computer use and in access to information. These assistive systems do not come to entirely eliminate the traditional methods of information, but facilitate access much faster and easier.

Future research could elucidate that the cognitive changes that new information alternative to have on the blind how to change their cognitive and learning styles. The number of visually impaired users is very low (approximately over 1%), based on the total number of people with visual impairment (94.471)[§§].

It should be designed and implemented educational policies that provide those public and private benefits of using access technologies by people with visual impairments and to assist them in education and training.

For people with visual impairments, the computer is a tool that we can develop the skills to create and contribute to publishing newspapers, books and other written materials, giving them the opportunity of building texts to illustrate interests, something that often does not possible through officially published materials. People with impaired more easily prove in producing computer texts and finding mistakes than do people without disabilities, in writing.

Implementation constructive technologies in educational institutions special access in mainstream schools and faculties would allow visually impaired people and those with disabilities, from students to students and not only to communicate more easily in the programs online training. Creating an online platform, e-learning, which have access to visually impaired persons would lead to nondiscriminatory treating people with visual impairments.

Information technologies are combined with access technologies indispensable in any field, and this allowed and still allows all persons with disabilities access to education, information and professional qualification. For this, it needs a new approach and / or adapting to a new style of thinking and behavior that will enable the company to cope with change.

Access technologies have created the premise of access to information to a group of people with a potential for development and support of modern values, but this requires society to adapt as requirements of people with visual impairment. Multimedia systems based mainly on complex graphics must be programmed in such a way as to be accessible for the blind.

It is worth noting that the number of projects and applications in the field of access technologies is increasingly higher, but access to some of them is restricted, for various reasons. Some applications are at the prototype stage, others have exceedingly high price for blind users.

With certainty we can say that the contribution of access technologies has been and will remain important in establishing a new educational and professional path of students with visual impairment, as well as independence and social integration.

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[§§] **http://www.anph.ro**

- http:// www.w3c.org
- http://www.daisy.org
- http://phoenix.easterseals.com
- http://www.anph.ro.

DIGITAL REPOSITORY FOR PERIODICAL COLLECTION. "MONITORUL" COLLECTION CASE STUDY

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ABSTRACT:

Europe's cultural heritage, which includes printed materials (books, newspapers, magazines), photos, museum artefacts, archived documents, audio and audio-video recordings, monuments, and archaeological sites (further on referred as „cultural content"), represents one of the key areas of the digital agenda.

Cultural content online access will allow European users wide access and use for recreational, learning or professional purposes.

Periodicals Collection Digital Repository Web Application Architecture is presented. The developed application namely the Monitorul Express digital archive/repository, offering word search option, incorporating the latest script software, allowing data preservation, dynamic and efficient server accessing, and special libraries facilitating special effects was build and can be used for persons with NEEDS. There are studied the application efficiency from the usage resources point of view and cost support effectiveness. This represents two key components to a web project development.

KEYWORDS: software application, documents management, newspaper industry, digital repository, scanning, digital

INTRODUCTION

The web application for creating the digital archive of periodicals collection presents the application, namely the digital archive of Monitorul Expres newspaper, an archive offering word search options, created with the latest script software, allowing data preservation, dynamic and economic server accessing, and special libraries which allow special effects. In the same time, the efficiency of the application in terms of used resources and of the necessary supporting costs are two key components in development of a web project.

STRUCTURE OF THE APPLICATION

The application was created using PHP programming language and MySQL database system. We also used Yii framework. Yii (or Yes IT Is) is a modern PHP framework, known for its high performances in processing the requests sent to server, therefore a critical tool for all web programmers. [1]

Yii is based on **MVC** architecture (Model - View - Controller) [Fig.1], frequently met in several informatics projects, which proved effective in time. [3] MVC consists in dividing the

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structure of the classes and proper code, together with dividing the logic of the application in these three components:

- model – represents the entities of the application and processes the information in the database;
- view – types the data and the interface;
- controller – controls the communication between view, user and model, that is the database.
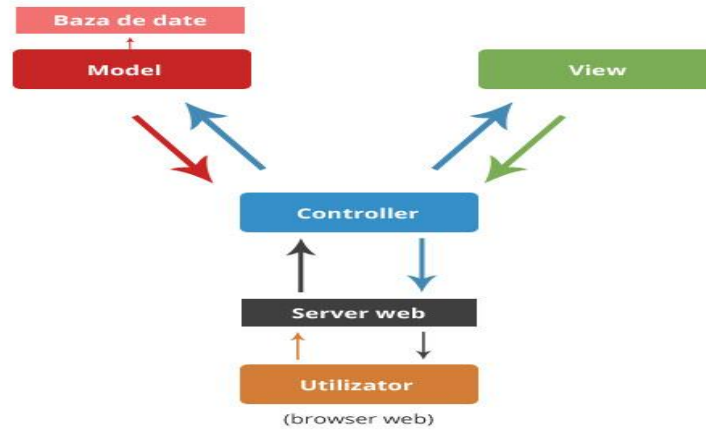
Figure 1 *MVC architecture of a web application*

APPLICATION INTERFACE

The application can be accessed through an internet browser. The browser allows the access to the digital archive based on authentication. There are two types of users:

- plain user – he/she can view the archive and can use filters or searches;
- admin – he/she can also manage the database, adding new documents to the archive.

UML diagram in figure 2 presents the action which can be done by the users of the system. [4]
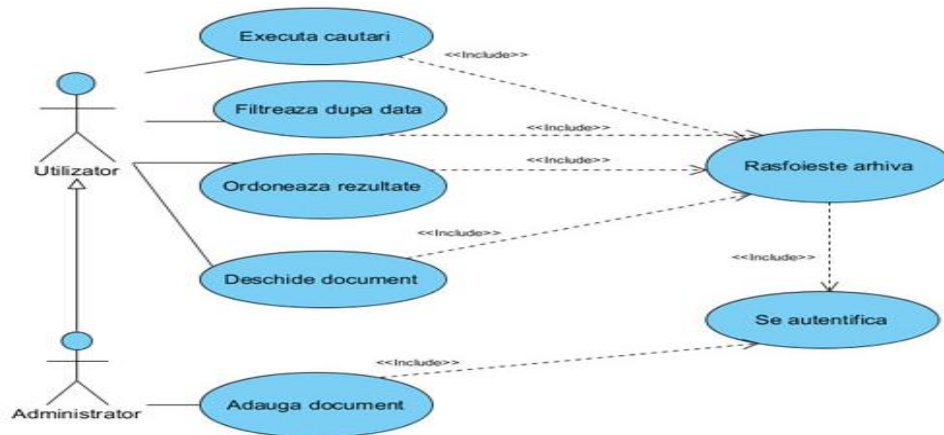
Figure 2 *UML Diagram*

Utilizator = user
Administrator = admin
Executa cautari = performs searches

Filtreaza dupa data = filters by date
Ordoneza rezultatele = sorts the results
Deschide document = opens file
Adauga document = adds document
Rasfoieste arhiva = browses archive
Se autentifica = authenticates
Include = includes

The user of the application can therefore:
- enter words or keywords in order to filter the results;
- filter by certain publishing date for periodicals collection;
- sort results by publishing date, ascending or descending;
- access the digital version of each edition.

All these actions are allowed only after the user's authentication in the system. The recognition of the type of user is automatic, while the interface is adjusted to the user's right of execution. The authentication screen is presented in figure 3, where entering a valid user and password is needed. [5]

Once the authentication process is successfully executed, it is valid during a PHP session, more exactly during our interaction with the application. The user is still greeted with the main interface, in which he/she has access to all the above mentioned actions, and may view the complete list of digital achieve in the database. One may notice that the results are paginated, grouped in ten, avoiding this way the overloading of the web page and the blocking of the user's system.
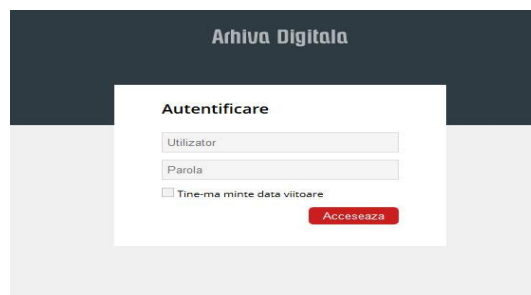
Figure 3 *Authentication screen*

In the upper right, the application presents the confirmation of the fact that it recognized and
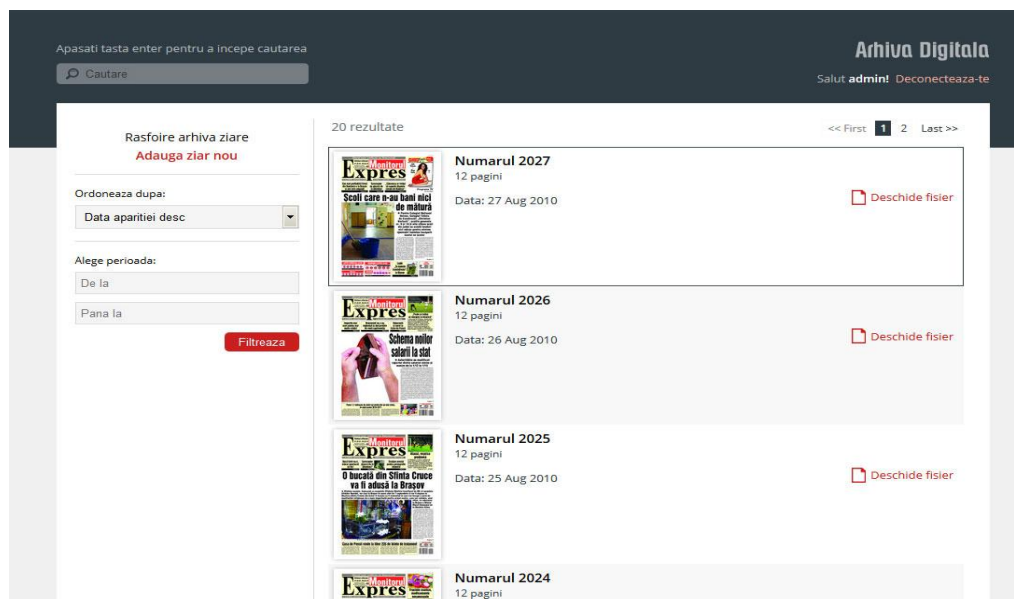
authenticated the user and it also offers the option of disconnecting from the system. It will lead to closing the current session and redirecting the internet browser to the authentication page. To access the digital documents, the users will click the "Deschide fişier" button near each edition, or click on their image, represented by a picture of the first page. The design of the interface is presented in figure 4.[7]

Figure 4 *Application interface*

In order to perform a search, the words to be searched are entered in the upper left box and the ENTER key is pressed. This way a request will be sent to server, which will use FULL-SEARCH index to filter the column content in the database and will return the corresponding data. The total number of results will be displayed in the interface, in the right upper side of the screen.

The design related to the selecting way of the starting period to be browsed, using Yii facilities is presented in figure 5. The starting period is chosen as 10.06.2009. One may notice that a calendar is displayed, and the user can select the starting year and date of the browsing period. [6]
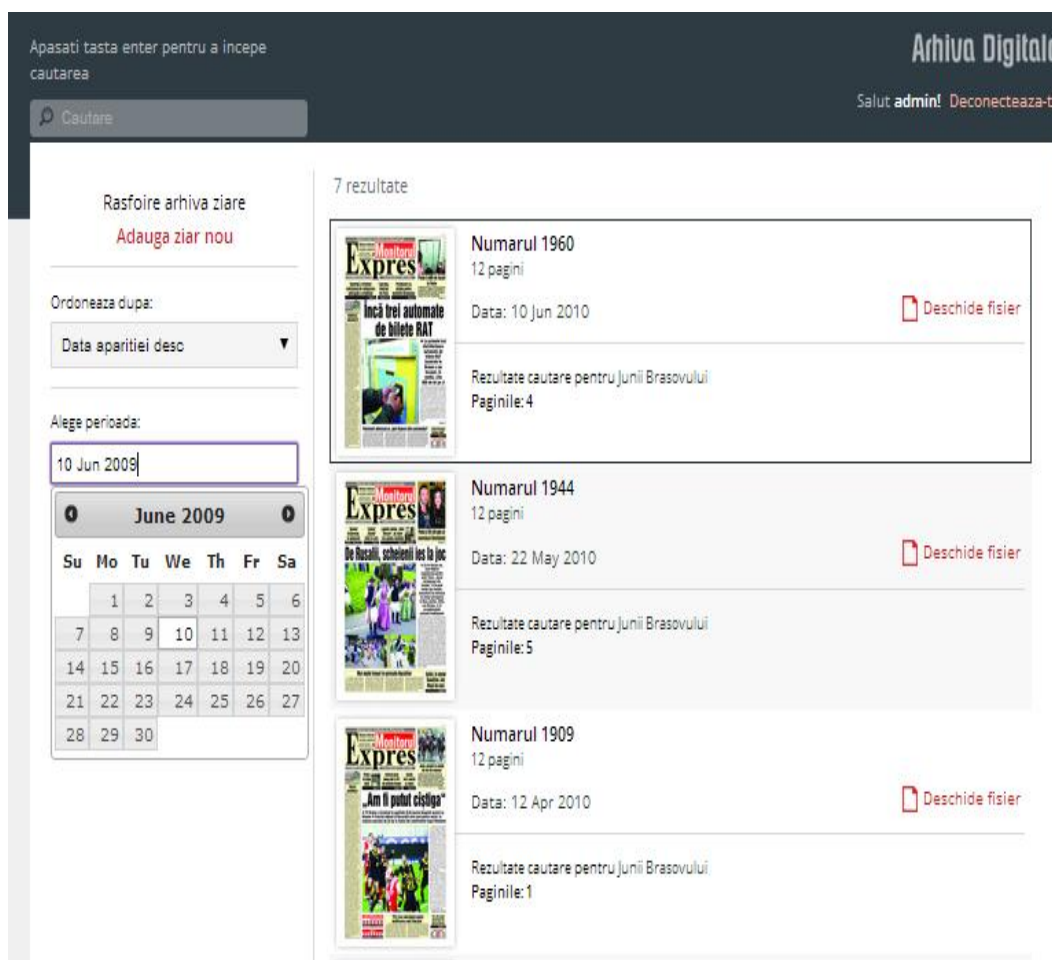
Figure 5 *Selecting the starting period of newspaper browsing*

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In figure 6 one can see a search/browse performed only by a certain period, chosen by the user, therefore I selected *10.06.2009 – 11.06.2009* period and 2 newspapers have been found (2 results).
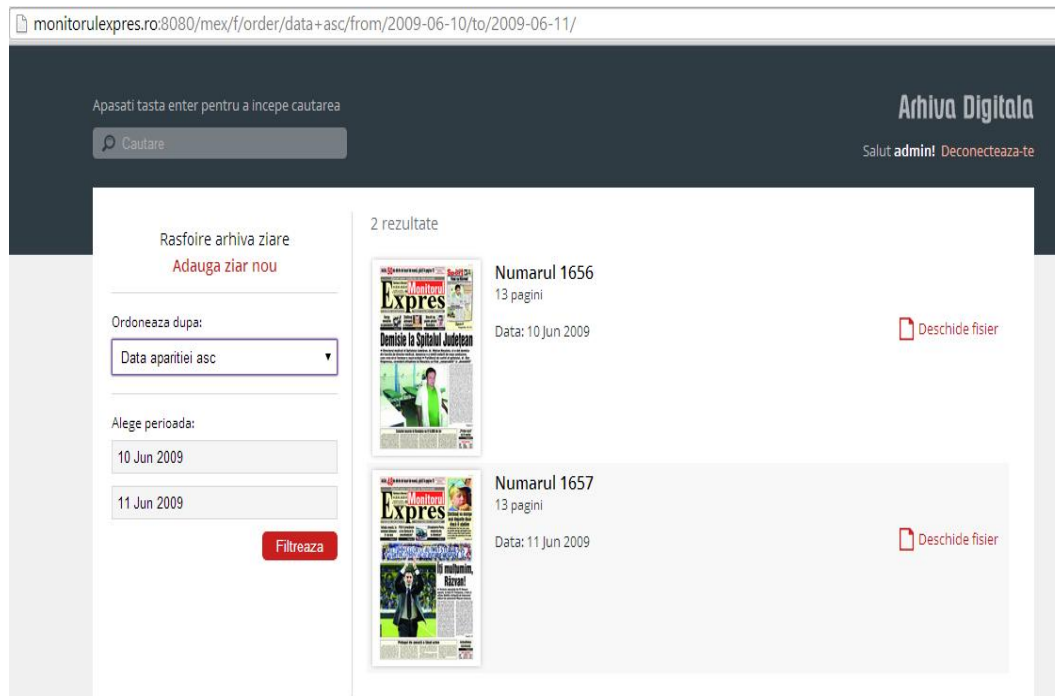
Figure 6 *Selecting the browsing period for the newspaper*

CONCLUSIONS

This software application, a platform independent from the operating system, used the latest technologies in the IT market. To create it, MVC (Model-View-Controller) architecture was used. All these technologies, together with MVC architecture, were presented in chapter 5 of the thesis. The created platform, elegant and flexible, allows the access of the digital archive to a wide audience. Database populating was done through PDF parsed data. These data were stored in an MySQL database, using a PHP library named **pdfparser**. The created database is structured in three tables, as follows: a table, named *utilizator,* containing information related to the user; a tale, named *ziar*, containing information related to the analysed newspaper; and a table, named *pagina*, linked to the table *ziar,* containing information from a certain newspaper page. In order to get a more precise search, the information stored on the individual page can be used.[9]

The structure of the created database has a field named "*conţinut*" in table *pagina*, full-text type, in which the entire contents of each reference document is available to be viewed online, printed, or downloaded. In addition to text documents, one can include images like charts, maps, photos and diagrams. A database with a full-text field allows searches by words, keywords or both.

In the web application of the project, the full-text index is used to offer users the possibility to do a rapid search for a word or keyword in one of the documents in the digital archive. The application will return the list of documents corresponding to the criterion that was inserted. It implies saving the result of a search in a binary format in cache files, and using this format, already processed for the next searches, by the the same words. The users that are about

to perform searches by the same word will get the result in cache files, the database being this way protected against a density of inquiries that might hamper its performances. [8]

Accessing the digital archive can be done through an internet browser. It can be performed based on authentication. We must emphasize the fact that this platform has two actors, namely: the plain user and the admin of the platform. Each of these actors has the right to execute certain actions to the database. The user has the right to view the archive and can execute filtering or searching actions, while the admin can administer the database adding new documents to the archive. [11]

Thus, the user can:
- enter words or keywords by which to filter the results;
- filter by a certain publishing date for periodicals collection;
- sort the results by publishing date, ascending or descending;
- access the digital document of each edition.

Display of the results of the inquiry performed by the user is clear, concise, with useful information obtained by browsing the archive. [10]

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Scientific information management using information systems within the open access to knowledge context

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ABSTRACT:

*A general feature of the Open Access as a new strategy of scientific communication characterizing international, national and institutional policies related to open access, the open access to information models is a new debate in academic society. A traditional paradigm of the scientific communication is characterized as well as the analysis of the defining factors upon which the need to upgrade the scientific communication system by changing the paradigm under open access strategy circumstances relies. This work is mainly aimed at presenting and analysing the academic community attitude towards copyright, generating a computer application by integrating two already available platforms, creating a useful information management tool for the academic community and analysing the digital repository by calculating and optimizing performance indicators in terms of digital repository users satisfaction with the scientific production of the academic community. **The qualitative research related to the Academic Community Behavior – Editors and Universities** describes various researches and studies related to academic community attitudes, expectations and knowledge in terms of copyright, own archiving and open access to information.*

KEY WORDS: *computer application, digital repository, open access, marketing research*

INTRODUCTION

Within the mainframe of RoMEO project [3] we conducted various research and studies related to the attitude, wishes and knowledge of the academic community concerning the copyright, auto archive, and open access to information. [1].

The research took into consideration the two qualities of a member of the academic community: a researcher and an author. The study was conducted in 2003, on a population consisting in 524 authors in academic environment and 80 academic journals editors. The research base consists in A-P-U triangle, where A stands for the authors of the scientific publications, P – the authors, and U – the universities. [2]

Lately, there has been a particular interest in marketing research in various fields. Marketing concepts and methods have reached almost all humanities, from the economic field, where marketing appeared and developed, to the field of infodocumentary structures with their specificities.[4]

In the new context – geerated by the so-called crisis of periodic publications in academic field – a combination between the ascending spiral of subscription prices of the periodicals determined by editors (often for commercial reasons) and the descending spiral of subscriptions made by university libraries – the access to academic information is threatened. For this reason,

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the academic community have taken several initiatives aiming at finding a solution to maximize the access to scientific information. [5]

In practice, these initiatives aimed at setting up two mechanisms for processing the scientific materials: **Open access periodicals** and **institutional digital repositories** or Open access archives. [5]

"Transilvania" University in Brasov implemented the first institutional digital repository in Romania, encompassing the scientific production of the academic community. This repository is the result of research done by Marketing Department of Faculty of Economic Sciences.

Academic communities like Department of advanced mechatronic systems, Department of road vehicles, School of Law and Faculty of Computer Engineering adhered and developed this repository.

Marketing research aims at determining the attitude and behavioural barriers in order to access the promotion of scientific research and to increase its visibility by developing open access to information.

According to the concept of modern marketing, any activity should be developed starting with knowing the user behaviour.

Theory of user behaviour actually turned into a distinct marketing discipline. User behaviour is a complex area. Marketing research collects, processes and analyses information related to the users, while the information will become the base of effective development of marketing strategies.

From **March** to **April 2012** a quality marketing research was conducted on the opinions of the teaching staff from School of Law on the copyright and open access to information.

The research analysed the two roles of the academic community members, the researcher and the author. The research population consisted in 37 authors. The research base was the A-P-U triangle, where: **A** – Authors of scientific articles created in the academic environment, **P** - Editors, **U** - Universities.

Regarding the open access to scientific information, copyright issues were raised. Debates focused on the question "Who is entitled to own the copyright: A, P, or U?" The research took these aspects into consideration and monitored the attitude of the three parties involved in copyright ownership.

RESEARCH RESULTS

An electronic survey with 10 question was created and published at the School of Law, on the address http://www.surveymonkey.com/s/RVYJQHK.

The results of the research, the answers to our questions are presented below.

1. What is your academic teaching experience?		
Less than 5 years	0.0%	0
5-10 years	**73%**	11
10-20 years	26.7%	4
More than 20 years	0.0%	0

Figure 1 *Academic teaching experience*

Concerning the academic teaching experience, it is confirmed that The School of Law is relatively young, with a continuous evolving teaching experience, and 73.3% of the respondents have a teaching experience between 5 and 10 years.

On question number 2, related to "**Number of articles published as a single author**", most of the respondents, 64.3% published 11-20 articles as single authors, while 60% published in collaboration less than 10 articles.

2. Number of articles published as single author?			
Less than 10		14.3%	2
11-20		**64.3%**	**9**
21-30		7.1%	1
31-40		7.1%	1
41-50		7.1%	1

Figure 2 *Number of articles published by the teaching staff as single authors*

3. How many articles have you published in collaboration with several authors?			
Less than 10		**60.0%**	**9**
11-20		13%	2
21-30		20.0%	3
31-40		6.7%	1

Figure 3 *Number of articles published by the teaching staff in collaboration*

4. In your opinion, who owns the copyright for the articles you wrote?			
University		0.0%	0
Author, authors		**73%**	**11**
Editor		20.0%	3

4. In your opinion, who owns the copyright for the articles you wrote?		
I don't know	6.7%	1

Figure 4 Owner of copyright for the articles published by the teaching staff

Related to intellectual property rights, 73.3% of the respondents believe that, in case of articles they wrote, the authors own the copyright. 20% believe that the editors own the copyright.

Nobody believes that the university, as institution, owns the copyright.

6. What does rather interest you?		
Moral rights	**73%**	**11**
Patrimonial rights	26.7%	4

Figure 5 *Interests of teaching staff in copyrights*

73.3% of respondents are interested in moral rights, while 26.7% are interested in patrimonial rights.

7**. When publishing, have you ceded your copyrights to the editor free of charge?**		
Yes	33%	5
No	**53%**	**8**
You haven't ceded your copyright	13%	2

Figure 6 *Opinion of teaching staff on copyright cession*

An interesting result was obtained on the copyright cession issue. 53.3% haven't ceded the copyright for free, while 33.3% have ceded the copyright for free. 13.3% haven't ceded the copyrights.

8. Do editors ask for it?		
Yes, it is the publishing condition	21.4%	3
You haven't signed such contracts de	**78.6%**	**11**

Figure 7 Editors' conditions for publishing

21.4% believe that editors ask for copyright cession, while 78.6% haven't signed such contracts.

9. Would you agree to publish your articles in open access, meaning visible on the internet. It would increase the visibility and the chance for being cited.		
Yes	73%	11
No	26.7%	4

Figure 8 *teaching staff opinion on open access publishing*

73.3% of the teaching staff from School of Law would agree to publish their articles in open access, while 26% disagree.

10. Do you use open access articles for your research?		
Yes	73%	11
No	26.7%	4

Figure 9 Teaching staff habits on accessing open access articles

73.3% of the teaching staff at School of Law use the open access articles, while 26% don't.

CONCLUSIONS

The studies conducted in order to analyse the authors' attitude focused on:
- Understanding current practices on scientific paper writing and copyright;
- Understanding the wishes of academic community members to protect the scientific articles available on the internet and to be informed in their rights;
- Understanding the opinion of the academic community members concerning the free of charge use of other open access articles.

In consequence, one may notice a more obvious concern of the academic community for intellectual property rights. The authors are more interested in moral rights for their papers, than on patrimonial rights. Most of them consider their papers rather as an intellectual extension, and not an extension of their portfolio economically speaking, given the fact that there are very few cases in which authors are paid for a scientific paper.

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Good Architecture Takes Care. A Different Approach on Special Needs Education

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ABSTRACT

The Good in architecture may reside in the accomplishment of its design, in the lastingness of its constitution or in the ability to fit a certain context, but, besides all these, it has to reside in the regard to the people. Good architecture takes care of the people that benefit both directly and indirectly from it. The paper proposes a different approach on special needs education: one look that explores phenomenology of architecture and environmental psychology in order to seek new and possible answers. Pointing some ongoing dimensions of the subject through the lens of personal experiences in three countries, Italy, France and Germany, the paper suggests that suitably designed learning environments, thoughtful integration of users' needs outlined by inclusive design, responsibility in architecture starting from educational level and finally, the built environment in general, as an influential presence in human life can also provide valuable tools in special needs education.

KEYWORDS: architecture, environmental psychology, inclusive design, phenomenology of architecture, special needs education.

1. INTRODUCTION

The Good in architecture may reside in the accomplishment of its design, in the lastingness of its constitution or in the ability to fit a certain context, but, besides all these, it has to reside in the regard to the people. Good architecture takes care of the people that benefit both directly and indirectly from it. Good or bad, it has a strong influence on human behaviour [1]. More specifically, good architecture understands and copes with disability. For, disability may be perceived in many different ways, as Selwyn Goldsmith observes – medically, financially, socially and even architecturally. In his opinion, the architectural model of disability stands upon the architects' care and anticipation of the needs that potential users may encounter. [2]

Disability may be understood within the context of architecture, but what about education regarding disability? From this perspective, some questions arise. Is there a relation between architecture and special needs education? How hidden or how obvious is it? In which way can architecture influence special needs education?

This paper aims to offer another perspective on special needs education, one that is different from the well developed educational, social and medical approaches. It proposes one look through the eyes of architecture. One look that goes beyond the way it is firstly perceived as architectural recommendations and rules listed in official documents, although, these lead to its concrete, efficient materialization that afterwards enables its implementation. One look that explores phenomenology of architecture and environmental psychology in order to seek new and possible answers.

Pointing some ongoing dimensions of the subject through the lens of personal experiences in three European countries Italy, France and Germany, the paper suggests that wakeful

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consideration in planning, subtle architectural gestures and responsibility, can also provide valuable indirect tools in special needs education. Associating the mentioned aspects with the countries does not imply the fact that the observation is exclusive for that particular country. On the contrary, the discussed dimensions can match all the given examples, it is only the filter of personal tangency that renders it in this way as a mere illustration.

2. ONE DIRECTION: PHENOMENOLOGY OF ARCHITECTURE

An interesting way of dealing with disability is through senses. In many cases impairment may be compensated by a higher receptivity or sensitivity. Architecture, as a support and container of life, communicates and is perceived by means of senses. It has a special impact on life. Before being either a message or a symbol, architecture is an envelope for life in and around it, 'a sensitive container for the rhythm of footsteps on the floor, for the concentration of work, for the silence of sleep' [3, p.13]. That is why an approach of the present subject through architecture's influence on the senses, seems possible.

Generally, phenomenology of architecture shows the invisible side of human interaction with buildings. Particularly, phenomenology of architecture may explain differently the relation between architecture and the senses, and in this case its connection to disability, opening the way for sensory design [4]. There is only one step to be made, the one from disability to special needs education. Fostering special needs education on the students' ability to communicate with the built environment through senses and on the significant influence that architecture, through its components, exerts on the students, this step may be easily made.

Therefore, one side of the issue of special needs education lies in the degree and accessibility to engage a context, physical, sensorial, mental as it may be. The observations regarding Italy made as a student and later as a young researcher come to this point. Built culture both formal (educational institutions, museums, theatres) and informal (buildings, streets, the cityscape itself) is largely reachable and it turns into a great educator whose lessons are seen, touched, smelled, and in one word, felt. What stood before as a background would bring its share of indirect, unspoken education. Even though the human body was from ancient times onwards a source of proportion system and measurable aspects, translated into guidelines or norms, it still has as well a full sensory role in experiencing the built environment [5]. Having in mind and minding the sensorial experience of the disabled and combine it with the architectural project's objectives may lead to a positive result regarding special needs education.

The essence stays on ahead: 'In memorable experiences of architecture, space, matter and time fuse into one singular dimension, into the basic substance of being, that penetrates our consciousness. We identify ourselves with this space, this place, this moment, and these dimensions become ingredients of our very existence. Architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses' [6, p.76].

3. ANOTHER PATH: ENVIRONMENTAL PSYCHOLOGY

In the quest for possible answers regarding the influence of architecture on special needs education another path is to be followed. Environmental psychology explores the context of human behaviour and wellbeing, whether that context is physical (urban, architectural), social or conceptual (design, narrative) [7].

The influence of architecture on special needs behavior is without a doubt obvious. It is its influence on special needs education that seems more unexposed. Well, architecture may bring its share of influence in special needs education, as it follows.

3.1. A start point – architectural education

Directly, through suitably designed learning environments. The scale and proportion of the space, the light, the relation with the exterior, the type of materials of the surfaces, the colours, even the sound, all these are markers of the educational environment that impact behaviour. Design can improve the function, value and appearance of the educational space affecting positively both users and producers, and even becoming a part of the hidden curriculum [8]. The influence of the named factors may be translated into comfort, stimulation, enjoyment, receptivity, or, on the contrary, into disturbance, lack of concentration, tiredness, disconnection.

Indirectly, architecture in general, through every built environment - public or private, open or closed - creates a possible context for special needs education. This brings the discussion to an important observation. It essential to understand the significance of embodying multiple disciplines into design, and the only recognized academic disciple bridging design and psychology is environmental psychology [9]. And the start point of learning such mastering of multiple disciplines into design is architectural education itself. How architecture students are taught and guided to deal with these external, but complementary disciplines, how are they showed to problematize, to respond to real life situations, these form the core, that later will guarantee a thorough design.

As an illustration, the importance of this dimension, focused on the issue of making architecture students aware and responsible, is also rendered by personal experience as an exchange student at a university in France. Firstly, the accent upon specific normative documents and their prescriptions, displaced architecture from the poetical-conceptual sector to the real-practical one. Secondly, the induced responsibility led to rigour and consciousness, even though the projects were only an exercise. Students were invited to think of the impact of their projects in real life situations and contexts, and not to regard their work as a simple drawing or object, without any implications. They were strongly recommended to follow normative and regulations, particularly when special needs design issues were regarded.

3.2. Inclusive design

Another approach of the relation between architecture and specific human behaviour is to be highlighted. Even though architecture may not have the direct power to cure illnesses, to teach the ignorant, or, generally, to sustain life, it surely affects the quality of life and can give the sustained life meaning [10]. In this light, contribution to sustaining life reaches a superior level through inclusive design. Conceived not only to respond to disability, but also to every particularity ranging from culture, age to physical conditions, inclusive design sets some directions, such as placing people at the heart of the design process, acknowledging diversity and difference, offering choice where a single design solution cannot accommodate all users, providing flexibility in use, providing buildings and environments that are convenient and enjoyable to use for everyone [11].

In supporting this dimension of sustained life through inclusive design, emerges an observation rooted in personal experience as a visiting young researcher in Germany. A general attention and thoughtfulness within the built environment was present not only regarding impairment situations, but also concerning other categories like older people or families with small children. Therefore, user perception should be involved in resolving design issues, in order to improve understanding and uptake of inclusive design by architects [12]. In that way inclusive design may bring it share to inclusive education. Good architecture may teach respect and consideration on one hand, and on the other hand stimulation and confidence. It may show one of its reflections in the liveliness of those being in contact with it.

One final observation puts emphasis on the fact that dealing with impairments doesn't has to be perceived as limiting and hindering within the design process. On the contrary, starting with disability can have a true creative potential in architectural practices, arguing that design can help forgo underlying and overlooked inequalities [13]. Accepting the challenge from the beginning, knowing that the so-called restraints don't narrow the path, but make it visible among the multitude of options, integrating user perception, all these bring their contribution in accomplishing good architecture.

4. CONCLUSIONS

The end should provide answers to the questions in the beginning. The presented arguments tried to show that between architecture and special needs education lays a relevant relation. Even though at first this connection might seem loose, at a closer look through the lens of phenomenology of architecture and environmental psychology, it becomes more and more obvious. Architecture may influence special needs education in many ways: through suitably designed learning environments, through thoughtful integration of users' needs outlined by inclusive design, through making architecture students aware and responsible, and finally, through the built environment in general, as a continuous and influential presence in human life. Good architecture takes care.

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Teaching Mathematics for children with SEN – good practice examples

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ABSTRACT

The inclusion of children with special educational needs in the mainstream schools is a process that involves a lot of changes both at the structural level of education and at instructional level. Teaching Mathematics, no matter of the educational level, requires good competences regarding the planning, the development or the evaluation activities in the class. In this context, those teachers who succeed at making a good practice started with a best knowledge of their students and with a differentiated planning of those activities developed with the children with special educational needs. The main purpose of our study is to identify some good practice models of teaching Mathematics to children with special educational needs. We tried to identify what are the main educational strategies used by teachers in their activities in order to prevent or to fight against scholar failure of the children with special educational needs (SEN).

KEYWORDS*: disabilities, inclusive education, Mathematics, special educational needs (SEN), teaching.*

1. INTRODUCTION

Nowadays the issue of children with special educational needs (SEN) is of growing interest in many countries. The necessity of special teaching Mathematics to children with special educational needs (SEN) is revealed by the multiple researches in this domain. "Inclusive education is a complex and lengthy process which requires continuous analysis, adjustments and development, in order to achieve inclusive policies and practices starting with the early education. The principle of inclusive education was officially promoted in the U.S. in the early '90s with Individuals Disabilities Education Art" [1].

There are many publications which present studies on inclusive education. The researchers C. Forlin and D. Chambers asserted that: "the role of the generalist teacher is now affirmed as being an important component in the success or otherwise of inclusive education practice. Issues about the effectiveness of teacher preparation for working in inclusive classes have arisen" [2]. In another study, A. de Boer, S.J. Pijl and A. Minnaert said: "Teachers are seen as key persons to implement inclusive education. Positive attitudes are therefore argued as playing a considerable role in implementing this educational change successfully" [3]. U. Sharma, C. Forlin and T. Loreman, found that: "inclusion of students with disabilities into regular schools is now one of the most significant issues facing the education community both nationally and internationally. In order to address this issue there is widespread acceptance that teacher training institutions must ensure that new teachers are trained to teach effectively in classrooms where there are students with a variety of learning needs [4]. In a recent study, L. Bailey, A. Nomanbhoy and T. Tubpun showed that: "in Malaysia the views expressed by the teachers involved in inclusive education were positive towards the principle of inclusion. However, despite common

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professional development on special educational needs, these teachers lacked a common consensus about the benefits of inclusion; they expressed concern about the lack of teacher skills in this area; further professional development is required to address these shortcomings" [5]. In Romania there is a tradition of inclusive education [1].

The inclusion of children with special educational needs in the mainstream schools is a process that involves a lot of changes both at the structural level of education and at instructional level. Teaching Mathematics, no matter of the educational level, requires good competences regarding the planning, the development or the evaluation activities in the class. In this context, those teachers who succeed at making a good practice started with a best knowledge of their students and with a differentiated planning of those activities developed with the children with special educational needs.

2. METHODOLOGY

2.1. Purpose of Study

The main argument for this study is promoting the examples of good practice in order to help other teachers to prevent educational failure on children with special educational needs (SEN).

2.2. Sources of evidence

In our study we had two main categories of sources of evidence: legal documents and researches of teachers. For the first category, we tried to identify those European and national documents of educational policy regarding the educational activities developed for children with special educational needs (SEN): Resolution of the Council and the Ministers for Education meeting within the Council of 31 May 1990 concerning integration of children and young people with disabilities into ordinary systems of education; The Law of National Education (no 1, 2011); OMECTS 5573 and 5574/ 2011. The second category included 28 researches of teachers which worked with children with special educational needs (SEN).

Those researches were made in three counties of Romania (Brasov – 8 localities), Covasna (2 localities) and Alba (1 locality), on 73 pupils on different levels of education (preschool, primary, secondary and high-school level).

2.3. Methods and instruments

The researches included methods as: observation (as well in the period dedicated to getting the students known, as in the realization of case studies and of personalized intervention plans for children with special educational needs), colloquy, the analysis of the pupils' educational products, experiments, study of documents (catalogues, students' transcripts, students' psycho-pedagogical data sheets, students' personal files, different documents from the school archive referring to some aspects of the students' training – scholar curriculum). It was also used SWOT analysis in order to identify the main strengths and difficulties in learning Mathematics.

Within the issue of planning and developing the learning activity and the students' individuality study, the docimologic test has become a core instrument.

The sociometric test has been applied in the period dedicated to getting the students known, achieving as well the common matrix for election and rejection.

2.4. Period

The researches developed between 2006 and 2012.

3. FINDINGS

Using the SWOT analysis, the results revealed that the main difficulties presented are dyscalculia, difficulties of understanding the meaning of numbers or of mathematical operations.

Examples of other difficulties in mathematics for primary school: there are confusions between the triangle and rectangle or between the inside and outside of a geometrical figure; during the transition from oral calculation (in which the numbers to be added up or subtracted are written in line) to written calculation, the students do not arrange correctly the terms/factors in order to perform that operation; students make mistakes at the algorithm of calculation of the unknown term; students make mistakes at the composing and decomposing of natural numbers, in the recognition of tens digit and the units digit; students do not know the neighbours of even and odd numbers; students do not command the correct ordering of numbers from least to greatest; frequent errors occur at the exercises of addition and subtraction with crossing tens barrier; the months of seasons or the own date of birth are not known etc.; there are difficulties in associating the terminology higher, lower, with the corresponding operation; the data of the problem is not being consciously read or analyzed and therefore it is not correctly solved; the assignment of the exercise is not carefully read and therefore its requirement is being confused; mistakes occur in identifying the first factor of multiplication and in writing the products; the expression: "with....more" is confused with „by... times higher"; mistakes occur in identifying the factors when the product is known; difficulties arise at transposing the problem's statement into exercise; the association between the name and operation (product, addition, subtraction, ratio) is not correctly made; due to inattentive reading of the statement, there are common mistakes at dual -choice items; difficulties arise at using the signs $<$, $>$, $=$ in simple inequalities; mistakes occur in enunciating a problem according to a literal formula.

We hereinafter present the united results of the researches made upon the issue of teaching and learning Mathematics to classes with integrated special needs students. A thorough knowledge of each pupil, accompanied by determining the level of mathematical knowledge and the deficiencies level in the preparation of each student were basic conditions to achieve progress in math. Through differentiation and individualization, the quality of learning mathematics has increased significantly. Only working differentiated and individualized within the students' questions, the group- or independent -work tasks (on notebooks, fiches, blackboard), within the practical activity , or homework, most pupils became aware and improved their results.

For the children with special educational needs the focus has been on recognizing information in order to help them achieve the syllabus objectives at a minimal level. Getting satisfaction in fulfilling the tasks increased their self-confidence. Individual treatment was needed to promote the optimal development of skills and abilities of each student.

In the case of children with special educational needs the individualised learning had a massive role, although the children in discussion were separated from the other children, and this fact has increased their own isolation tendency. It has been called on their integration with other students in solving tasks at the extent of their powers, invoking the general human desire to help. As a consequence, many students offered to help, and their help was accepted.

Besides the differentiated and individualized teaching, a progress of these children was noticed, when the teachers were using interactive methods in the educational practice.

For the students under the lower limit of mathematical performance standard were assigned additional hours, organised on level groups in order to help them make progress.

Another didactic strategy successfully applied for children with special educational needs during the Mathematics class, was the use of educational software, created in order to improve the typical, general mistakes.

The majority of the children with special educational needs didn't read attentively the text of the problem, which led to making random operations with numbers. That is why it was insisted upon going over the stages of math-problem solving with more attention.

Following the completion of these experiments, in which were taken the ameliorative measures mentioned above, it have been noted light progresses in math for children with special educational needs, such as: numeracy knowledge in the 0-10 concentre, comparing natural numbers and composing and decomposing them in the same concentre, ascending / descending ordering in the 0-10 concentre, addition and subtraction with support, without crossing the order in the 0-100 concentre, and even the addition and subtraction with and without crossing the order in the 0-1000 concentre.

4. CONCLUSIONS

The conducted study has led to the following conclusions. The indispensable premises for ensuring some progress in Mathematics for every child with SEN are: differentiated and individualized teaching, differentiated recommendation of the homework, use of group interactive methods, of independent work, of recover fiches, allocation of overtime work with these children, use of educational software, solving practical problems and problems of immediate recognition and application, of the learned theory.

Another conclusion with practical implications for teachers is that pupils' interest in Mathematics is determined by the way in which the teaching, learning and assessment of mathematical knowledge are done. Involving pupils in extra-curricular activities is likely to stimulate interest in Mathematics.

To determine students to love Math, depends on who is teaching it, on the whole teaching strategy used, on the skill, dedication and ability with which theachers work.

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The reasoning of practicing leisure sports activities in the improvement of the physical and health condition, in adults

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ABSTRACT

Physical health refers to the body condition and its responses to injuries and diseases. Health can be maintained, respectively improved through practicing leisure sports activities, graded on an intermediate and long-term basis. This stimulus, represented by the physical exercise, if applied constantly, contributes significantly to the improvement of the physical fitness. The latter is a component of the biological side of a human being, which is acquired in time and contributes to the physical wellbeing of the individual.

Along with other measures, often more convenient, that man nowadays takes in order to be active in the socio-professional environment, we believe that, at present, a broader action of awareness is needed, in relation to the conditioning of the level of physical health, to the one expressed through the indicators of physical capacity.

The present research, applied on a population pool of adult age , highlights on the one hand , the dynamics of some physical condition parameters , depending on the leisure sports activity volume, and on the other hand , the significant correlation – from a statistical mathematical point of view – between physical health and physical fitness.

From this study we concluded that, a good physical fitness, acquired through a high level of participation to various sports activities, has a positive effect on the physical health, that we perceive in relation to oneself.

KEYWORDS: *adults, leisure sports activities, physical fitness, physical health*

1. INTRODUCTION

Health is a fundamental resource for individuals, communities and societies overall. For the individual, enjoying a good health is vitally important. At the same time, a good level of health of the population is absolutely necessary for the economic growth and the development of society. (Alber, J. şi Kohler, U., 2004, p. 34).

A good health is an important component of the human capital, allowing people to carry out their work, to fulfill their purposes, to have a full life and to be active members of society. (Mărginean, I. and others, 2006, p. 56).

Maintaining a good health of one's body, is a quite concerning matter nowadays, that should be acknowledged and handled by each society, in order to cope with the daily demands.

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Health can be improved by practicing leisure sports activites, where the main stimulus – physical exercise – can contribute significantly to the improvement of the individuals' physical fitness, leading to the same extent to a good health of society, as, through its action, it brings together different social categories. (Dumitru, Gh., 1997, p. 3).[***]

Sabău, E., (2002, p. 39), believes physical condition is a component of lifestyle, appreciating the value of physical activies at all ages and under any material and social circumstances.

From a logical and methodological point of view, the notion of „condition" comprises all kinds of activities meant to acquire the „fitness". Considering the fact that some prefer only one kind of sports activity, swimming, for example, the latter may solve one's need for recreation, but in order to ensure the effects of a good condition, it needs to be performed according to methodological principles recommended by experts. (ibidem, p. 353).

2. MATERIAL AND METHODS

In an experiment that we conducted between April – November 2013, on a pool of 65 adults (who practice leisure sports activities), aged between 25 and 49, citizens of Brasov county, we found a significant correlation between physical health and the level of physical fitness. The higher the volume of physical activity is, the higher the level of physical fitness.

In this research, we used (initial and final) a type of questionnaire, focused on the main component of the quality of life – health, a strong emphasis being placed on the component "physical health" (timeframe spent on practicing leisure sports activities). This questionnaire comprised 20 questions, with values of results interpretation between 1 and 60 points.

For the evaluation of the physical fitness we used a standard test (http://www.topendsports.com/testing/hometest.htm), which consisted in three physical tests that the participants underwent individually at home, each month; the results of the periodic tests were emailed to the participants. We have also watched over the course of 8 months, the amount of participation of adults in various leisure sports activities (organized locally by NGOs, Commercial Companies, Brasov city hall) as well as in the set of programs that we proposed, called „Brasov people in motion").

After performing all the sports activities and collecting the data reported monthly by participants, in the end, we used once again, the questionnaire of physical health, as a result of the evaluation of participants' physical condition.

In the wake of the collected data, we calculated the index of physical health in adult participants and we established the effects of leisure sports activities on their health, via: correlations between the amount of physical activites and the level of physical health; correlations between the physical fitness at the end of our research and the acquired level of physical health; the initial physical fitness and the final physical fitness, for each age group, as follows: 25 – 29 years old, 30 – 34 years old, 35 – 39 years old, 40 – 44 years old and 45 – 49 years old.

3. RESULTS AND DISCUSSIONS

In terms of age groups, the highest number of leisure sports activities were perfomed by young participants, aged between 25 and 29, with an average of 72 activites, followed, one after another, by those aged between 30 and 34, with an average of 50,10 activities, participants

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between 35 and 39 years old, with an average of 43,23 activities, than those aged between 45 and 49, with an average of 32,78 activities and those between 40 and 44 years old, with an average of activity of 32,15. (Tab. 1, Fig. 1).

Table 1. *Total of leisure sports activities for the pool of adults who practice sports activities depending on the age group*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
25-29 years old	4	72,00	10,100	5,050	55,93	88,07	61	82
30-34 years old	10	50,10	4,886	1,545	46,60	53,60	43	60
35-39 years old	13	43,23	4,166	1,156	40,71	45,75	35	51
40-44 years old	20	32,15	4,998	1,118	29,81	34,49	23	39
45-49 years old	18	32,78	5,082	1,198	30,25	35,31	23	41
Total	65	39,75	11,899	1,476	36,81	42,70	23	82
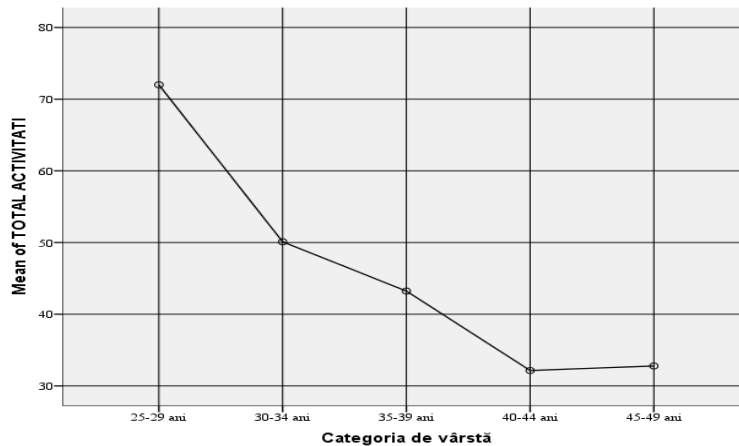
Fig. 1. *Distribution of the total amount of leisure sports activities for adults who practice sports activities depending on the age group*

Over the course of the 8 months, the highest number of activities/ from all 65 participants took place in June (363 activities) and September (345 activities), whereas the lowest number took place in October (292 activities) and August (306 activities). (Fig. 2).

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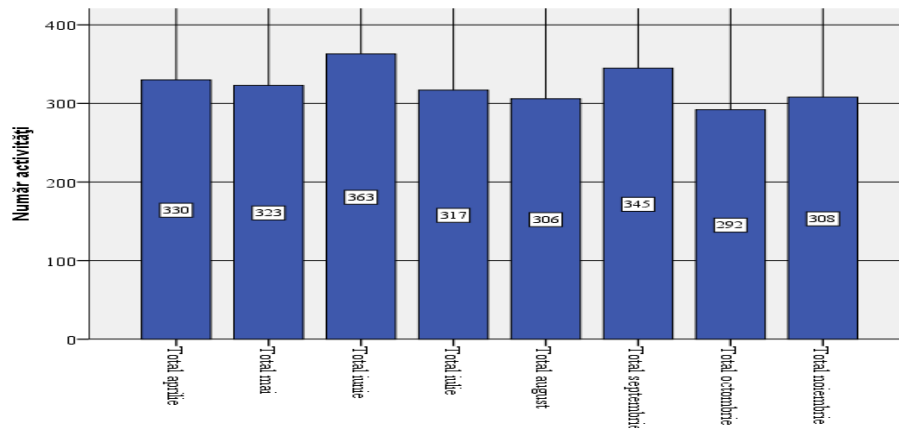
Fig. 2. *Distribution of the total amount of sports activities per month, for adults (target pool) who practice leisure sports*

3.1. Initial and final physical health depending on participants and age

At the beginning of our research, most of the people (95,4%) who practice leisure sports activities (within our pool of 65 participants), have a stated average level of physical health; 3,1% have a low level and only 1,5%, have a good physical health. (Tab. 2, Fig. 3).

Table 2. *Distribution of the initial level of physical health index for the pool of adults who practice leisure sports activities[a]*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	2	3,1	3,1	3,1
	Average	62	95,4	95,4	98,5
	Good	1	1,5	1,5	100,0
	Total	65	100,0	100,0	
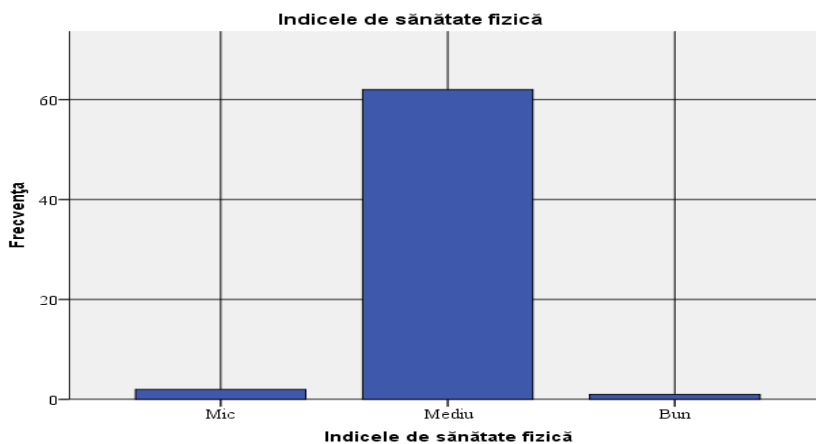
a. Practicing leisure sports activities = yes

Fig. 3. *Distribution of the initial level of physical health index for the adults who practice leisure sports activities*

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In terms of age groups, people who practice leisure sports activities, aged between 25 and 29, 30 – 34 and 35 – 39, have, on a very high scale (100%), an average index of physical health. Amongst the other age categories, the percentage of persons with an average index of physical health is also high, but a decrease has been noted in this percentage as the persons are ageing. (Tab. 3, Fig. 4).

Table 3 *Distribution of the initial level of physical health index for the pool of adults who practice leisure sports activities depending on the age group[a]*

| | | | Index of physical health | | | Total |
			Low	Average	Good	
Age group	25-29 years old	Count	0	4	0	4
		% within Age group	0,0%	100,0%	0,0%	100,0%
	30-34 years old	Count	0	10	0	10
		% within Age group	0,0%	100,0%	0,0%	100,0%
	35-39 years old	Count	0	13	0	13
		% within Age group	0,0%	100,0%	0,0%	100,0%
	40-44 years old	Count	0	19	1	20
		% within Age group	0,0%	95,0%	5,0%	100,0%
	45-49 years old	Count	2	16	0	18
		% within Age group	11,1%	88,9%	0,0%	100,0%
Total		Count	2	62	1	65
		% within Age group	3,1%	95,4%	1,5%	100,0%

a. Practicing leisure sports activities = yes
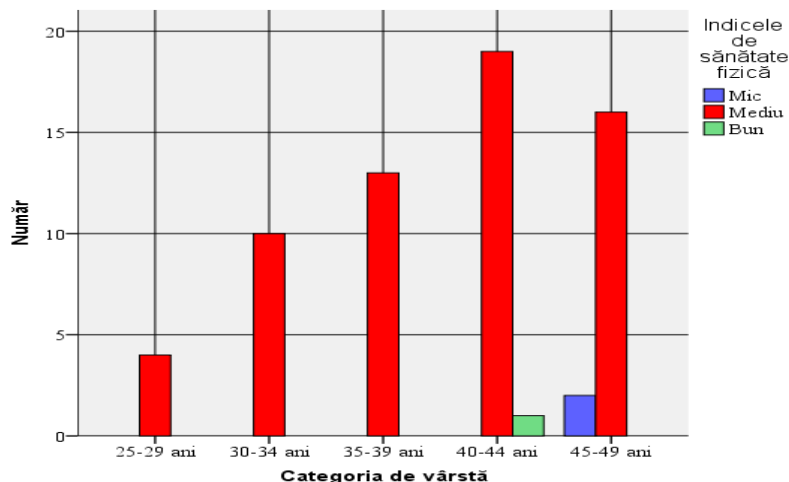
Fig. 4*. Distribution of the initial level of physical health index for the adults who practice leisure sports activities depending on the age group*

In regard to final physical health, 64,6% is a good index of health, whereas 35,4% of people have an average index of physical health. (Tab. 4, Fig. 5).

Tabel 4*. Distribution of the final level of physical health index for the pool of adults who practice leisure sports activities*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Average	23	35,4	35,4	35,4
	Good	42	64,6	64,6	100,0
	Total	65	100,0	100,0	

a. Practicing leisure sports activities = yes
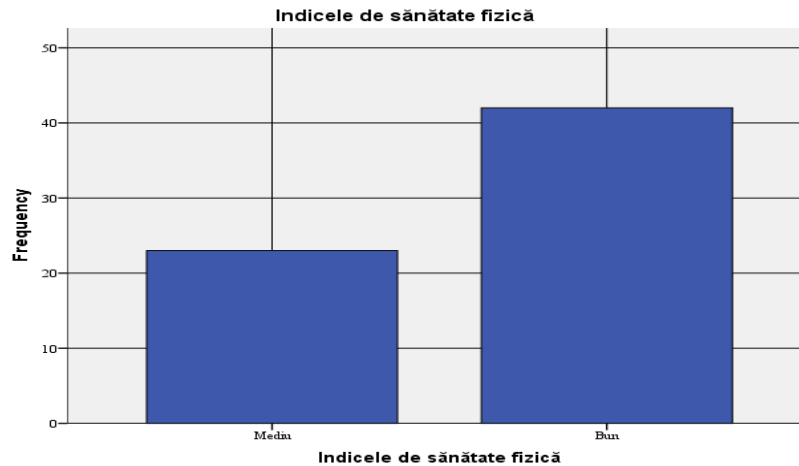
Fig. 5. *Distribution of the final level of physical health index for the adults who practice leisure sports activities*

Depending on the age category, adults who practice leisure sports activities, aged between 25 and 29, 30 to 34 and 35 to 39, acquired, on a very high scale (100%), a good final index of physical health. Amongst the other age categories, as adults are ageing, we can observe a lower increase in the percentage of adults with a good index of physical health. (Tab. 5, Fig. 6).

Tabel 5. *Distribution of the final level of physical health index for the pool of adults who practice leisure sports activities depending on the age group[a]*

			Index of physical health		Total
			Average	Good	
Age group	25-29 years old	Count	0	4	4
		% within Age group	0,0%	100,0%	100,0%
	30-34 years old	Count	0	10	10
		% within Age group	0,0%	100,0%	100,0%
	35-39 years old	Count	0	13	13
		% within Age group	0,0%	100,0%	100,0%
	40-44 years old	Count	11	9	20
		% within Age group	55,0%	45,0%	100,0%
	45-49 years old	Count	12	6	18
		% within Age group	66,7%	33,3%	100,0%

Total	Count		23	42	65
	% within Age group		35,4%	64,6%	100,0%

a. Practicing leisure sports activities = yes
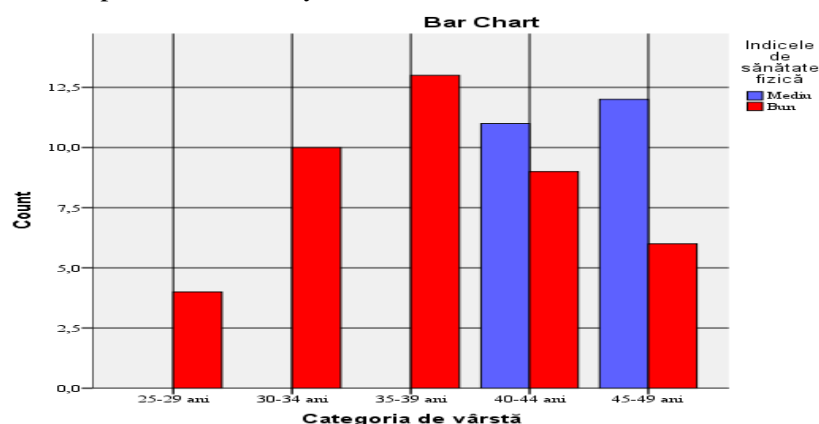
Fig. 6. *Distribution of the final level of physical health index for the adults who practice leisure sports activities depending on the age group*

3.2. Evolution of physical fitness, initial - final

By analyzing the evolution of the physical fitness, we can see a general trend /target pool, of permanent increase of physical fitness, from month to month, reaching its highest level in November. (Tab. 6).

Table 6. *Evolution of the physical fitness per months in adult participants who practice leisure sports activities*

	N Valid	Missing	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis	Minimum	Maximum
Below average level of physical fitness April	65	0	6,1329	6,0000	6,00	,69882	,077	-,550	5,00	7,67
Low level of physical fitness May	65	0	5,9842	6,3300	6,33	1,65788	-2,917	8,613	,00	7,67
Below average level of physical fitness June	65	0	6,5029	6,6700	6,67	,55312	,095	-,496	5,33	7,67
Below average of physical fitness July	65	0	6,63	6,67	7	,487	,193	-,696	6	8

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Below average of physical fitness August	65	0	6,8051	7,0000	7,00	,39969	-,135	-,191	6,00	7,67
Average level of physical fitness September	65	0	7,0766	7,0000	7,00	,34629	,295	,336	6,33	8,00
Average level of physical fitness October	65	0	7,3332	7,3300	7,33	,37287	,151	-,702	6,67	8,00
Above average level of physical fitness November	65	0	8,0362	8,0000	8,00	,56596	,200	-,684	7,00	9,33

The general trend of positive evolution of the physical fitness can be noticed in all age groups within our pool of participants. (Tab. 7).

Table 7. *Evolution of the physical fitness per months in adult participants who practice leisure sports activities, depending on the age group*

Age group		Level of physical fitness April	Level of physical fitness May	Level of physical fitness June	Level of physical fitness July	Level of physical fitness August	Level of physical fitness September	Level of physical fitness October	Level of physical fitness November
25-29 years old	Mean	6,2500	3,4175	6,4175	6,58	6,7475	7,0000	7,1650	7,9175
	N	4	4	4	4	4	4	4	4
	Std. Deviation	,41857	3,94849	,73699	,568	,50056	,26944	,19053	,16500
30-34 years old	Mean	6,4660	6,0000	6,6670	6,77	6,8680	7,1330	7,5000	8,4010
	N	10	10	10	10	10	10	10	10
	Std. Deviation	,52513	2,17193	,54502	,474	,42182	,35743	,28503	,41019
35-39 years old	Mean	6,3846	6,5646	6,7700	6,85	6,9746	7,2554	7,7446	8,7438
	N	13	13	13	13	13	13	13	13
	Std. Deviation	,54052	,48018	,37108	,400	,31835	,33706	,30897	,30918
40-44 years old	Mean	6,2995	6,2155	6,6330	6,75	6,9000	7,1495	7,2995	7,9170
	N	20	20	20	20	20	20	20	20
	Std. Deviation	,77887	1,58657	,60135	,494	,36032	,29457	,26375	,33943
45-49 years old	Mean	5,5550	5,8694	6,0933	6,28	6,5550	6,8522	7,0183	7,4811
	N	18	18	18	18	18	18	18	18
	Std. Deviation	,52357	,48789	,35728	,367	,38007	,32643	,26478	,32903
Total	Mean	6,1329	5,9842	6,5029	6,63	6,8051	7,0766	7,3332	8,0362
	N	65	65	65	65	65	65	65	65
	Std. Deviation	,69882	1,65788	,55312	,487	,39969	,34629	,37287	,56596

3.3. Correlations and t test for dependent pools between the results obtained by participants, in terms of physical health and level of physical fitness
- *The link between the amount of activities and the level of physical health*

In order to determine the correlation between the amount of performed sports activities and the level of physical health, we used an analysis of bivariate correlation, based on the Spearman correlation coefficient. For this, we built on the two hypotheses of the test:

H0: There is no significant link between variables

H1: There is a significant link between variables

As $p<0,001$, H1 hypothesis is confirmed.

We can state that there is an indirect link, of high intensity, between the amount of performed activities and the level of physical health, rho (0,777). (Tab. 8).

Table 8. *Results of the correlation analysis, based on the Spearman coefficient, between the amount of sports activities and the level of physical health*

			Total Activities	Index of physical health
Spearman's rho	Total activities	Correlation Coefficient	1,000	,777[**]
		Materiality threshold p	.	,000
		N	65	65
	Index of physical health	Correlation coefficient	,777[**]	1,000
		Materiality threshold p	,000	.
		N	65	65

[**]. Correlation is material at a threshold of 0,01

- *Link between the final physical fitness and the level of physical health*

The values of the materiality threshold that we obtained in the bivariate analysis between physical fitness on the one hand and the level of physical health on the other hand, shows us a significant correlation from a statistical point of view, between the two elements. The intensity of the correlation is high, rho (0,779). (Tab. 9).

Table 9. *Results of the correlation analysis, based on the Spearman coefficient, between the final physical fitness and the level of the physical health index*

			Total Activities	Index of physical health
Spearman's rho	Average level/above average of physical fitness November	Correlation coefficient	1,000	,779[**]
		Materiality threshold p	.	,000
		N	65	65
	Index of physical health	Correlation coefficient	,779[**]	1,000
		Materiality threshold p	,000	.
		N	65	65

[**]. Correlation is material at a threshold of 0,01

In order to compare the level of the initial and the final physical fitness, after 8 months of leisure sports activities, we applied the t test for dependent samples.

The average level of initial physical fitness was 6.13, whereas the average level of final physical fitness was 8,03. The standard deviation for the initial results is 0.69, whereas the deviation for the final results is 0,56.(Tab. 10).

We took into account the following hypotheses:

H0: The level of initial physical fitness does not differ in a significant manner from the level of final physical fitness.

H1: The level of initial physical fitness differs in a significant manner from the level of final physical fitness.

We can note that the average levels of physical fitness, both initial and final, differs one from another significantly: t=-24,741; df=64; p<0,001.

The confidence interval of the difference (*95% Confidence Interval of the Difference)* varies between -2,05 (lower error) and -1,74 (upper limit). (Tab. 11).

The results obtained show the positive effects of sports activities, activities that lead to a significant increase in the level of physical fitness.

Table 10. *The results of the t test analysis for dependent samples, between the level of the initial physical fitness and of the final physical fitness*

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Level of physical fitness April	6,1329	65	,69882	,08668
	Level of physical fitness November	8,0362	65	,56596	,07020

Table 11. *The results of the t test analysis for dependent samples, between the level of the initial physical fitness and of the final physical fitness*

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Level of physical fitness April - Level of physical fitness November	-1,90323	,62019	,07693	-2,05691	-1,74956	-24,741	64	,000

4. CONCLUSIONS

The obtained results led us to the following conclusions:

– Over the course of the 8 months, the participants practiced, on average, 39,75 sports activities, the smallest number of activities being 23 and the highest number - 82.
– In terms of age groups, the highest number of leisure sports activities were performed by the young participants, aged between 25 and 29.
– The study shows a direct relation, of high intensity, between the amount of performed sports activities and the level of physical health. Also, a high level of physical fitness is related to a high level of physical health.

5. ACKNOLWDGEMENTS

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Study on Knowledge and Acceptability of Custom Implants Manufactured by Selective Laser Sintering Method from Biocompatible Materials with Human Body

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ABSTRACT

Custom implants from biocompatible materials represent a viable alternative to medical devices currently used in the healthcare system. The survey based on an original questionnaire has tested the knowledge level and acceptability of the population regarding the use of customized implants.

The study showed a relatively good level of public knowledge regarding the existence of customized implants from biocompatible materials, the acceptability of their use was high, the main sources of information were the specialist and the family physicians.

The motivations of choosing to perform surgery in Romania's hospitals were different depending on the category of subjects surveyed (medicine students or the general population).

KEYWORDS: *biocompatible material, custom implant, marketing research*

1. INTRODUCTION

In the last years in all medical specialties, including orthopedics, plastic surgery, ophthalmology, maxillofacial surgery, cardiology, urology and neurology biomaterials are used for diagnostic, prevention and therapy

Custom implants manufactured based on anatomy characteristics of each patient that are manufactured from biocompatible materials with human body through selective laser sintering technology represents, currently, new opportunities and modern alternative in surgical solving of trauma, tumors, bone malformation and chronic degenerative pathology of the osteoarticular apparatus.

Marketing should be understood as a tool to meet the needs of customers, selling and advertising representing only the tip of the iceberg. Together they merge in the social field to build relationships with customers, who have as a feedback, the profit.

Double purpose of marketing is to attract new customers by promising a superior value and preserve or increase the number of customers by meeting very appropriately their expectations. Thus, marketing must reach the performance to know the client and the service / product to be suitable for him so that he may "sell itself" [1].

The marketing process involves, [2] knowledge of the market, of the needs and wishes of consumers, developing a marketing strategy focused on customers, developing a marketing

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program that aim to create a higher value, building a strong relationship with customers and their satisfaction, obtaining value from customers in order to create profits and quality for consumers.

Marketing system created and applied in developed countries, with particularly positive results in raising the living standards, is expanding in recent decades also in the rest of the world [3, 5]. Marketing affects everyone, but in different ways, thus creating a conflict of interest between consumers and producers and public groups, which can be overcome if the marketing system will be able to achieve four objectives: maximizing the consumption, the consumer's satisfaction, the consumer's choice and quality of life. These objectives are interrelated, and by combining them is obtained maximize results [5].

2. MATERIAL AND METHOD

The current research was conducted through a questionnaire for collecting data in order to achieve the survey regarding the level of knowledge of population and their acceptability of custom implants made by selective laser sintering of biocompatible materials with the human body.The original questionnaire was developed based on a series of hypotheses set out in the preliminary investigation and was pre-tested on a pilot sample of 5 subjects who were not included in subsequent research, following the methodology of scientific research.

After pretest period, the questionnaire was validated and developed the final form, which was applied by full investigation on two series of students in final year from the faculty of Medicine (total 116 respondents).

Also, the questionnaire was applied in two family medicine cabinets to test level of information and acceptability of potential patients regarding the use of a custom implant. Thus data collecting was done by self registration upon presentation at the medical center of the first 100 patients who accessed health services in one week.

Ethical principles of scientific research were respected, including the anonymous character. Previously the consent of the insured and that of the students to participate in the study was obtained.

As there was done also in other researches, [4], databases achieved in "EXCEL" program were processed by Statistical and Mathematical Methods.

3. RESULTS AND DISCUSIONS

Over half of the patients from the study group belong to male subjects aged between 35-65 years and over, mostly from urban areas with a higher average educational level and over two thirds having monthly earnings between 800 and 1600 lei.

The majority of students from the study belong to females under the age of 35 years, mainly from urban areas and most with monthly earnings of 800 lei.

More than half of surveyed patients (54.00%) and over three quarters of students enrolled in research (77.59%) declare that they have knowledge about the existence of customized implants. (Fig. 1).

It can be noted the difference between the percentage of responses of medical students, which shows that only 22.41% say they have not heard about the existence of customized implants, possible response motivated by the knowledge from the specific university training compared to the share of 46, 00% of the responses of potential users registered to family physicians from the two cabinets taken into the study.

A possible explanation of this distribution of responses to potential users may be the heterogeneous structure of participants in the study, the different health culture, restricted access

to the new world of scientific research results and accidental contact with the new product - custom implant of biocompatible materials - just in time where there is a need for surgery on a personal level.

Because, in this research, an original work questionnaire was applied, in literature consulted have not found studies that address the issues studied in this manner, so there is no comparative data with the results obtained from the original questionnaire. In the future, further studies that will be performed using this questionnaire will allow to obtain comparative results for the level of information of population (potential users) regarding the existence and usefulness of customized implants made of biocompatible with the human body.
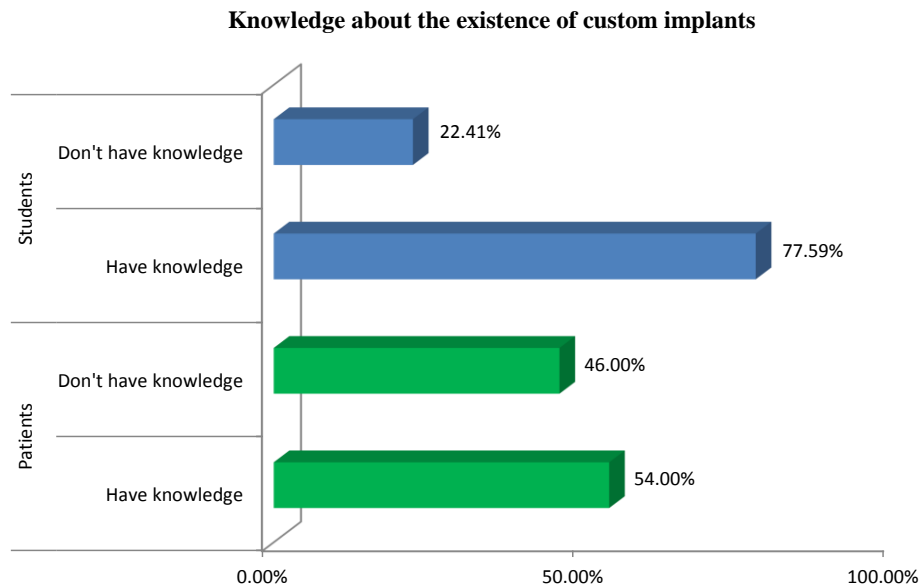
Fig. 1. The share of respondents answers depending of their knowledge, regarding the existence of the customized implants

When respondents were questioned about the intention to use a custom implant of biocompatible materials with the human body in case of malformation type disorders, bone tumor or injury that requires surgery with implant, nearly half of the students investigated, they answered, "Sure Yes " the remaining 54.31% expressed some uncertainty in their responses.

The existence of responses that say they are not totally decided to the use of a custom implant from biocompatible materials, do not entirely exclude the decision to resort to such a product.

Patients gave different answers than students and they expressed their definite intention to use a custom implant from biocompatible material in proportion 46.00% of the responses.

The uncertainty in using this type of implant is declared by over 54.00% of respondents, a possible explanation for these shares being the lack of information and understanding of the new concept.

It must be mentioned that there is no study participant (patient or student) who certainly reject the possibility of using custom implants made of biocompatible materials (Fig. 2).

Intention of using a custom implant from biocompatible materials
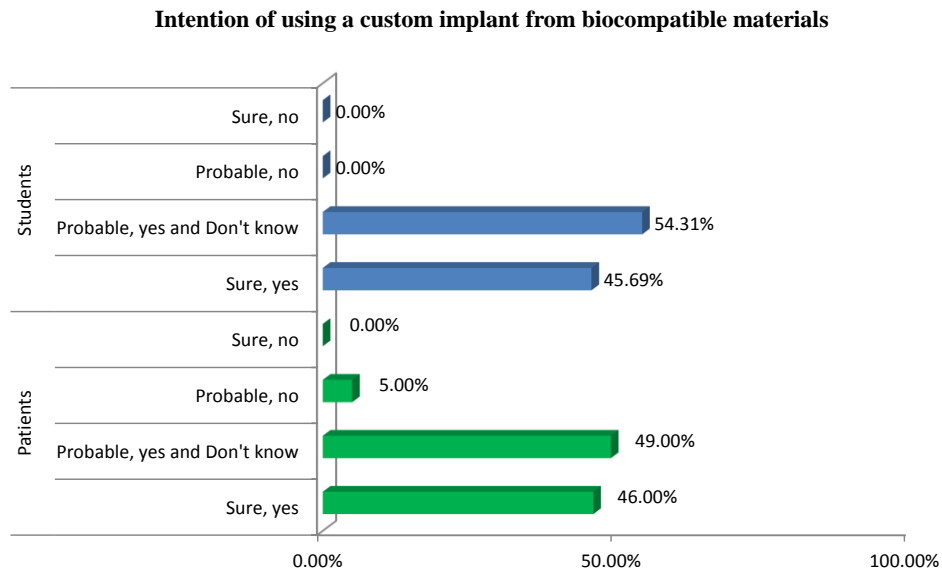
Fig. 2. The share of respondents answers depending of their intention for using a custom implant made from biocompatible materials

The specialist physician and the family physician are the main source of information that most respondents (88.18% patients; 85.50% students) say they will ask for advice in choosing, in case of need of a custom implant. Other sources of information specified subjects were: studies and articles, internet (medical sites) clinics. (Fig. 3)

The shares of more than 80% in declarations regarding the information sources used when is token the personal decision for accepting medical intervention in which both students and patients placed in the first rank the healthcare providers (physician and family doctor) suggesting the confidence of population in the opinion of health professionals, including in the case of choice an implant for a surgical operation.

Both students and patients, as potential users of customized implant recognize mass media role in informing the public about the new product, hence the need to lobby for population information and greater adherence to the use of the new opportunities in solving surgery trauma, tumors, bone malformation and chronic degenerative pathology of osteoarticular apparatus.

Source of information on choosing custom implants
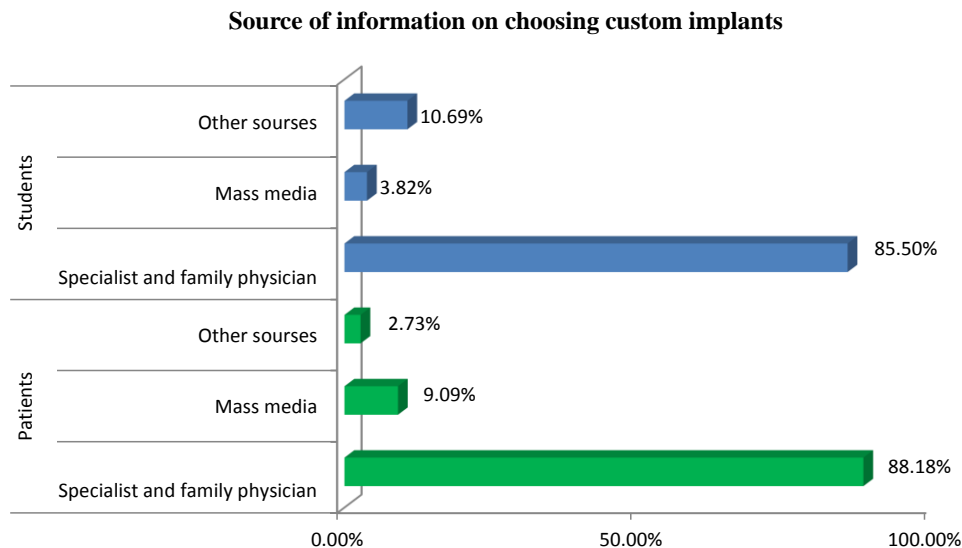
Fig. 3. The share of respondents answers depending of their source of information on choosing custom implants

Only 10 of the students surveyed (representing 8.62%) answered that they certainly want to choose a hospital in Romania for surgery required for a custom implant, while 3.45% categorically refused to access this kind of services in Romanian hospitals.

The analysis of the reasons given by those who argue strongly that they want to go to a hospital in Romania, shows competence and confidence in doctors specialists in Romania. Some of the interviewed subjects who responded certain that refuse, or be likely to refuse services offered in hospitals in Romania, motivate their choice of hospitals by poor equipment, poor conditions and lack of staffing in hospitals.

The uncertainty (87.93%) in choosing a hospital in Romania expressed by interviewed students is supported by answers where respondents consider that choosing a hospital would depend on the experience of specialists and success rates in similar interventions.

Patients' responses given to the question "Did you choose a hospital in Romania for a surgery with custom implant ?" Shows that in share of 80.00%, the respondents have intention to use health services provided by hospitals in Romania.

A possible motivation for this approach could be differentiated costs of treatments required surgical implants, which in Romania are below those of other countries, the population that participated in the study, had low and medium monthly earnings and that surgical interventions are covered in the vast majority by the health insurance system in our country, could be a strong motivation for the decision expressed.

Students that in medical education have the opportunity to know the realities of Romanian hospitals declare a higher percentage (21.55%) that would not go to a hospital in the country for the required implant surgery, compared with the general population who said in a lower share (1.00%) this intention. These answers could be explained by the difference in standard of quality health services between the two population groups surveyed. (Fig. 4)

Intention to choose a medical unit from Romania
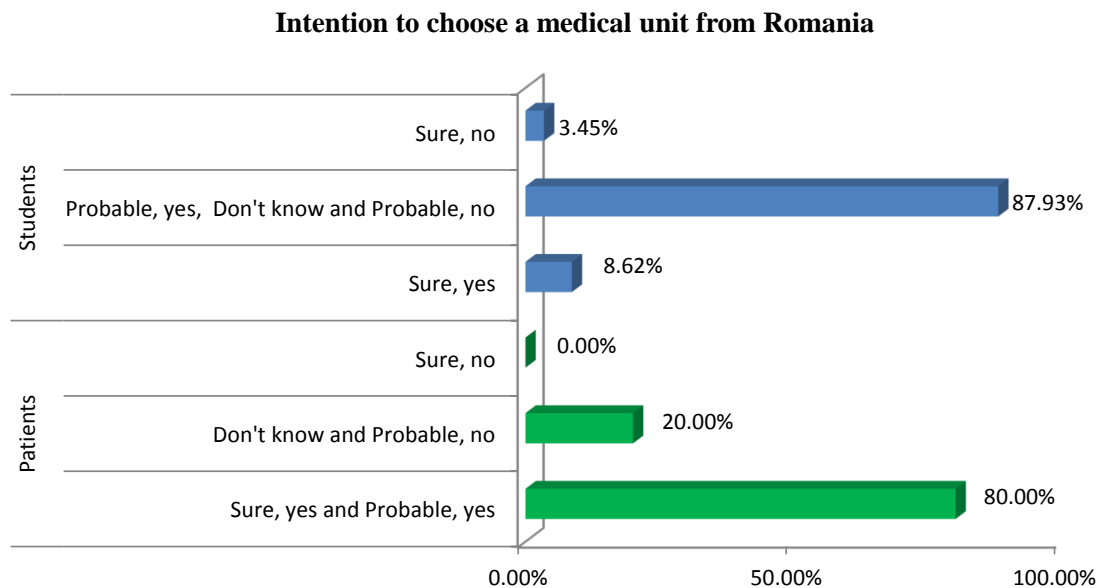
Fig. 4. The share of respondents answers depending of their intention to choose a medical unit from Romania

4. CONCLUSIONS

The study shows a relatively good level of knowledge of the public regarding the existence and usefulness of customized implants from biocompatible materials with the human body.

There is no study participant who totally reject the idea of using custom implants, which shows a very high level of of acceptability of these products.

The main source of information on the existence and usefulness of customized implants from biocompatible materials was the specialist physician, family physician, but it was underlined also the role Massmedia and other sources (scientific articles, Internet) to promote the new product.

Payment by the health insurance system of certain surgeries and implants is the main motivation in choosing the use of health services in Romania, for most patients investigated, while the quality of services provided by hospitals in the country is the main criterion for selecting the unit health for medical students.

5. ACKNOLEDGEMENT

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Some ethical aspects concerning the chemotherapy treatment of small animals in veterinary medicine

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ABSTRACT: *In veterinary medicine practice the cytostatic treatment is available mainly in printed form – books, articles, studies, researches. Due to ethical issues regarding the limited access to therapeutic protocols for the pets, through the elevated costs of the chemotherapy and in the absence of the animal health insurance for pets in case of cancer in Romania it is accepted the idea to introduce in practice the software for oncological therapy.*

The research was realized based on an original questionnaire with the aim to find ethical aspects regarding the acceptance of the chemotherapy in veterinary treatment, the need to introduce a form of insurance for the pets in case of oncological treatment and the possible founding sources for the treatment.

The study confirmed that the practice vets consider unethical the idea of limiting the access to chemotherapy for small animal medicine. The study revealed the need to introduce some form of health insurance in the veterinary oncological practice and the payment for treatment should be covered by the owner, insurance, pharmaceutical and food producing companies.

KEY WORDS: *cytostatic prescription, marketing software, multimedia platform, veterinary oncology*

Introduction

In Public Health, the elevated costs of medical treatment in the oncological veterinary field are limiting the access to this type of interventions, but also the absence of a social health ensuring system or financial founding by specific programs like the National Programs from human medicine.

In case of the farm animals, where the productions can be used in human consumption, the chemotherapy treatment is forbidden; the concerns of the oncological veterinary specialists for preventing the limited access of small animals to this type of treatments are less than optimal. In veterinary medicine practice, the cytostatic oncological treatment is administered only to small animals, but a major issue is represented by the elevated costs of the treatment which influences the decision of the owners to apply for the oncological complete treatment.

The problem of initialing and applying the treatment is related to the elevated costs. Who should support the costs? Only the owners? Or, there could be other public or private structures that could support this kind of treatments?

The aim of this study was to evaluate participants' opinion regarding the ethical aspects arising from limiting the access to chemotherapy treatments for small animals if the oncological veterinary pathology is present.

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Material and method

The study was conducted on applying an original survey using the utility of electronic chemotherapy prescription for veterinary medicine, realized after the conclusions of a focus group held with veterinary practitioners. From the 32 items of the survey, this study was focused only on 5 questions (Q25-Q29) which were realized on the ethical dilemma on using chemotherapy in veterinary oncology.

Some of the items in the survey were calibrated as a tool to measure using a Lickert scale with 5 values.

It was tested on a pilot group of 5 participants; their results were excluded from the final results. Collection of the data was realized by self-registration, face to face, during the January-March 2015 period.

After validation of this survey, it was applied to a batch of people working in the field of veterinary medicine - students of the Faculty of Veterinary Medicine at different educational levels (students and graduate students), veterinary practitioners employed in the public or private veterinary assistance, teachers of the Faculty of Veterinary Medicine. The number of participants in the study was determined based on the formula of Tarro Yaman (106 persoans), with a coefficient error of 0,1 (Mureşan P, 1989).

There were criteria developed for the inclusion and exclusion from research of the subjects and all of them expressed their informed consent to participate in the survey anonymously, with the right to use personal information only for the purpose of scientific research and respecting the principles of ethics in scientific research.

Inclusion criteria: student to Veterinary Medicine; veterinary public sector employee; authorized veterinarian; veterinarian in private practice; veterinarian committed to the practice (clinic, hospital) private; veterinarian unemployed; retired; Veterinary Medicine graduate and are employed in another field; regardless of age group, gender (female, male) and area of origin (urban, rural); permission to participate in the study.

Exclusion criteria from the study: the refusal of participation in the study.

Data were processed using statistical and mathematical methods. (Muresan P, 1989), presenting them being performed in Microsoft Excel 2007 - ANOVA single factor and T tests.

The results of the items Q1-24 and Q30-32 from the survey were the subject of another publication, the ethical aspects being processed only in this study.

Results and discussions

Participants in the study belonged to both genders in almost equal percentages (F: 50.94% and M: 49.06%), the majority (84.06%) were aged between 25-59 years, with activities in the field of veterinary medicine, with experience between 1 and 29 years (56.61%), 81,13% - declared that they own a pet animal.

Owning a pet might influence, from the psychic, behavior and ethical point of view, the view of the vet towards the use and acceptance of the chemotherapy treatment for his own animal, fact that can change the therapeutically decision also on the „other patients" with oncological disease.

From the analysis of the data obtained, the analysis was directed on the two categories (81.13% pet owners and 16.98% which don't have a pet). From the analysis, the persons who didn't respond to this question were excluded (2 persons – 1.98%).

This separation in two categories tried to bring more information regarding the possible differences between the opinions of the subjects who own a pet and those who don't, regarding:

use of chemotherapy treatments for their own pet, limiting their access to chemotherapy and the utility to introduce some forms of insurance in veterinary medicine.

Analyzing the availability to use the chemotherapeutical treatment for their own pet, we registered that only 2.33% from the persons that own a pet are not willing to use this treatment in case of oncological disease. Most of the questioned people – 95.35% - showed that they are willing to use the chemotherapeutical treatment, but in different degrees of acceptance.

From the 18 questioned people who don't have a pet, 14 declared different degrees of acceptance to utilize the chemotherapeutic treatment for their own pet. (Chart 1)

The high share of those who declare that they accept the chemotherapy treatment can be explained by the professional training of the people involved in the study (veterinary staff), who realizes the importance of chemotherapy in veterinary oncological pathology.

The answers given by the subjects who declare themselves owners of pets sustain the idea that limiting the access of pets to chemotherapy treatment when the oncological pathology is present to be totally unethical (46.51%), very unethical (11.63%) and little ethical (25.58%). This opinion is found in 83.72% of the questioned people.

Even for the people who don't have a pet, all the 18 people agree that limiting the access to chemotherapy is totally unethical (10 people) and little ethical (8 people)(Chart1).

Due to elevated costs of the chemotherapy treatments in case of pathological oncology in pets and preventing inequality in accessing the health, in the survey we introduced a question regarding the utility to introduce some form of health insurance in veterinary medicine. The utility was confirmed by 79.06% of the total people owners of pets and of 10 people out of 18 people who don't own a pet (Chart1).
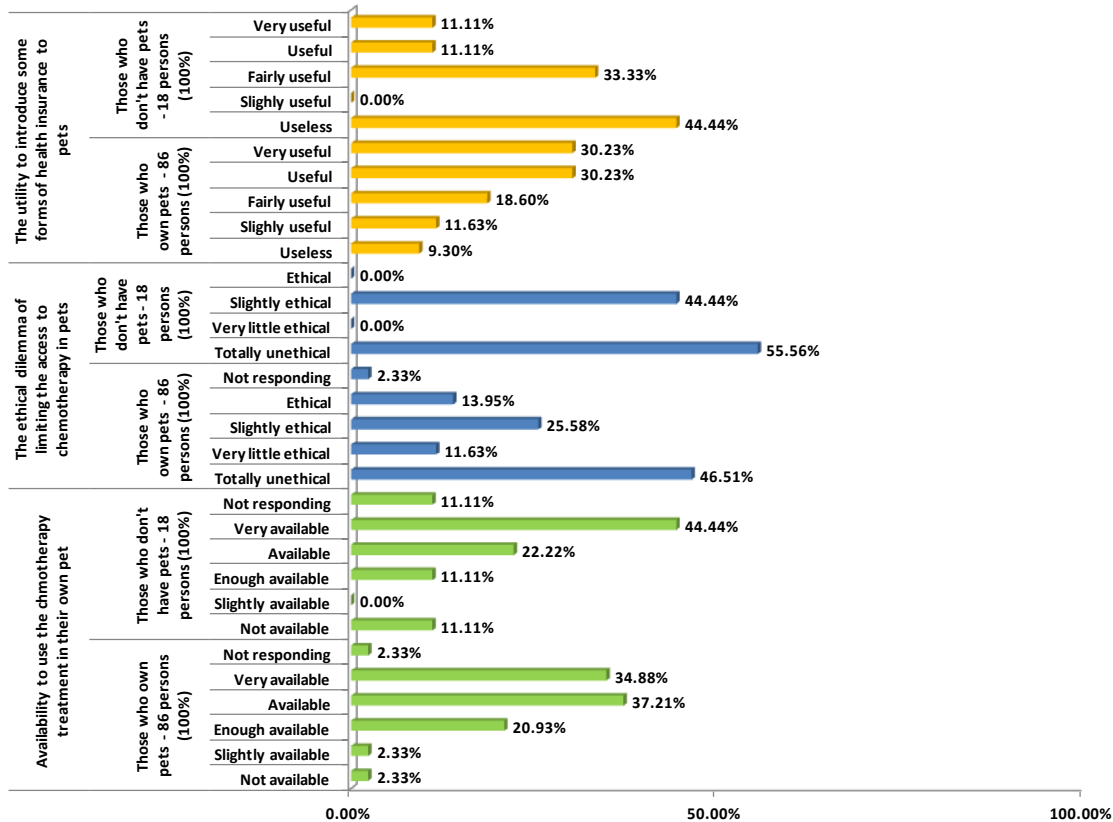
Chart 1. The opinion of the questioned people owners and non- owners of pets towards: using the chemotherapeutical treatment on their pet, the ethical dilemma of limiting the access of pets to chemotherapy and the utility to introduce some forms of health insurance in veterinary medicine

Analysis of significance was performed (by ANOVA) at a p = 0.05, between the following variables:

- Owning/non owning a pet and the willingness to treat their own pets with chemotherapy if he has a diagnosis of oncological pathology;
- Owning/non owning a pet and the opinion regarding the ethical dilemma of limiting the access of pets to chemotherapy treatment of pets
- Owning/non owning a pet and the opinion regarding the utility to introduce some form of health insurance in veterinary field.

Following this statistical analysis the following results were obtained:

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	106	128	1.207547	0.204133		
Column 2	106	430	4.056604	1.196765		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	430.2075	1	430.2075	614.188	2.84277E-64	3.886121
Within Groups	147.0943	210	0.700449			
Total	577.3019	211				

Statistical analysis of results between variables questions 25 and 26 show a statistically significant difference between the two groups of variables, at p = 0.05.
In groups of variables statistical significance is not observed.

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	106	128	1.207547	0.204133		
Column 2	106	222	2.09434	1.381491		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	41.67925	1	41.67925	52.5714	7.83E-12	3.886121
Within Groups	166.4906	210	0.792812			
Total	208.1698	211				

Statistical analysis of results between variables questions 25 and 27 show a statistically significant difference between the two groups of variables, at p = 0.05.

In groups of variables statistical significance is not observed.

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Column 1	106	128	1.207547	0.204133		
Column 2	106	356	3.358491	1.965499		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	245.2075	1	245.2075	226.0361	3.67E-35	3.886121
Within Groups	227.8113	210	1.084816			
Total	473.0189	211				

Statistical analysis of results between variables questions 25 and 28 show a statistically significant difference between the two groups of variables, at p = 0.05.

In groups of variables statistical significance is not observed.

Due to elevated costs of chemotherapy treatment in oncological veterinary pathology the results of the study confirms solidarity in supporting the costs and to reduce the inequity in access to treatment for companion animals, as demonstrated by the answers given by the survey participants. Thus, from the batch of participants in the study in rank I (39.62%) there are the answers sustaining the payment for chemotherapy oncological pathology in pets should be supported only by the owner and second rank is held by those who believe that payment should be the responsibility of the health insurance companies in the veterinary field (30.19%).

Note the relatively high share of subjects who claim that responsibility for payment of chemotherapy should belong equally, to the owner, veterinary drug companies, the companies that produce pet foods and the health veterinary insurance companies (26.41%). (Chart 2)
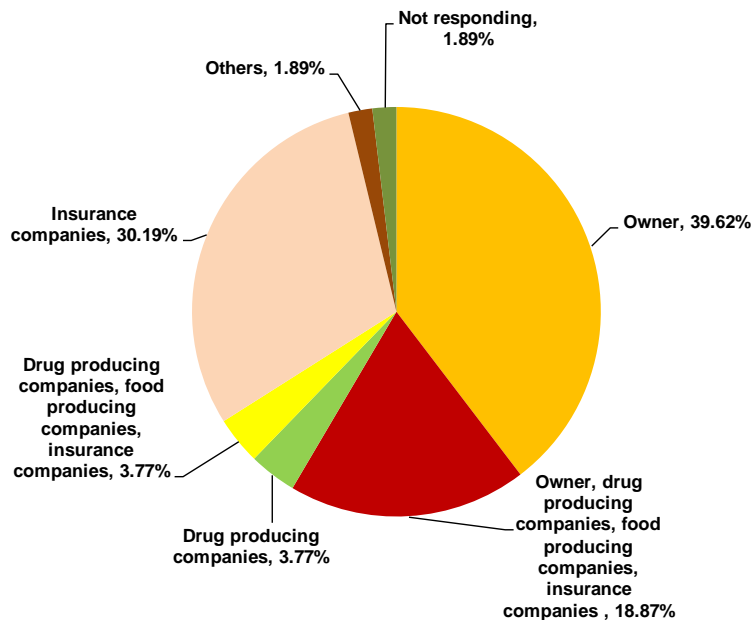
Chart 2. Opinion of the subjects regarding the responsibility for the payment of chemotherapy in the pet with oncologic pathology

The research was realized based on the original survey that we conceived. We did not use a standard survey instrument because the literature lacks this type of instrument to evaluate the aspects that we were interested for this research. The data collected could not be compared with similar results and can be considered as preliminary results, which need further research on other batches of subjects. This will allow comparing the results that we obtained with similar studies. The results cannot be generalized to the whole veterinary community in Romania; the sample on which the research was made it is not representative for the whole veterinary community.

However, a significant number of participants consider that this responsibility should be divided between owners and other structures: insurance companies, drug producing companies, food producing companies. Obviously, these responses indicate a normalization of the situation taking into account that this trend is also visible in other European countries such as Switzerland, where 10% of dogs and cats are insured, 20% in the UK, and in Sweden pets are insured in a percentage close to 80%. (http://www.acommeassure.com/, 15 December 2014)

In Romania, although some insurance agencies have some assurance for pets concerning the health care program, there are no facilities assured for the chemotherapy treatment in case of oncological pathology.

Conclusions:
1. Overall batch investigated a share of 92.30% of survey participants said, to varying degrees, the availability for use of chemotherapy for their own pet, where oncologic diagnosis would advocate for this type of medication.
2. Out of the total subjects retained in the statistical analysis only a share of 13.95% consider ethic the limiting access to chemotherapy in pets.
3. Only 25.00% of investigated subjects consider unnecessary or very little useful the introduction of health insurance for pets, the study highlighting the usefulness of

introducing some form of health insurance in the veterinary field, three quarters of respondents - 75.00% - confirming , to varying degrees, this need.

4. Over a quarter of respondents - 26.41% - claim that the responsibility for payment of chemotherapy should belong equally, to owner, veterinary drug companies, the companies that produce food for pets and the health insurance companies that work in the veterinary field.

5. It is natural that pet owners to be supported in their quest to treat affected animals of cancer, which results from the study participants' answers.

6. Study confirms the idea of solidarity and participation of several structures in supporting the costs and to reduce inequality between pet owners, on accessing expensive treatments for pets. It remains only to insurance companies to offer affordable options for those interested, and represents the owners and profile associations to represent their interests involving other interested structures in this process.

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Aspects of monitoring a cohort of adult homeless people suffering from tuberculosis compared to the general population of Bucharest

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ABSTRACT

In the case of homeless adults (HA), there are high rates of TB- a public health issue in Romania- due to poor living conditions and to those conditions favouring the development of the disease. The aim of this study is to compare the cases reported with chemosensitive/ monoresistant TB, in 2013 at HA with those occurred in the general adult population (GAP), in terms of socio-demographic and clinical characteristics, and to evaluate the direct costs provided to such persons from both cohorts. Data were collected from the National Tuberculosis Programme. Have been taken into account the costs directly determined strictly for detection, monitoring and treatment of patients with TB, comparing the mean values for the 2 groups. The results showed that most patients are young men, representing new pulmonary TB cases, with associated conditions (HIV, drug addiction) and that there are significant statistical differences in terms of average costs determined per HA patient, due to the extended length of stay in their case. Most of the cases are pulmonary that can transmit the disease. The average length of stay in the case of HA is about 3.0 times higher than in GAP cases.

KEYWORDS: *direct costs, general adult population, homeless adult people, tuberculosis.*

1. INTRODUCTION

In our country, tuberculosis is an endemic disease and a public health issue and, through its high incidence has placed us first among European Union countries in 2013 [1]. In vulnerable population groups that are at high risk for developing tuberculosis (TB), there are high rates of TB due to poor living conditions, to their poly-morbidity and to those conditions favouring the development of the disease, such as drug use, HIV infection and overcrowding in the shelters where they live [2, 3]. The vulnerable population groups also include the homeless adults - HA, a population group that has limited access to health care services, which makes the disease to not be early detected. WHO has claimed in 2009 that in many industrialized countries the TB rates in HA can be over 20 times higher than in the general population, that is perhaps due to the conditions of the economic crisis in recent years, and which has resulted in increased poverty [4]. Compliance with a long-term treatment (at least 6 months) is usually low, therefore, for a correct treatment under direct observation – DOT [5, 6], is preferred the hospitalization of HA for the whole duration thereof.

2. AIM and OBJECTIVES

Starting from the data gathered in the previous research, when was analysed the HA cohort for 2013 in Bucharest, the aim of this study was to review the same cohort of HA suffering from chemosensitive / monoresistant tuberculosis compared with a corresponding cohort of patients

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from the general population of Bucharest, and the proposed objectives were to analyse these people in terms of socio-demographic and clinical characteristics, as well as to assess the direct costs arising from the healthcare services provided to such persons from both cohorts, by comparing the average values thereof.

The hypothesis of this approach is that the cost of caring out for HA patients is higher than that of the cases of the general population.

3. METHODOLOGY

The methodology was a descriptive approach to HA and GAP suffering from chemosensitive / monoresistant TB, as they were reported in the year 2013, in Bucharest. The data were collected from the reporting sheets of HA kept by the TB outpatient care in the sectors of Bucharest, and from the electronic database of the National Programme for the Prevention, Surveillance and Control of Tuberculosis (NPPSCT), for both HA and the GAP.

In the calculation of costs, there have been taken into account the costs directly incurred strictly for detection, monitoring and treatment of patients with TB (Table 1) [7], and it was not taken into account the cost of epidemiological investigations carried out in each case, the cost of investigations conducted for persons who were in contact with cases of tuberculosis and the cost of other medical supplies used in such cases.

Table 1. Costs incurred for the detection and treatment of a case suffering from TB

Costs taken into account	Value	
the pulmonology clinical examination	RON 16	
pulmonary x-ray	RON 27	
the bacteriological examination	microscopy RON 17	= RON 71
	culture RON 54	
drug sensitivity test (DST)	for the short series (isoniazid, rifampicin) is of RON 102	
	for a long series (and second line drugs) is of RON 841	
the maximum cost of a day of hospitalization (for 2013)*	RON 231 for chemosensitive TB cases	
the average cost for a treated TB patient	per year is of RON 491 (regimen I- 6 months, II – 8 months, individualized, but not for MDR-TB)	

In the study have been excluded tuberculosis cases with multidrug-resistance (MDR-TB) due to their particularities: a special regimen of treatment that covers 24 months, with two phases (intensive and continuation), with a higher cost (of RON 11,180 for around 24 months) and also the hospitalization that could cover 90 days and over (the cost for a day of hospitalization in such case is of RON 1,900) [7].

The data was summarized in a database in Excel and its processing was performed using SPSS version 19, and Microsoft Excel, including the descriptive statistics analysis of socio-demographic and clinical data, as well as concerning the assessment of direct costs.

4. RESULTS

The number of persons reported as suffering from TB in Bucharest, in 2013, was of 1291, of which 45 were HA.

The cases of MDR-TB were eliminated: 3 among the 45 HA –remaining 42, and 46 among the GAP, as well as children under 18 years old reported during this period, so that the remaining people in the study from the latter category, suffering from chemosensitive / monoresistant TB, were 1,099 in number.

Most patients were men, i.e. 33 among HA and 660 among GAP (Fig. 1). There is a statistical significance between the two cohorts regarding their distribution by gender (p=0.015).
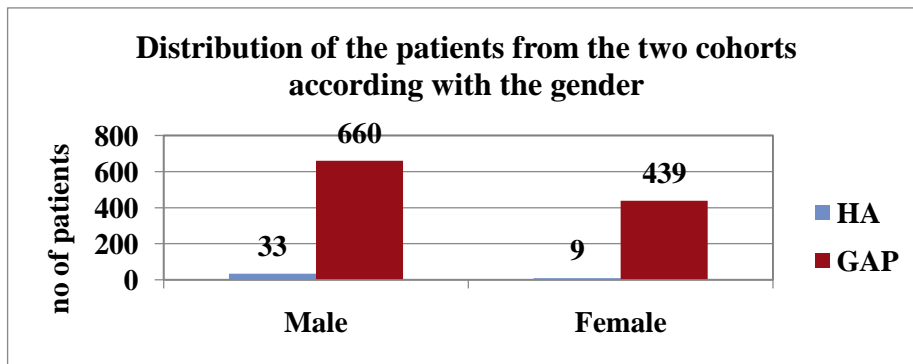
Fig. 1. Distribution of the two cohorts patients according their gender

Their average age is of 43.74 ± 12.26 years old for HA and of 43.94 ± 17.38 years old for GAP. The median among HA was of 44.00 years old and among GAP of 41.00 years old. Minimum age for HA was 19 and for GAP was 18, and the maximum age was 71 for HA, respectively 90 for GAP.

Depending on their location and classification at the time of reporting, most cases are pulmonary and new cases. Of the 42 cases of TB in HA, 40 of them are pulmonary cases, and of the 1,099 in GAP, 934 of them are pulmonary cases. Among the pulmonary cases in HA, 28 are new, 6 are relapses, 5 are defaults and 1 is failure, and out of the 934 pulmonary cases in GAP, 768 are new, 135 of them are relapses, 23 are defaults, 6 are failures and 2 are chronics. The 2 extrapulmonary cases in HA are new, and out of the 165 extrapulmonary cases in GAP, 153 are new, 11 of them are relapses and 1 is a failure.

The most common medical conditions associated with the TB patients reported in Bucharest, in 2013, were liver diseases - both for HA and GAP, namely 10 and 69 patients, as well as diabetes, alcoholism and drug addiction in GAP (56, 25, and respectively, 22 cases) and in HA, drug addiction and alcoholism, 7, respectively, 4 cases (Fig. 2).

Distribution of medical conditions associated with TB patients
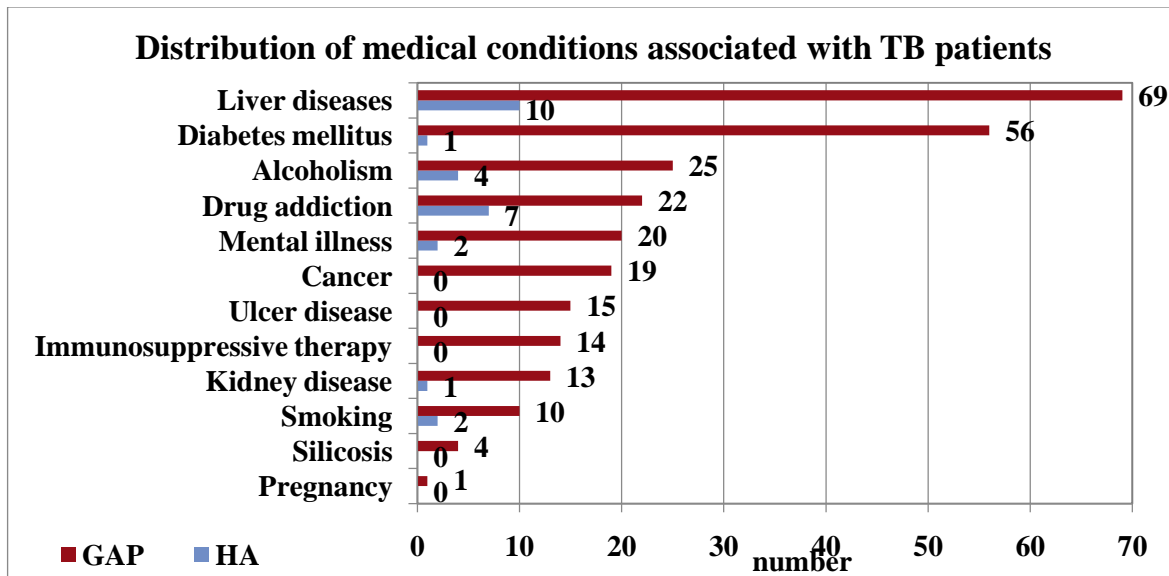
Fig. 2. Distribution of medical conditions associated with TB patients, HA versus GAP

In terms of HIV testing, 31 of the HA were tested and 740 of the GAP, and of these, 14 were positive in HA, respectively 40 in GPA, 13 of HA and 36 of GAP were receiving an antiretroviral treatment.

In terms of costs, all patients benefited from a pulmonology consult (RON 16) and X-rays (RON 27) - a total of 1,141 patients, meaning RON 1,806 for HA and RON 47,257 for GAP.

For the 42 HA patients, there were performed 210 bacteriological tests, with an average of 5.00 ± 2.34, minimum 0 and maximum 10 bacteriological tests per patient, a median, respectively a mode of 5, their cost being of RON 14,910. For the GAP patients, the number of bacteriological tests was of 4,350, with an average of 3.95 ± 2.41, minimum 0 and maximum 15 per patient, and a median, respectively a mode of 4. Their cost was of RON 321,900.

There have not been performed all drug sensitivity tests (DST) in patients with positive cultures, therefore, of the 37 culture-positive in HA patients, 7 DST have not been performed, and of the 681 culture-positive in GAP patients, 279 DST have not been performed. Of those performed for HA patients, the median, respectively the mode was 1, with a maximum of 2 DST, and of those performed for GAP patients, the median, respectively the mode was 0, with a maximum of 3 DST. In total, 35 DST were performed for HA patients, and 426 DST were performed for GAP patients. Only 18 DST were extended (long series), and among these, 2 of them were for HA patients. The total cost of such DST tests was of RON 5,048 (RON 3,366 + RON 1,682) for HA patients, and of RON 55,276 (RON 41,820 + RON 13,456) for GAP patients.

In terms of number of hospitalization days for patients with chemosensitive / monoresistant tuberculosis, they were of 5,320 for HA patients, with an average of 126.66 ± 81.49 days, a median of 114 days, minimum 0 and maximum 331. For the GAP patients, the total number of hospitalization days for those suffering from chemosensitive / monoresistant tuberculosis, was of 46,470 days, with an average of 42.24 ± 39.43 days, a median of 33 days, minimum 0 and maximum 356 (Table 2). The cost incurred with hospitalization days was of RON 1,228,920 for HA patients and of RON 10,734,570 for GAP patients.

Table 2. Number of hospitalization days for both HA and GAP

Number of hospitalization days		
	HA	GAP
Mean and Std. deviation	126.66±81.49	42.28±39.43
Median	114	33
Minimum- Maximum	5-331	0-356
Sum	5,320	46,470

Considering the average number of hospitalization days for HA and GAP (126.66±81.49 for HA versus 42.28±39.43 for PGA), the observed differences are statistically significant (p<0.001).

The average duration of treatment for the HA suffering from TB was of 7.57 ± 3.49 months, with a minimum of 0.75 and a maximum of 15.00 months, and the median of 6.75 months. The average duration of treatment for the GAP suffering from TB was of 6.95 ± 2.47 months, with a minimum of 0.00 and a maximum of 22.00 months, and the median of 6.25 months (Table 3). In total, the number of months of treatment for HA was of 318.00 months, the cost incurred being of RON 13,011.50, and the number of months of treatment for GAP patients was of 7,642,25 months, incurring a cost of RON 312,695.39.

Table 3. Duration of treatment for both HA and GAP patients suffering from sensitive / monoresistant TB (months)

Duration of treatment for both HA and GAP patients suffering from sensitive / monoresistant TB (months)		
	HA	GAP
Mean and Std. deviation	7.57±3.49	6.95±2.47
Median	6.75	6.25
Mode	8.00	6.00
Minimum-Maximum	0.75-15.00	0.00-22.00
Sum	318.00	7,642.25

The total average cost per HA patient was of RON 30,087.98 and the average cost per GAP patient was of RON 10,426.43, the differences being statistically significant (p<0.001), the increased costs for HA patients being determined by their long length of stay. The total cost for HA patients was of RON 1,263,695.50 and for GAP patients was of RON 11,458,648.39, whereas the total amount spent for treating these patients was of RON 12,722,343.89.

Regarding the outcomes of the treatment of patients suffering from sensitive / monoresistant TB, most of them are a therapeutic success, for both HA and GAP patients. Thus, of the 42 TB cases in HA, 20 were cured and 8 of them have completed the treatment, whereas in GAP, of the 1,099 cases, 553 patients were cured and 406 of them have completed the treatment. Among the HA patients, there were 5 defaults, 4 died, 3 were failure and 2 patients were lost of follow-up. For GAP patients, there was a total of 58 deaths, 37 defaults, 17 cases were considered as treatment failure and 10 were lost of follow up. Also, 6 of them are continuing treatment, and 12 patients have not been evaluated.

5. CONCLUSIONS

The characteristics of the patients suffering from TB in Bucharest show that they are young adults, men, associated with liver diseases, diabetes, drugs and alcohol consumption, mental illness, and with co-infection HIV. In terms of location, most of them are pulmonary cases (those that can transmit the disease).

The optimal length of stay for a TB case without multidrug-resistance, was set at 37 days, at the country level, in 2013. The average length of stay for HA patients is about 3.4 times higher than the average length of stay for TB cases at the country level, so that the costs of hospitalization are also higher (for GAP patients are 1.1 times higher) [8].The average number of hospitalization days is about 3.0 times higher for HA patients than for GAP patients, as well as the average cost per patient, precisely because of the large number of hospitalization days for HA patients.

The duration of treatment for chemosensitive / monoresistant TB is about 7.6 months for HA patients and 6.9 months for GAP patients, but the incomplete treatments must also be considered (i.e. default, lost of follow up, died!).

6. DISCUSSIONS

There are still not evaluated people in the GAP group of patients and some who are still undergoing treatment, a fact which may influence to some extent the final results. As in the electronic database of NPPSCT are not passed information regarding radiological monitoring and biological examinations carried out on patients during treatment, the total cost could be undervalued.

For a proper monitoring and a comprehensive treatment, due to the particularities of the HA patients (unable to follow an appropriate hygienic-dietary regime, lack of minimum living conditions, high mobility, etc.), is preferred a treatment under direct observation – DOT [5] - administered in the hospital, thus leading to increased costs of hospitalization for these patients, otherwise, there is a higher risk of abandoning treatment and the danger of contracting resistant strains.

The difficulty lies in finding optimal solutions for a proper monitoring and a correct and complete treatment of these people, with the possibility to reduce cost, that means it would be necessary a collaboration between health services and social services, by addressing the HA problem in an interdisciplinary manner.

Perhaps the best solution to reduce these costs in the future should be regularly screening of HA [5], not just for TB, but also for hepatitis B and C, and HIV.

ACKNOWLEDGMENTS

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Influence of a Kinetotherapy Program on Health Related Quality of Life in Patients with Stroke

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ABSTRACT

Kinetotherapy programs decrease the deficits and improve the quality of life in patients with stroke, but the access to these programs is quite poor. Our study aimed to measure the benefits in functionality and quality of life gained by patients with stroke following a kinetotherapy in-hospital program. We studied 105 patients with stroke (81% ischemic and 19% hemorrhagic), median age 61 years (min 23, max 82), 55% males, and median duration from the acute event 5 months (min 2; max 45 months). Patients were tested at three moments (admission, discharge, 6 months after discharge) measuring their pain (VAS), spasticity (Ashworth Scale), functional independence (Functional Independence Measure Scale) and quality of life (SF 36). Patients gained significant improvements in pain, functional independence and especially quality of life. Our results underline the importance of access to appropriate rehabilitation therapy for patients with stroke.

KEYWORDS: *functional independence, kinetotherapy programs, quality of life, pain, spasticity.*

1. INTRODUCTION

A stroke, cerebrovascular accident (CVA), cerebrovascular insult (CVI), or brain attack is the loss of brain function due to a disturbance in the blood supply of the brain, consequence to either ischemia or hemorrhage [1]. Around 80% of the strokes are ischemic, meanwhile 15% are hemorrhagic [2]. Ischemic stroke can be caused either by a blood clot or another substance (plaque, fatty material) that travels through the blood stream to a brain artery (the embolic stroke), or a blood clot forms inside an artery that supplies blood to the brain (thrombotic stroke). Both situations lead to an occlusion of blood vessels supplying brain tissue, with consequent deprivation of oxygen and nutrients, neuronal death and irreversible brain injury. Ischemic risk factors include age older than 40 years, heart disease, high blood pressure, smoking, diabetes, high blood cholesterol levels, illegal drug use, recent childbirth, previous history of transient

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ischemic attack, inactive lifestyle and lack of exercises, obesity, current or past history of blood clots [3]. Hemorrhagic stroke occurs when a blood vessel suddenly ruptures and blood leaks directly into brain tissue and/or into the clear cerebrospinal fluid that surrounds the brain and fills the ventricles, brain damage being related in this case to the leaked blood which irritates and harms the brain cells. As hemorrhagic risk factors high blood pressure, smoking, illegal drug use (especial cocaine and 'crystal meth'), use of warfarin and other blood thickening drugs should be mentioned [4].

Worldwide, stroke is the third main cause of mortality and morbidity in developing countries (after myocardial infarction and cancer) and the most important reason of long term disability [5]. Every year around 15 million people worldwide suffer a stroke, among which 5 million die and another 5 million remain with a permanent disability, thus affecting profoundly the quality of life for the patient and the family as well [5]. According to American Heart Society, stroke tends to be more common in men (incidence and prevalence rate 33% and 41% respectively, both higher than in females), but more severe in women (1 month case fatality of 24.7% compared with 19.7% in men) [6]. Stroke mortality is three to four times higher in Romania than the EU countries average [7]. The stroke prevalence for Romania is 0,1% for the less than 40 years group of age, 1,8% for the 40-55 years interval, 53% for 55-70 years and 13,9% for higher than 70 years, Romania being situated in top ten of stroke incidence worldwide, with also a higher incidence for primary cerebral hemorrhagic incident [8].

Stroke treatment management relies on correct diagnosis of ischemic or hemorrhagic etiology, followed up by cardiovascular, respiratory and neurological assessment and rehabilitation therapy. Rehabilitation after stroke aims to preserve or improve range of motion, muscle strength, bowel and bladder function, functional and cognitive abilities [9, 10]. To prevent second disabilities and depression, rehabilitation procedures should begin as soon as patients are medically stable [11, 12]. Regaining the ability to get out of bed and to transfer to a chair or a wheelchair safely and independently is extremely important for the patient's psychological and physical well-being [13 - 16]. Gait impairment, spasticity, visual field defects, incoordination and aphasia require specific therapy. For hemiplegia novel treatments include: constraint-induced movement therapy, robotic therapy, partial weight-supported ambulation and total body vibration [17 – 20]. After a stroke, fine coordination may be absent so it is important for patient's recovery to be directed to the occupational therapist [21 – 24]. Given the risen frequency and debilitating consequences of this pathology, physical therapy must be granted intensive attention for the outcome in reintegration management [25, 26]. Although the recognized benefits of the kinetotherapy programs for both functionality and quality of life of the patients with stroke, the access to these programs is quite poor in Romania.

2. AIM

Our study aimed to measure the benefits in functionality and quality of life gained by patients with stroke following a kinetotherapy in-hospital program.

3. METHODS

We performed a prospective study on 105 patients with spastic hemiparesis secondary to stroke, (55% males) admitted in a Rehabilitation Clinic during a 6 months period. Patients followed a personalized rehabilitation program. They were examined at the admittance (T0), at discharge – after two weeks of in-hospital rehabilitation program (T1) and in six months after discharge (T2). We measured pain, spasticity, functional independence and quality of life, using

respectively Visual Analogic Scale (VAS), the modified Ashworth Scale, the Functional Independence Measure Scale (FIM) and SF 36 [27 - 30]. The chronic pain on the affected hemibody was tested at shoulder and knee, in rest and at mobilization. Spasticity was measured at hand's flexors and thigh's adductors on the affected part. The functional independence was tested globally and by motor and cognitive component and for the assessment of quality of life physical (PCS) and mental (MCS) scores of SF-36 were considered.

Principles for therapy: The major pathological problem for our patients was the abnormal command of the nervous impulse, as the motor control was absent or deficient. Usually the patient develops abnormal and stereotype schemes for basic movements and the recovery of the normal schemes imposes firstly the suppression of the pathologic ones. Patient should do the exercises without effort (efforts increase the spasticity through increasing tonic reflexes). Decrease in spasticity will be achieved by using reflex-inhibitory schemes (these restrain postural abnormal reactions and facilitate active automatic or volontary movements.

Components of the therapeutic program: We used a specific adapted rehabilitation program that contained kinetotherapy, ergotherapy, therapeutic massage, paraffin wax and electrotherapy [31, 32]. By kinethotherapy we aimed to decrease spasticity and increase motor control, to conserve range of motion and to obtain an optimal elasticity for the soft tissues, and also to prevent complications induced by a long stay in bed. By therapeutic massage we aimed to improve the peripheral vascular pathology and by paraffin wax treatment to reduce spasticity and enhance active movement. Electrotherapy (Hufschmidt/TENS/Ultrasound therapy) has been used to control pain and spasticity.

Data analysis: quantitative variables were tested for normality using the Kolmogorov-Smirnov test. Means and medians were calculated and the differences were compared between two consecutive moments (T1 versus T0 and T2 versus T1) using Wilcoxon signed-rank or Paired Samples T test.

4. RESULTS

Our patients had a mean age of 60.07 ± 13.300 years and a median of 61 years (minimum 23 – maximum 82 years), with a non-symmetric distribution by age (p=0.011, test Shapiro Wilks). 81% among them had an ischemic stroke and 66% had affectation on their left part. The median duration from the acute event has been of 5 months (minimum 2 – maximum 45 months), 57% having less than 6 months from the acute event.

Pain: In all situation the median score decreased after the kinethotherapy program and remained low at six months follow-up (shoulder - rest: from 3 to 2 and 2 at T0, T1 and T2 respectively; shoulder – mobilization: from 7 t0 5 and 4; knee – rest: from 3 to 2 and 2; knee – mobilization: from 7 to 5 and 3). Distribution of pain scores is shown in Fig. 1.

Shoulder - rest
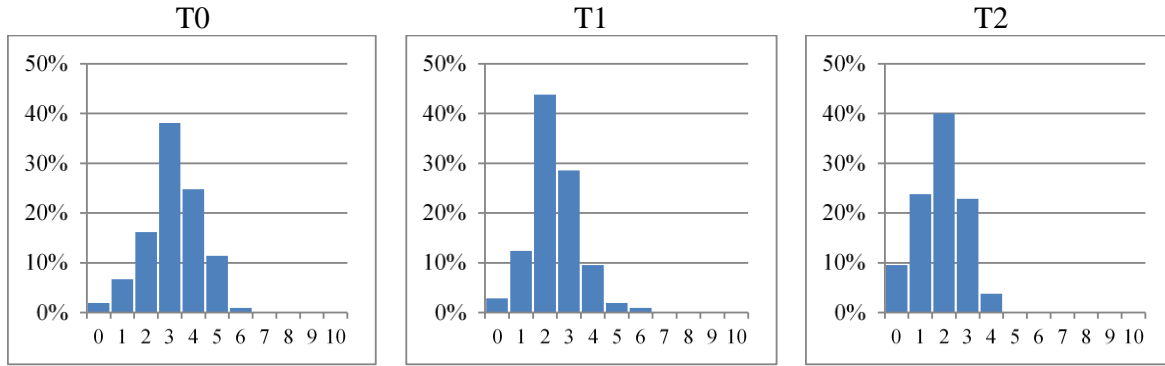
Shoulder - mobilization
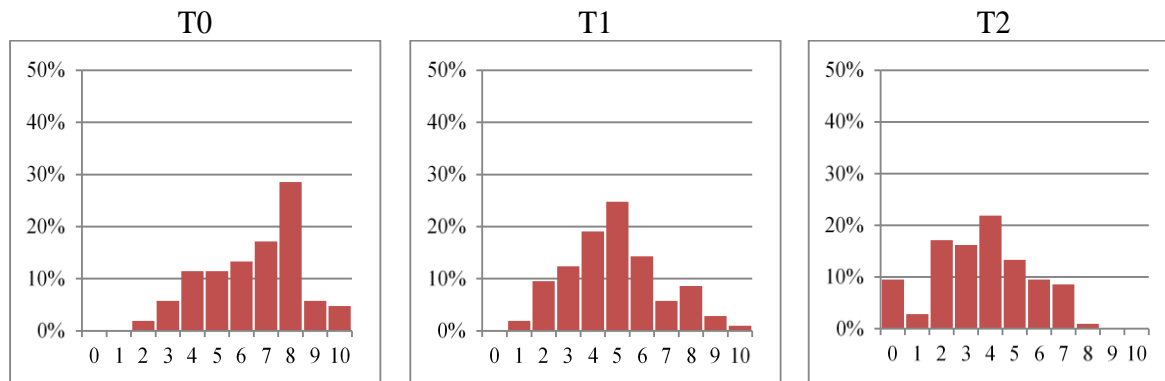
Knee - rest
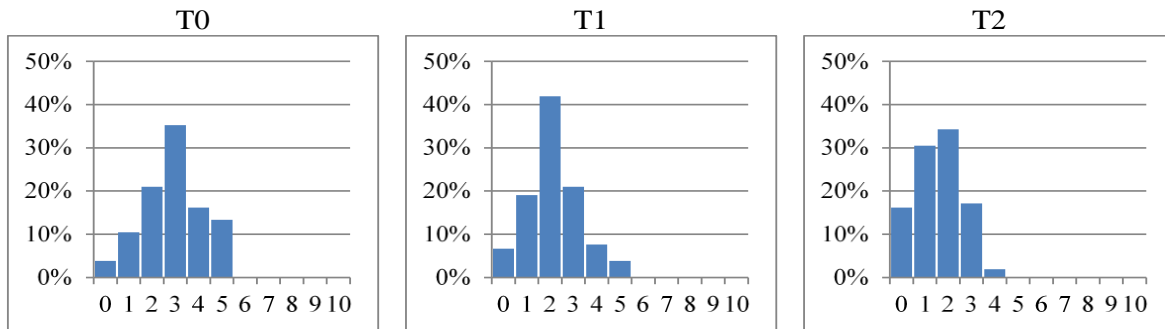
Knee - mobilization
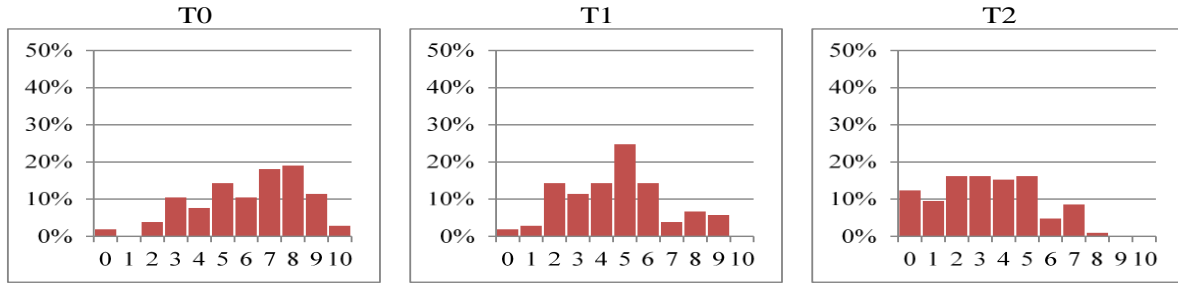
Fig. 1. Distribution of Pain scores at T0, T1 and T2
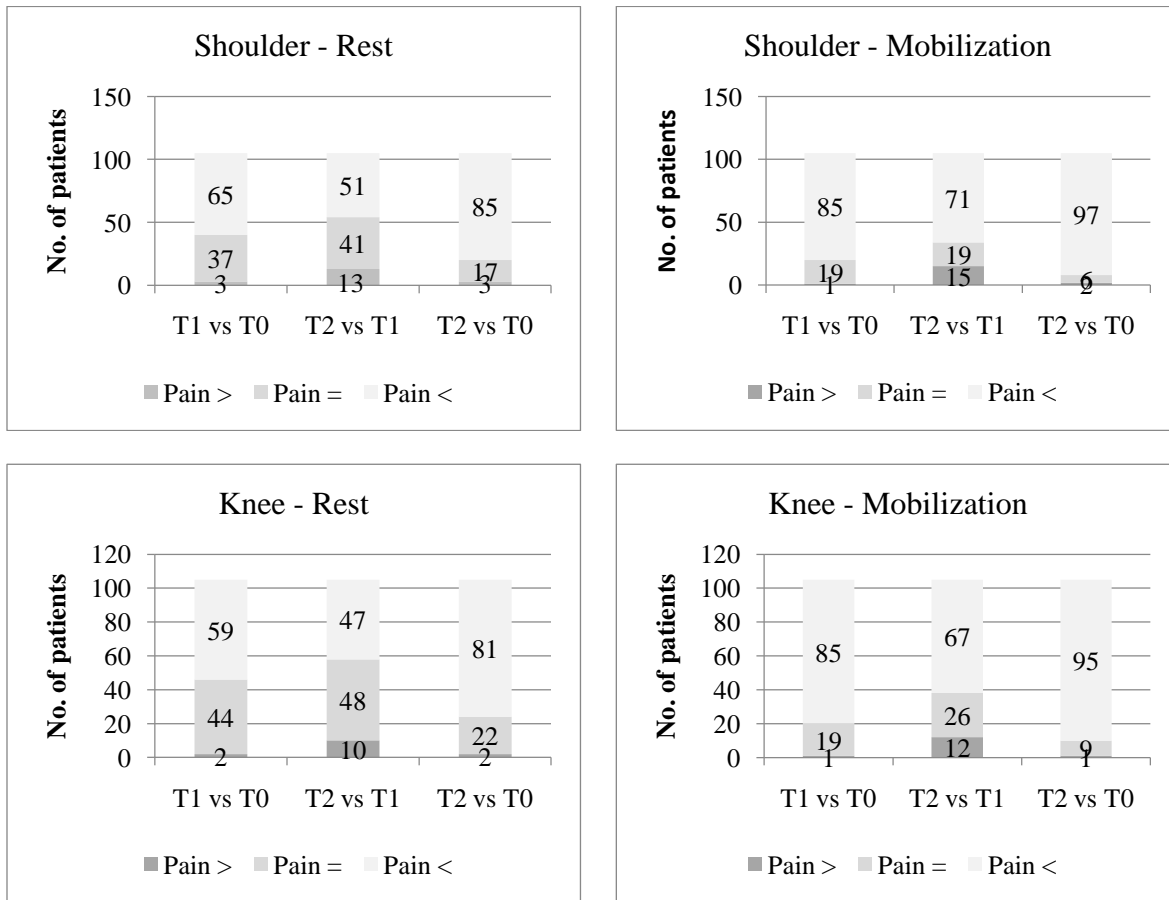
Fig 2. Distribution of patients according to the progress of their pain score

Generally, most of the patient had lower pain scores after six months, the progress being apparently slightly higher during the admission than from T1 to T2 and slightly higher for movement than in staying (no statistical significance proved).

Spasticity: Our program didn't bring significant gains in decreasing spasticity. Most of the patients tended to have an equal or increased spasticity at 6 months of both hand's flexors and thigh's adductors, this being the natural course of the disease (Fig. 3). Maintaining spasticity compared to baseline can be a target to motivate the patient.
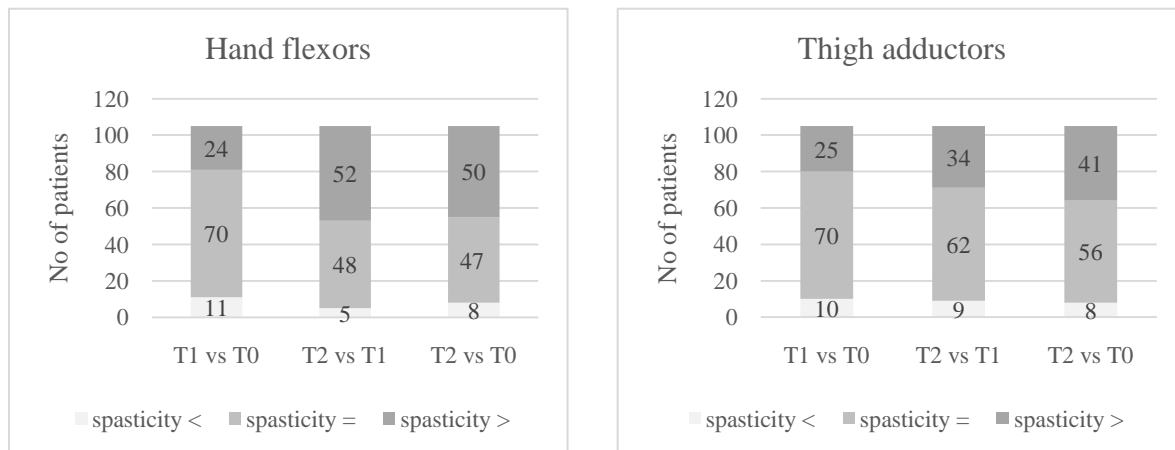
Fig 3. Distribution of patients according to the progress of their pain score

Functional independence: 94 out of 105 patients have significantly better functional scores at discharge, and the results were maintained after 6 months (median FIM score incresed from 63 to 80 and 93 respectively, $p<0.001$)**.** The improvement became visible especially for the motor component (Fig 4).
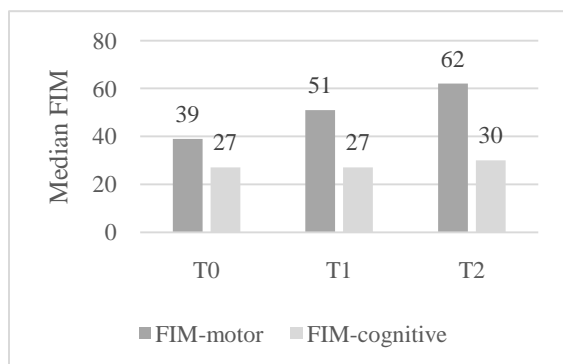
Fig. 4. Median FIM score by component
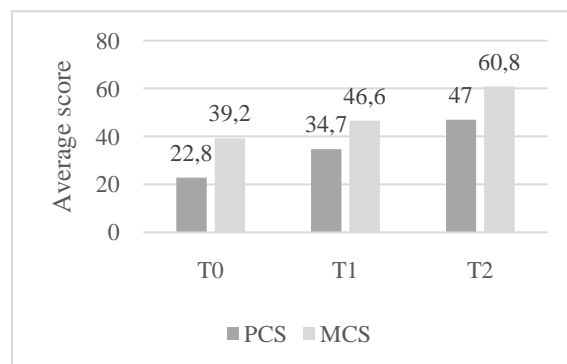
Fig. 5. Average SF-36 scores for MCS and PCS

Quality of life: Significant improvements were found in quality of life after the therapeutic program in both physical and mental components (PCS and MCS) ($p<0.05$, Paired Samples T student test). Physical component had a lower average compared to the mental one at T0 (higher functionality affectation), but the gain in average reached 106%, meanwhile 55% gain in average has been found for the mental component.

5. CONCLUSIONS

Our patients gained significant improvements in pain, functional independence and especially quality of life following the kinetotherapy program. A tendency of the group towards chronic pain was observed as regard for pain in shoulder and knee on the affected hemibody, with low intensity during rest, and medium intensity during mobilization, and with a clear

decreasing effect after kinetotherapy. Functional testing with FIM scale notes significant progress at discharge and control compared to the precedent moments, for the total value and especially motor component. Both physical and mental components of the quality of life improved significantly between every two consecutive moments. The evaluation of spasticity shows that it has not been significantly influenced by the specific rehabilitation program, thus being necessary new therapeutic, pharmacological and non- pharmacological approaches, to reduce spasticity of the wrist flexors and hip adductors. However, our results underline the importance of access to appropriate rehabilitation therapy for patients with spastic hemiparesis secondary to stroke.

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Ethical Considerations On Using Autopsy In Medical Process Of Learning And Research

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ABSTRACT

Autopsy has always been the foundation of medical educational and biomedical research process. During time, post-mortem examinations had a main role in training and forming of medical professionals; many generations of doctors have learned anatomy, pathology and physiopathology at the autopsy room, at autopsy table; results of post-mortem examinations, through pre and post mortem findings have represented the foundation for most of modern medicine knowledge.

Medical students, by attending autopsies, acquire anatomy and pathology information, so, they have the possibility of better understanding the clinical-pathological co-relations, also they have the possibility of differentiating the two types of autopsies (clinical and forensic) and in which cases they choose one or the other.

Another important aspect regards the possibility of knowing legal and ethical aspects relating to death, including how to certify death and filling in a death certificate.

Using autopsy as a teaching tool is a great benefit in medical educational process; visual experiences one has while taking part in an autopsy process last for long and can not be replaced by alternative methods (virtual autopsies and computer software).

From ethical point of view, the acceptability of using autopsy in medical learning process and in medical research is of high complexity due to potential ethical conflict between the necessity and benefit of using autopsy or dissections in the learning process/medical research and the right to physical integrity of a person (even if deceased) whose lifeless body is subjected to post-mortem examination procedures.

KEYWORDS: *autopsy, benefit, ethics, human body/corpse, learning*

1. BACKGROUND

It is well known that autopsy has represented the main "tool" for finding out the mysteries of human body in all its' complexity.

Autopsy has always been the foundation for medical education and biomedical research; from ancient times it provided precious information that are still valid today, data obtained through dissections and autopsies performed on human corpses.

For most of us, anatomy lessons held in autopsy halls are alive and memorable. We can't stop remembering the emotions and the reluctant steps towards the autopsy table at our first practical anatomy lesson (dissection) and the tens of questions rolling in our minds regarding what we saw.

Then, as time went by we arrived in the autopsy hall, where, another universe opened before our eyes, while with our youthful enthusiasm, we were trying to absorb as much as possible.

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Using autopsy as a teaching and research tool in the learning and research process involves aspects we cannot overlook.
- the relevance of autopsy in the forming and training of medical students and young doctors
- the fact that autopsies/dissections on human corpses can be a real emotional "challenge"
- medical pre-clinical teaching activity requires a high level of intrusion on the human body during anatomy demonstrations
- obtaining the consent of the care-takers for utilising the body or for harvesting tissues or organs for teaching purposes

2. IMPORTANCE AND ROLE OF AUTOPSY/DISSECTION IN MEDICAL LEARNING PROCESS

Autopsy has always been the main tool for the medical learning process. During time, post-mortem examinations held an essentiol role in teching and training medical professionals; many generations have learned anatomy, morpho-pathology, phisiopathology in the autopsy room; results obtained constitute the main frame for modern medical knowledge.

Autopsy represents a valuable teaching tool offering the possibility of visualising lesional processes and facillitating the understanding of basic pathology; it allows debating over medical incertainties and is a measuring tool for the quality of medical health care.

The use of autopsy as a procedure in the teaching-learning process helps medical students understand and integrate knowledge from their pre-clinical years; it is also useful in practicing reason and deduction for understanding clinical cases,[1] has suggested that exposing medical students to autopsies during educational process will help them in their future medical practice, in understanding what means a post-mortem examination and which are its' benefits.[2]

Medical students by attending autopsies acquire deep anatomy and pathology knowledge and so, they have the possibility of a better understanding of clinical and pathological co-relations; altogether they learn to differentiate between post-mortem examination and forensic autopsy and the conditions when each applies.

Another benefit is represented by the possibility of knowing legal and ethical issues related to death: how to certify death, how to fill in a death certificate. Hill and Anderson have identified main areas of knowledge that can be effectively taught to students through their attending autopsies.[3]

By attending autopsies, medical students have the opportunity of improving their diagnosis skills; it is also most probable that they acquire and improve the ability to talk to the families of the patients, mostly in difficult cases or in delicate situations like the death of a patient.[1, 2, 4, 5]

From the first two years of medical studies, during demonstration classes of anatomy, dissections help promoting deductive reasoning and co-relating data in order to solve clinical cases.[1] Human bodies' dissections have had an essential role for medical learning process since Renaissance period.[6]

Dissection of the human corpse is the act through which the body is cut open in order to expose the human anatomy for studying purposes: topography and structure of its' components. One can say that the experience of using dissections as a teaching tool offers students a better tri-dimensions perception of the human body (and a better understanding of variables and anatomical oddities; knowledge acquired this way are decisive for medical training generally and for surgeons particularly.[7]

3. PSYCHOLOGICAL AND EMOTIONAL ASPECTS RELATED TO THE USE OF HUMAN CORPSES IN THE MEDICAL TEACHING PROCESS

Beyond obvious cognitive benefits, from the emotional point of view, autopsies/dissections on human bodies, as methods used in medical teaching, are a real "challenge".

Many medical students interact for the first time with a lifeless human body during anatomy classes at dissections demonstrations.

Some authors suggest that emotionally, autopsies and dissections are strenuous and challenging for students; the dissection of a body in not simply a technical exercise as it involves emotional reactions regarding the human dignity of the deceased.[8] Autopsies and dissections offer the opportunity of debates over ethical and legal issues of the death and certifying of death; an autopsy may represent a good opportunity for discussing psychological and social issues co-related with death and clarifying moral and ethical dilemmas regarding one's death and every aspect that derive from it.

In some authors' opinion, experience brought by the use of cadavers in the studying process will help the medical students in their future practice as doctors, so that, in spite of their permanent exposure to diseases, suffering and death, they can have a proper empathic attitude towards their patients and their families.[6]

In medical literature a series of medical studies were published with the objective of analyzing attitudes and emotional experiences of medical students while taking part in demonstration classes for autopsies and dissections.

Autopsy/dissection is an emotionally challenging teaching method, but it helps students face situations of high emotional impact without impairing their empathy for the patients.

There are situations when teachers cannot accurately appreciate psychological reactions of their students when viewing what autopsy/dissection procedures mean; consequently this intensely emotional experience can distract attention from the educational benefit. It is imperative to ensure all measures have been taken in order to decrease this type of reaction. [9] also, it is an opportunity for training self-control, professional conduct and integrity, which are so important in their future medical practice.

Teachers have a main role in the teaching-learning process, especially when situations are emotionally challenging for the student. An intensely emotionally situation, be it positive or negative emotion, lingers in memory for a long time; this is why teachers' role is to guide the medical students to have a positive attitude towards the use of autopsy/dissection teaching method, and help them understand the aim and benefits of this procedure.

These way students can overcome most of the psychological and emotional obstacles towards the teaching method through the use of human cadavers.

Together, teachers and students can debate the proper attitude towards the patient, the use of human body in medical practice and how to manage the rush of emotions that can overwhelm people. From debates like that medical students can experiment the right way to perceive the human body in the autopsy hall and how to discuss "with" and "about" patients; this debates are to have a positive impact on professional social skills of students.

4. ASPECTS REGARDING ETHICAL ACCEPTABILITY OF USING AUTOPSY IN MEDICAL TEACHING PROCESS

From the ethical point of view the acceptability of using autopsies in medical learning and research process is highly complex, due to the potentially ethical conflict between the necessity and the benefit of using autopsy/dissection and the right to physical integrity of a person (even in death) whose body is subjected to the techniques and procedures of a post-mortem examination.

Considering the above mentioned issues, we can justly ask ourselves if the technical maneuvers which are required by a post-mortem examination are against the moral - ethical and religious principles and in accordance with the respect owed to a human being even if "in conditions of technical procedures a post- mortem examination can get ethical acceptability and legitimacy".

In order to solve these dilemmas, the starting point is the goal of a clinical autopsy, respectively the "why" and "for whom" the results obtained are useful; also, another important issue is to determine if the aim of a post-mortem examination can offer the procedure legitimacy and under what circumstances.

Post-mortem examination was the foundation of medical sciences development. At the beginning of the XXth Century autopsies practiced on patients that died in the hospital played a major role in medical educational process;[4] benefits derived from them being vast and long termed: establishing exact cause of death, diagnosis certainty, enhancing inconsistencies between clinical and post-necrotic diagnosis, possible clinical and pathological co-relations and their positive consequences in medical educational process (college and post college training, forming and performing), ensuring epidemiological data base accuracy with high impact on health policies and strategies, all these are only a part of the multiple positive aspects that define usefulness of post-mortem examinations ensuring the noble status of its' aim. The way to use a human body for educational activities for autopsy/dissection must be in accordance with the respect we owe to the person as a "former living human being".

Performing an autopsy/dissection on a dead body can seem to be against the principle of respecting integrity of the human body, but in a strictly controlled environment the performing of these kind of techniques can obtain acceptability and moral-ethical and legal obligatorily.

It is essential to differently approach these two procedures: autopsy and dissection of the human body. In case of autopsy intrusion on the body is only partial and short lived, as the body is returned to the family in a recognizable shape for the burial?

In case of dissection all the maneuvers on the body lead to an alteration (even fragmentation) of the body, at the end of the study the cadaver has a different route that doesn't include usual religious and funeral services.

The specific techniques of these procedures and the way they are performed, both teachers and students must be careful not to bring damage to the inner value of the deceased.

Due to their specificity, anatomical dissection activities or other educational procedures on the corpse (oro-tracheal intubations, surgical techniques, harvesting parts of the body for permanent anatomical models, a.s.o.) moral-ethical issues of a more delicate nature occur.

The main challenge is how to procure corpse that are to be used in educational processes.

From the ethical point of view the most acceptable source of bodies would be those obtained through voluntary donations of the own body while still alive. [10].

This way is would be respected the basic principle of autonomy and the motivation rests in the fact that it is a selfless gesture in the benefit of society (teaching the future doctors, contribution to the progress of medical science).

We must also mention that the use of the deceased body will be strictly according to the limits offered by the donor or the caretakers through the donation act and at the end of the study the dissected corpse will be used for other didactic purposes (obtaining of skeletal pieces or other permanent anatomical samples) or scientific ones, only if the person or its caretakers have agreed to that.

5. CONCLUSIONS

Autopsy/dissection as didactic tools in medical teaching-learning activity, through the possibility of co-relating lesion aspects with clinical context remain undefeatable, as there is no other equivalent alternative. The impact of directly seeing anatomical aspects and lesion ones while understanding morbid characteristics of diseases is very strong and unforgettable.

'The need for knowledge 'in the area of healthcare and clinical education is an important factor in accepting autopsy/dissection. The use of the human body must stay within the limits of profound respect for the deceased. Beyond the obvious cognitive benefits, the use of the human body allows the initiation and development of an attitude of respect, empathy and compassion for MAN and the value of LIFE.

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A better quality of life in elderly

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Introduction

The last century witnessed an unprecedented increase in the average human lifespan. The estimated total world population of older people was about 200 million in 1950 and is expected to rise to 1.9 billion by 2050 – nine-fold increase in 100 years.[1] Currently, about 6% of the world's population comprises those aged 65 years or above.[1]
The reasons for this explosion in the older population in the world in general, and in the develop world in particular are many, and are not just a result of increasing life expectancy. Other factors including the declining fertility rate, declining child mortality, education and economic development play a big part.

The ageing population of the world presents major challenges for society and for health services. Mental health issues are extremely important, as mental disorders, notably dementia and depression, are common in old age. Mental ill-health can profoundly affect the quality of life of elderly people and has a significant impact upon the use of health and social services.

Normal ageing

There is no satisfactory definition of the normal ageing process. It can be defined as a cumulative process of adverse changes in physiological, psychological and social functions that characterize average older people. Normal ageing as a social concept refers to an accepted range of variation in health, appearance, and performance of adults at different stages of their lives. However, it is always difficult to make a distinction between normal and pathological ageing.

According to **biological theories**[1], the ageing process can be divided into primary and secondary ageing.

Primary ageing refers to those declines in function that are genetically controlled and *secondary* ageing consists of random changes resulting from acquired disease and trauma. These theories suggest that if the hostile events related to secondary ageing could be prevented, life would be extended, but because of primary ageing decline and death are inevitable.

Psychological theories[1] of ageing can be divided into cognitive and personality theories.

The Cognitive theory is based on studies of cognitive changes associated with age. In general, adults with higher intelligence and education tend to show minimum decline in their performances with increasing age, while a significant decline is observed in adults with lower intelligence and education. Older adults in general tend to perform less well in new and novel situations.

The Personality theory: Most studies have reported relative stability of personality traits from adulthood into late life. When personality changes occur, they appear to be related to losses, particularly those involving health and social support systems. Some studies have reported sex differences in personality in older age, men tending to become more dependent and

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nurturing and women tending to become more individualistic and more aggressive as they become older. [1]

The most frequent mental disorders in old age are: dementia, depression, anxiety disorder, drug abuse and psychosis.

Dementia

The prevalence of dementia increases with age. Most studies have shown a prevalence of 0.8% in the 65-70 year age group which increases exponentially to 28.5% in the 90+ age group.[1] Dementia has an enormous impact on persons with the disorder and on those around them. The quality of life of individuals with dementia is affected by their cognitive and functional impairments, as well as the behavioral and psychological symptoms that often occur.

Mild Cognitive Impairment (MCI)

MCI is an etiological heterogeneous condition characterized by cognitive decline greater than expected for an individual's age and education level, but that does not interfere notably with activities of daily life, subjects performing poorly on a variety of cognitive, functional and behavioral parameters, compared with normal person of the same age, but the cognitive decline is not enough severe to characterize dementia.[2]

For diagnosis of mild cognitive impairment are used[3] the Peterson criteria (2001):
 - memory complaint, preferably corroborated by informant,
 - impairment is 1.5 standard deviations (SD) below peer norms,
 - impaired memory function for age and education,
 - preserved general cognitive function,
 - intact activities of daily living,
 - not demented.

Use of term MCI by clinicians is increasing, as they see more and more such patients in clinical settings as the populations ages and awareness of the treatability of some forms of dementia grows. According to an evidence-based medicine review, the American Academy of Neurology recommends that MCI is a useful clinical concept worthy of attention. This is because persons with MCI progress to dementia at a rate of 10% to 15% per year, which is in contrast to the normal elderly cohort that convert at 1% to 2% per year. [2] The transition is usually to Alzheimer's dementia, and less commonly to vascular dementia. In referral clinic populations, most patients with a diagnosis of mild cognitive impairment either persist with mild cognitive impairment or progress to dementia, and on autopsy such patients have characteristic neuropathological findings of Alzheimer's disease, including senile plaques. [4]

Etiology of MCI

The cognitive decline etiology includes (1) genetic factors and (2) environmental factors (viral infections, food, smoking, stress).

Fat diet increase the risk of disease. Depression is secondary to stress, and untreated depression is a major risk factor for cognitive impairment and for dementia. [2] Another risk factors for mild cognitive impairment are: cardiovascular disease, abnormal blood pressure, too high or too low, metabolic disorders, low levels of physical, social and mental activity, fewer years of education. People who have higher levels of social, mental and physical activity seem to have less risk of MCI and dementia.

Symptomatology of MCI

The patient with MCI complains of difficulty with memory. Typically, the complaints include trouble remembering the names of people they met recently, trouble remembering the flow of a conversation, and an increased tendency to misplace things, or similar problems. In many cases, the individual will be quite aware of these difficulties and will compensate with increased reliance on notes and calendars. Most importantly, the diagnosis of MCI relies on the fact that the individual is able to perform all their usual activities successfully, without more assistance from others than they previously needed.

Prevention of MCI

The ***primary*** prevention of MCI involves the prevention of the appearance of the disease by measures applied to the individual and the environment.[5] The treatment of risk factors includes the treatment of hypertension, hypercholesterolemia, diabetes, hypothyroidism, depression, sleep disorders and other psychiatric disorders that may adversely affect cognitive status.

Alcohol in moderation may slow the appearance of cognitive deterioration and dementia progression in people who already have cognitive impairment. In addition to the specific treatment related diseases mentioned above, MCI's primary prevention includes physical activities and Mediterranean diet. Other non-pharmacological interventions which may have effects on memory and their removal are: stress factors, sleep low, taken medication (anticholinergic and sedative).

Secondary prevention lies in identifying and treating asymptomatic or pre-symptomatic persons having a risk factor of developing the disease; if MCI, secondary prevention can be achieved by use of anti-aging treatment, such as: omega-3 acids, natural products on herbal (vinpocetinum, Rhodiola Rosea, gingko-biloba), nootropics (piracetam), antioxidants (vitamin E,C, A, alpha-lipoic acid, Coenzyme Q10).

An alternative method consists in the administration of extracts of Rhodiola Rosea strain containing bioactive alkaloids, polyphenols and phenyl-propanoids. The effects on the brain function are: cognitive stimulation, memory improvement, learning improvement and improvement of abstraction capacity.[6] The effects of Rhodiola Rosea are augmented in combination with Piracetam or Ginseng.

Cholinesterase inhibitors are typically used to treat early and mild stages of dementia. Treatment of Alzheimer's dementia could be extrapolated and used for the treatment of slight cognitive deficit. Cholinesterase inhibitors are donepezil (Aricept R), rivastigmine (Exelon R), galantamine (Reminyl R) and tacrine (Cognex).

Tertiary prophylaxis prevents association factors that lead to disease, preventing complications from occurring

Treatment of MCI

Presently, there is no specific treatment for mild cognitive impairment, the treatment for Alzheimer's disease could be extrapolated and used for patients diagnosed with mild cognitive impairment. The adequate treatment for mild cognitive impairment includes non-pharmacological and pharmacological treatment.

Non-pharmacological treatment
<u>*Physical activity*</u>

Regular physical activities seems to improve the memory loss to persons over 50 years with cognitive impairment, according to a study done in Australia, publicized in Journal of the American Medical Association in 2008.[7]

Diet

Recent research has shown that diet plays a major role in preventing cognitive impairment and reducing the risk of MCI conversion to AD. Mediterranean diet is currently considered the most healthful diet because high intake of fruits and vegetables.[8] Mediterranean diet contains large amounts of beta-carotene, vitamin C, tocopherols, tocotienoli (vitamin E), polyphenols and essential minerals such as selenium, magnesium, zinc, iron, calcium and iodine.

Cognitive intervention

The goal is to slow cognitive stimulation rate of cognitive decline using functional approaches in order to strengthen cognitive function.[3] In art therapy it is possible to express ideas and feelings that cannot be converted in words and this is important for people with language impairment.

Art therapy

Art therapy have been used initially in Germany in the rehabilitation program of patients diagnosed with early dementia.[9] Art therapy is a nonverbal form of therapy that uses visual imagination. In art therapy it is possible to express ideas and feelings that cannot be converted in words. This is important for people with language impairment.

Pharmacological treatment

Several classes of drugs have been studied for the prevention of progression to dementia, these includes: antioxidants, nootropics (piracetamum), anti-inflammatory agents (rofecoxib), hormones (estrogens), other drugs which modify brain chemical levels and cholinestherase inhibitors (donezepil, rivastigmine and galantamine).

Antioxidants

Antioxidants (vitamin E,C,A, alpha-lipoic acid, Co-enzyme Q10) are substances which may protect brain cells from the oxidative stress.[10]

At least one randomized, placebo-controlled, double-blind, multi-center trial indicates that vitamin E may delay the progression of moderate-to-severe AD[12], but, the research is still underway to determine its efficacy in MCI. The combination supplemental of vitamin E(400UI/day or more) and vitamin C (at least 500mg/day of ascorbic acid) but not either vitamin alone reduce significantly the incidence and prevalence of dementia. The administration of vitamin E in combination with selegiline delays the institutionalization and the progression of dementia. There are clinical trials looking at vitamin E plus selegiline (a mono-amine-oxidase inhibitor) as a treatment for dementia and for preventing progression of cognitive impairment.[2]

Coenzyme Q10, or ubiquinone, is an antioxidant that occurs naturally in the body and is needed for normal cell metabolism. One of the apparent benefits that are thought to come from coenzyme Q10 is prevention of cellular damage caused by free radicals.

Selezin ACE represents a unique and balanced combination of minerals – selenium and zinc – enriched by vitamins A, C and E. All contained vitamins and minerals have antioxidant effects, which protect the human body against the negative influence of free radicals.

Ginkgo biloba

Ginkgo biloba has been used medicinally for thousands of years. Ginkgo has been used even as treatment and as dietary supplement in Europe and in Asia. Ginkgo is used for the treatment of numerous conditions, many of which are under scientific investigation.[11]

Ginkgo biloba has antioxidant properties and inhibit the formation of β-amyloid protein with a role in forming amyloid plaques in patients with dementia. Administered in a dose of 40 mg three times a day, ginkgo improve the cerebral flow. [11]

Rhodiola Rosea

Herbal alternative treatment for mild cognitive impairment, this plant grows in the mountains of eastern Europe, Siberia and the Far East at 3000 meters altitude. Its beneficial effects on the body have been mentioned 1,200 years ago in the writings of Tibetans. Reprots in the alternative medicine literature indicate that its extract (bioactive alkaloids, polyphenols and phenylpropanoids including tyrosol, rosavin, rosin and rosarin) have effects on brain function . The extracts of the roots of this plant have been found to favorably affect a number of physiological functions including neurotransmitter levels, central nervous system activity, and cardiovascular function. It is being used to decrease depression, enhance work performance, enhance learning and memory, increase accuracy in mental performance for prolonged periods of time, eliminate fatigue and prevent high-altitude sickness.[22]

Nootropics

Nootropics are drugs that boost brain activity and memory and enhance the brain function. *Piracetam* is the most used nootropic, increases performance in a variety of cognitive tasks, appear to be effective in dementia and mild cognitive impairment. The dose of piracetam used for cognitive decline is 1600mg/day and the side effects are few, transient and mild.

Anti-inflammatory agents

Anti-inflammatory agents have role in reducing inflammation in the brain as having a role in reducing risk for cognitive deterioration. Researchers and clinicians have shown that individuals who consumed NSAIDs have a reduced risk of dementia, taking non-steroidal inflammatory (*ibuprofen*) taken over two years decreased risk of Alzheimer's dementia. Other studies have demonstrated the effectiveness of *aspirin* and *acetaminophen*. *Celebrex* and *rofecoxib* (cyclo-oxygenase 2 inhibitor) had comparable effects with ibuprofen administration.[10]

Statins

Epidemiological and experimental *in vitro* and *in vivo* studies have indicated a link between cholesterol metabolism and the development of AD [23]. It is assumed that there is an influence of cholesterol on the formation and accumulation of amyloid-beta. In a 26-week randomized, controlled, double-blind trial, 80 mg *simvastatin* was administered to 44 patients with normal cholesterol levels and 40 patients with AD. A significant reduction in CSF Aβ that correlated with a slower progression of clinical symptoms were observed.[24]

Platelet Aggregation Inhibitors (Triflusal)

The effect of the platelet aggregation inhibitor *triflusal* on cognitive parameters and conversion to dementia has been studied in patients with amnestic mild cognitive impairment. The analysis of the data showed a significant reduction in the rate of conversion to dementia. In addition to the antiplatelet effect, triflusal has an anti-inflammatory effect, which may explain a potential secondary preventive effect.[25]

Hormonal treatment in MCI

Replacing the *estrogen* lost at menopause can prevent many of the manifestations of aging including osteoporosis, cardiovascular disease and decline in cognitive functions. Hormone replacing therapy after menopause have benefits for menopausal symptoms, for cognitive function – neuro-protective inhibit neuronal apoptosis and modulate Apo-lipoprotein gene expression. [2]

Drugs that alter brain chemical levels

Medications more commonly used to reduce the symptoms of Parkinson's disease may help normalize the effects of mild cognitive impairment

Control of cardiovascular risk factors

Arterial hypertension is a risk factor for mild cognitive impairment. Multiple mechanisms has been proposed to explain the correlation between arterial hypertension and MCI. Arterial hypertension is a risk factor for cerebrovascular diseases, and these are risk factor for MCI.

Cholinesterase inhibitors

Cholinesterase inhibitors are typically used to treat the early and middle stages of dementia. Alzheimer disease treatment can be extrapolated and used for mild cognitive impairment. This is because the deterioration in the production of acetylcholine accelerates over time, as more and more brain cells become damage did. These include donepezil (AriceptR), rivastigmine (ExelonR), galantamine (ReminylR), and tacrine (CognexR).

Cholinesterase inhibitors are used for long term treatment. Cholinesterase inhibitors improve or at least retard the rate of loss of cognition, the drugs can improve a person's quality of life.

Tacrine considered a first generation of cholinesterase inhibitor, used for cognitive decline in 1980 is no longer use due to hepatotoxic effects.

Currently there are three FDA-approved choline-mimetics: donepezil, rivastigmine and galantamine.[13-15] These medication are not curative but they have been shown to minimize morbidity in AD by improving cognitive functions such as memory, language and praxis. Recent evidence also suggests that such medications are effective in managing neuropsychiatric and behavioral symptoms in AD patients.[2]

Donezepil, the second cholinesterase inhibitor, is approved for treating mild dementia. The maximum daily dose of donepezil is normally 5–10 mg. This dose is taken just once a day, either in the morning or in the evening. It is well tolerated, the adverse events observed after administration includes nausea, vomiting, headache, insomnia and dizziness.

Rivastigmine is a reversible acetyl-cholinesterase and butyryl-cholinesterase inhibitor and was found to be superior to placebo in clinical trials. The maximum daily dose of Rivastigmine is 6–12 mg. The drug is taken twice a day with meals (typically breakfast and dinner).

Galantamine has a dual mechanism of action, an cholinesterase inhibitor and has additional properties at nicotinic receptors, increasing cholinergic activity by activating presynaptic nicotinic receptors. The maximum daily dose of galantamine is 16–24 mg, and it is also taken twice a day with meals. The side effects are usually gastrointestinal related, like nausea, vomiting, diarrhea.

Other substances

In addition to the above-mentioned drugs a number of other substances have been investigated in terms of their effectiveness and benefits for persons with MCI. These include intranasal *insulin*, *melatonin* and *nicotine patches*. However, only studies of small sample size and short duration exist. Based on these data, a recommendation for the use of these substances for the treatment of MCI cannot be given.[21]

A few substances are currently in phase II trials: *ladostigil*, a dual acetylcholine-butyryl-cholinesterase and brain selective monoamine oxidase (MAO)-A and -B inhibitor Other drugs under investigation for MCI include *levetiracetam*, *atomoxetine*, *pioglitazone*, *insulin*, *human growth hormones* and *immunoglobulins.[21]*

Conclusions

Taking into account the fact that the mild cognitive impairment is considered as a prodromal phase of dementia[20], it is important to identify it early and to start the primary prevention.

The primary prevention refers to the specific treatment of cognitive features and to changes of the lifestyle. The clinicians should advise the patients to try to maintain a healthy lifestyle. The compliance and the lifestyle can stop the progression of the disease.

Early detection and the treatment of mild cognitive impairment can maintain the elderly at a maximum level of functionality as much as possible.

It is therefore important to improve quality of life of elderly, so that they maintain health and functionality as long as possible, to prevent their admission to hospitals or homes-hospitals.

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Coloring Her Way Through School:
Esther, Alienated to the Borders

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ABSTRACT

Using a biopsychosocial lens, this single case study of Esther, exposes a broad contextual dimension of special needs children, those often thwarted by racism, colorism, and poverty and tainted by the low expectations of parents and teachers alike.

KEY WORDS: *colorism, border identity, poverty, race, special needs*

1. INTRODUCTION

The purpose of this study is to address the relationships of domination and difference, those relationships that continue to repress women and students of color and those with special needs--to confront and challenge compounded differences, historical repression, poverty, deprivation, devaluation and dispossession. And in so doing to sunder the bonds of interconnected domination in the service of engaging special needs students and women of color previously relegated to society's borders in the process of critical transformation necessary for and to personal as well as social reclamation and resolution.

The process of transformation can be vividly witnessed in my work with Esther, a janitor in a local Midwest school. Early in the study she says,

> "…You know all I ask in my life is somebody to care for Esther, somebody to respect Esther. And Esther will respect that person. I have never had nobody respect me, care for me, be proud of me…my kids is the only way I can really…"

What was left unsaid was clear and painful. In her eyes she had nothing but her kids. They defined the purpose of as well as the place in her life. And what she sought could fill no more than the basic spaces in her being: respect, care, love. Instead there was a fragile instability, an emotional vulnerability, a dysfunctional emptiness, a denial of her inner needs as a special education women of color, while portraying her singular ability to both cope and confront her world on a public platform.

2. TOO COMMON A STORY

Esther was the last of ten children, the granddaughter of a plantation slave, reared in the Mississippi South, schooled in an all-black southern district but discriminated against because her skin, which her teachers often pinched, was so much darker than her classmates. While she was in first and second grades, she and the other children were physically struck with a paddle for the slightest misconduct. If someone in the class caused a disruption and the teacher were unable to tell who was at fault, the entire class was told to place their hands behind them and

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they were paddled. When Esther would plaintively present her reddened hands to her father, she was told she had undoubtedly deserved it.

> "This is how they did. What else they'd know? That's the way their parents did. And the white people used to whip them and they used to whip us. That just be how they raised." (Interview, 3-18-2004).

In her entire class, Esther, a quiet reserved commonly built girl, received the most beatings. She was taunted by her classmates and by her teacher, mocked because she was so black and 'slow'. At the age of sixteen, unbeknown to anyone else, Esther gave birth to her father's baby girl. Ashamed that she had let this happen and knowing something wasn't as it should be, she buried the baby under the front porch of the family's house and never told anyone.

When she and her family moved North, the denial of her education continued on a new note. She was told she was a very slow learner and placed in the special education program, but not allowed to have any books. She felt devalued because she had difficulty in the classroom, denied the opportunity to ever learn to read—something which she hid from everyone, even her employers for she couldn't even fill out a job application. Beaten first by her minister father and later by two husbands who knew more about hustling on the streets, more about doing time and doing drugs than about loving their wife and caring for their three children, Esther tried to make sense of her estrangement, her alienation from other students and the absence of care from her family. Opal Palmer Adida's [1] speaks of Esther and of her conflicted experience when she writes,

> "…stress is hemmed into our dresses, pressed into our hair, mixed in our perfume
> and painted on our fingers. Stress from the deferred dreams, the dreams not voiced; stress from the broken promises, the blatant lies; stress from always being at the bottom, from never being thought beautiful, from always being taken for granted, taken advantage of…" (61)

Esther recalls going to her special class every day.

> "…I was tellin' the teacher, somethin' not right. I supposed to be in sixth grade not fourth grade. Why aren't you helpin' me to do better? I remember I bein' at this desk with this thing like a partition between me and the other kids that goes way back. And I remember (she uses the teacher's authoritative voice) 'but I couldn't function like other kids,' But I wanted to learn". (Interview 3-18,04).

In Esther's mind, the partition separated her from everything: from the other kids, from her own people, from her education and even from herself. And when she told her parents there was something wrong, they simply said, "Out of ten kids, you the handicap." And how did her family's dismissal make her feel? Like she 'got cheated out of life'. And yet she does not hold her parents accountable for she believes they knew no better. Given her father only went to the fifth grade and struggled even then, she felt he as well as her mother were both 'slow learners'.

> "When I was pregnant by my father when I was sixteen, I used to put my hand on my stomach and I used to say, Lord' please don't let my kids come out being slow learners.

Please let them come out being educated, smart. Let them be able to pick up things quickly." (Interview 3-22-04).

Dismissed, denied and devalued by the system, she was labeled and written off by the only people who could have fought on her behalf. 'Esther was just too slow', they said.

Societies' institutions had failed her as they had failed countless other special needs students who were Black women from the South, failed them, disavowed them and in essence had returned them to the plantation. In that part of her which should have experienced love, gaped an open wound, one inflicted by her father, by her family, by her teachers and by her husbands.

Her high school teachers categorized her, devalued her and neatly set her aside giving her books in which to color her way from grade to grade. The ugliest shadow of ignorance was the knowledge of the secret she read into everyone's eyes, the sense that everyone knew that about which she was most ashamed—she could color, but 'she could not read'.

How then can one speak of love, of self-identity, of self-recovery in terms of self-reclamation when the words on the printed page meant nothing? Esther experienced both a racism and a discrimination born of the cruelty of interracial discrimination and hatred of those who 'could not learn', which drove a system of subservience fueled by disenfranchised disempowerment. bell hooks writes, "Many of us were made to feel as children that the world was completely unsafe, hence our capacity for wonder was repressed and fear took its place" [2].

3. CONCEPTUAL FRAMEWORK

Because of the overlapping spheres of dysfunction in Esther's story, this paper attempts to deconstruct her experience using a critical theory perspective built on an ecological position and viewed through a biopsychosocial lens.

4. PROCESS AND POWER

Critical research strikes at the conscience in order to raise the issues of subdominance that are entwined in the fabric of our culture and according to Giroux (1992) to develop the notion of difference as a part of the common struggle to extend the quality of public life to all citizens. Without the support of effective programs for children with disabilities, Esther subsisted in the borders, which are formed in the language of transgressive power and dominance, a language spoken of special populations of generations past. It is the litany of silence, the discourse of exclusion, of the confrontation of loss of power, the discourse of difference. Conversely, critical race theory that embraced feminist perspectives, such as Esther's, brought greater understanding to the study of families of color [3]. Her story is discussed here because it is an archetypal example of intersectionality in special populations. Intersectionality exists when social phenomenon such as colorism, thought by some to be more influential than race [4], class, gender, poverty, ethnicity, ability and other factors that simultaneously "shape people's notions of self and others" [5].

However, in examining Esther's story, in the absence of special services, Figure 1, which uses a biological frame to examine the complexity of loss, tends to offer a clearer understanding of the overlapping bogs of alienation about which Brofenbrenner speaks [6] than the intersection of dysfunctions.

The biological frame examines the nature of the loss and its affects on the physical body including altered sleep patterns, change in weight, blood pressure and blood sugar levels and use

of non-nutritional food such as junk food and caffeine, all descriptors of Esther's life. The psychological examines Esther's body's response to varied losses and the perception of loss through stages of sadness, denial, anxiety, anger and dependency, while the sociocultural frame looks at relationships and support systems or lack thereof, as well as the role of spirituality and culture play in helping the individual understand loss and health [7].

As the stressors from the loss of home and school are translated into loss of control, a sense of detachment from friends, loss of social support and a sense of defeatism, the body negatively reacts as the mind translates these losses into lack of self-worth, self-abuse, other-abuse and the potential for any of the risk factors that now go unprotected [8]. The protective factors buffer the individual against the risk factors listed above. They assist young people in making reasoned decisions rather than engaging in destructive behavior, but only if they have family, school personnel and special support services people trained to assist in such dire situations.

Body	Mind/Personality	Socio/cultural/Life's events/Environment
*Genetic predispositions *Health and disease *Body's response to environment--sleep & stress *Depression and anxiety *Potential cognitive delay *Damage through continued abuse/rape	*Attachment loss, separation *Dispossession of self-worth *Devaluation of self-colorism *Distress of Self *Displacement of Self *Denial of self-worth *Overall behavior shift to subserviance	*Formal and informal lack of support *Peers-teachers and family *Interactionand inaction with social environment *Social harrassment (bullying) *Parental unresponsiveness, coldness, abuse *Effects beyond ourselves

Figure 1. Esther as a Contextual Being in Response to Lack of Special Needs Support

4.1 *Colorism*

More than poverty or physical abuse, the social construction of colorism played a dominant role in Esther's struggle for self-worth, a struggle that was passed to her three children, particularly as they became adolescents. Socialized to believe she was denied the value of personhood due to her dark skin and reinforced by her nine siblings, her father and her teachers, Esther entered a new school in the North with little sense of hope. Living in the projects, she was socialized to believe the shade of her skin exacerbated and surpassed the stigma of poverty in which her family struggled and disabused her of the little hope she had for academic success—to be able to

read. Race and stratification research strongly suggest colorism affects 'both psychological and socioeconomic outcomes" [9].

5. THE FACE OF SPECIAL EDUCATIION & EXPECTATIONS

Often expectations are self-fulfilling prophecies and such is born out with children of color. Educational expectations are overall lower for them, both from their teachers as well as from their parents who, themselves may not have attained a high level of education, may not have experienced success in school themselves, and who exert less support for the school and for their children's success in it. The disparities in discipline are evidenced in Black Americans being suspended from school three times more than their white counterparts [10]. African American public school students are reported to be three times more likely to be categorized as in need of special education services than their white peers [11]. Both African and Native American males are overrepresented in three groups of disabilities: learning disabilities, mental retardation, and emotional disturbance [12].

When Esther was put in the special education track, she, too, experienced another level of stratification and disparity. There are twice as many boys as there are girls in U.S. special education classes. Classroom teachers are reticent to recommend girls for special education for they recognize the possibility of this additional level of isolation and the emotional and physical abuse that may come with it. Unfortunately a significant number of males in these classes are misplaced, for they are the result of white middle-class teachers who lack the cultural competence to deal with the behavior of males of color. As well, students of color may be underserved, misclassified or more often put in special education classes because of the disjuncture between teaching and learning. Often students of color are field-dependent, visual and concrete learners [13] while white middle class teachers are more frequently verbal, abstract and decontextualized in their teaching [14].

Such a disconnection may cause confusion, lack of learning and in Esther's case another reinforcement of her inability to learn. And the problem or problems that led to Esther's special education label, the lack of a motivating, culturally responsive classroom went unresolved for she was categorized as a "special education student", irrespective of the precipitating factors that placed her there, regardless of the talents she had, the challenges she experienced and the eagerness to learn which she had long ago buried deeply within.

6. CONCLUSION

Without special services and teachers appropriately educated in working with students who may have border identities, disenfranchisement and its disablers will prevail. We must be prepared to see the pain caused, positions relegated, possibilities delineated and potentials denied. And we must search for ways through special education in which and for systems by which such brutal differences are reconciled. For if hurt is the home of hope, then Esther and women like her will never again return to the plantation.

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Gifted children and their special needs

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ABSTRACT:
The concept of giftedness is placed at the crossroad of three qualities: intelligence, creativity and self-motivation. Each quality can be discovered in a gifted child in the absence of the other two. Giftedness is the attribution of a combination of factors, coming from two directions: natural, innate factor doubled by the educational factor. There is a mutual determination relationship between these two factors. The fact that people are born with specific features is highlighted by studies on identical twins raised by different families. They show surprisingly similar psycho-behavioural characteristics although they have been raised separately and in different social backgrounds. Education influences the development of abilities to the maximum level of giftedness but it is achieved only under certain conditions determined by educational and social factors but mostly by personal self-motivation even at very young ages. Motivation along with creativity can often replace the absent factor but when all three factors: intelligence, creativity and self-motivation work simultaneously in a proper educational and social environment, children can reach outstanding performance in their development.

KEYWORDS: *giftedness, identification, training.*

I.1. The complexity of the gifted` personality

Any gifted child identified by parents or school must benefit from educational programmes that support the development of their innate potential. Thus, they can reach performances that can be turned into competences with social impact. The complexity of their personality brings about serious consideration on the elaboration and implementation of instructive-educational programmes . Gifted children develop learning abilities differently from other children, which are based on specific thinking models:

●critical thinking assesses ideas and arguments in a creative way;

●construction of models assigns logical meaning to the world and it can also be used in practice;

●construction of logical arguments which allow the validation or rejection of certain concepts;

●consideration and reconsideration of what is obvious; it favours the discovery of laws that are beyond the evidence and are not transparent at first sight;

●moral thinking favours the responsible approach of different actions and finding the best strategies to approach a situation.

All these features need special training for teachers who work with the gifted and therefore they need to develop proper learning styles, different from mainstream education. Gifted children own attitudes, moods and habits that revalue open mindedness, objectivity and impartiality. They practice metacognition and analyse their own way of thinking. Intellectual training that must underpin any activity/lesson requires planning, problem solving, strategic decision, methodologies, communication and use of others` experience in a critical way.

Learning should be directed based on an analysis of the educational optimum and its planning for the future. Gifted children are driven by curiosity, they are eager to understand how the universe functions, being capable of picturing improvements or reformations which produce socially useful values. Therefore, educational programmes for the gifted must meet certain educational requirements that are proper for the specific characteristics of their thinking :
• raise vital issues and questions which are clearly and concisely formulated;
• collects and assesses relevant information using abstract notions to interpret them;
• draws carefully considered conclusions, testing them on relevant criteria and standards;
• open and non-dogmatic thinking within alternative thinking systems; they admit and assess their own suppositions, implications and consequences;
• communicate effectively with others by building solutions to problems.
For these reasons, the gifted with critical thinking are self-disciplined, self-monitored and self-correctional using rigorous strategies and special abilities to handle these skills. They also develop special abilities in problem solving and communication. Therefore, teachers who work with these children must own special abilities and a psycho-intellectual profile that is compatible to the pupils`.

I.2. Educational programmes for the gifted

An educational system that complies with the gifted has been developed all over the world, as gifted children show special development features. This system can revalue the huge intellectual potential and the abilities of the gifted by directing educational influences of mainstream education towards the stimulation of the gifted . The below listed efficient educational programmes for the gifted have been often cited by the literature:
• method of creative problem solving developed by Parnes (1977); Sidney J.Parnes was the founder of the foundation for creative education; he studied the way of developing educational programmes that would support children facing learning difficulties and would develop creative thinking; he also supported the necessity of implementing differentiated curriculum;
• Renzulli`s Enrichment Triad Model, 1977, 1985. Joseph S.Renzulli develops a programme for the education of the gifted based on differentiated learning experiences, which contains: group training activities, general exploratory activities, individual or small group investigation activities;
• Calvin W.Taylor`s Multiple Talent Model (1978); Taylor develops a theory (based on Guilford`s structure of intelligence) on the stimulation and development of multiple creative talents through optimal educational tools. He supports the idea that every individual has a specific talent. Therefore, he highlights the idea that more t5han 10% of the gifted can be discovered beyond evaluation with intelligence tests, if other aspects are also taken into consideration. He suggests 9 areas such as: academic results, productive thinking, communication, products, decisions, application, relations, judgement. He also supports the idea that if the students` motivation for learning is stimulated, they will develop their potential abilities more intensely;
• the acceleration programme from John Hopkins University (Stanley, 1980). This programme contains several acceleration ways: earlier admission to schools than the normal age, skipping one or two grades, accelerated study of certain school subjects, study in parallel classes (a child can attend 2nd grade for certain subjects and 4th grade for others), placing the

child/pupil in classes with children of the same intellectual level, participation in special training programmes etc.;

•   Tannenbaum`s Enrichment Matrix (1983). Abraham J.Tannenbaum studied the ways of improving the education of the gifted with motor disabilities, of those with poor school results, of children coming from different cultural backgrounds. He published his findings in 1983 in his book: Psychological and Educational Perspectives. He insists on the idea of creating special classrooms for the gifted;

•   D.Cox`s Pyramid Plan (1985). Cox`s Model for gifted children aims the analysis and assessment of pupils` results based on homework given by teachers or freely chosen by pupils; analysis and comparison of grades in different subjects of study; psychological tests for highlighting different structural components (spatial perception, chromatic discrimination, observation, spatial and flat representation, labyrinth type evidence, tracing lines, scoring, etc.);

•   the model of autonomous pupil created by G.Betts (1985). Each pupil should benefit from a different approach according to his individual profile. Distinctive programmes need to be created based on the child`s profile;

•   Integrative educational model created by S.Kaplan (1986) (according to Stănescu, 2002, p. 69-95). He is also a supporter of differentiated learning for the gifted by using a flexible curriculum, grouping children according to their abilities and skills in homogenous classrooms or groups;

•   Purdue Programme created by John F. Feldhusen is a programme dedicated to the development of creative thinking and its four qualities: flexibility, fluency, originality and elaboration.

Ways of educating children who are capable of high performance can be classified according to:
●   orientation towards a definition or more definitions of giftedness;
●   orientation towards hypothesis;
●   ideological orientation or educational policy.

The education of the gifted involves special educational programmes, sometimes special classrooms, extra classes, specially trained teachers for the work with the gifted and other economic-financial aspects. All these aspects needed in the education of the gifted are socially justified by the contribution of these children in the future of the society. Then we will be able to state that beneficiaries, both the individual who revalues the social offer but also the society which benefits from future retroaction. More and more emphasis is placed on creating special conditions for the development of these exceptional children (Hargrove 2005). Researchers and practice have proven that regular school programmes and mainstream education cannot maximize the individual potential of the gifted. They have to be encouraged and supported by specialized and different institutions (Borland, 1986).

I.3. Adapting the school curriculum to the gifted

The curriculum used by educational policies is deficient in providing real support for the gifted, though it is an important element in planning education.

Therefore, world literature talks about a differentiated curriculum as means of adapting objectives, contents, teaching, learning and assessment strategies to the abilities at cognitive, affective and motor level and to the pace and learning style of gifted youth capable of high performance. (Beyer, B. K. 2008).

It is necessary to use a different curriculum than the one offered by the syllabus in the education process of the gifted. It should be adapted to the superior receptiveness of these children, enriched and differentiated in their fields of interest so as to meet the knowledge needs of the gifted. A special curriculum gives the gifted the opportunity to assimilate contents which fulfil their exceptional cognitive abilities. Thus they will achieve school performance according to their possibilities, will enrich their skills, develop specific behaviour, practice high abilities and develop competences required by performance in their fields of interest. If given the opportunity to select their own curricular path, the subject matters for which they show abilities, the gifted will access rapidly and easily knowledge in their field of interest and will train and develop their creative abilities in a manner that eases access to excellence and fulfilment.

A method with excellent results frequently used in the education of the gifted is mentoring. The gifted is placed in the educational care of a mentor who helps and counsels him in finding the true calling. Thus, the gifted benefits from programmes of improving personal achievements, supplementary and individualized lessons and also from extended areas of interest under the guidance and watch of a person with training in that field of interest. In a "normal" classroom, teachers make a distinction between very good, good and less good children and they have to adapt their teaching to these levels. When teachers know their class very well, they can plan the teaching activities in a differentiated manner. The class can be divided in value groups, give less information to the less receptive and gifted children and advanced knowledge to the very good children. The differentiation strategies are part of the teacher`s style and manner of organizing teaching activities. The following procedures can be used with exceptional children:

●selection of curricular sequences according to the abilities of the gifted;

●extension of the complexity of actions, in depth exploration of concepts and their use in new situations/problems;

●planning cross-curricular activities which encourage children to overcome the regular curriculum boundaries, to solve real life problems or problems with social relevance;

●accelerating the assimilation of contents in their own pace, skipping redundant or unimportant information;

An aspects that needs to be taken into consideration, refers to children with high abilities in a field but whose school results are not outstanding. They either don`t have the patience to follow the teachers` explanations, make elementary errors due to discontinuous learning or they cannot transfer knowledge to related fields. Most of them avoid new tasks, don`t take risks to avoid failure because the skills and strategies required by the overcoming of these problems have been wrongly developed: reading, writing, calculating. They don`t know where and how to search for information in a book or in the library and don`t own strategies of problem solving. They often show disability in social situations because they don`t trust themselves, they lack confidence, show physical clumsiness in games or in finding practical solutions for technical problems. Teachers use strategies provided by differentiated work and try to fill in these gaps, develop skills and correct the wrongly developed abilities. Some gifted children cannot fit in mainstream education because of their unique personality. Therefore, other ways of school education are needed. Abroad, these children have the opportunity to attend special school, skip a class or two and even have home schooling. There are cases of gifted children who have not attended "regular" schools. The gifted can often not be distinguished from other children in school; on the contrary, their school results might be mediocre. Giftedness is not always visible; it isn`t "transparent". It cannot be always noticed in the first school years because it can develop by a specialized education, by developing cognitive interests and special abilities. Mostly, the

gifted can be identified among children with average results. Therefore, school and teachers have to duty to facilitate and develop a learning climate where the gifted can be stimulated to develop their abilities, talents and giftedness. Cognitive stimulation and affective-emotional support of children with high intellectual potential and abilities should take place in the classroom. This type of training requires other types of school organization and other ways of curricular implementation.

I.4. Organization of classrooms and groups for the gifted

The modern educational system carefully considers the way classes and groups are organized. The way teachers plan their schedule is very important and so are the group division in a classroom, the teaching of contents, teaching materials, the way they blend teaching methods, the way the present the teaching units and the assessment. They all are attempts to answer the question: "how to organize a numerous class so as to treat each child individually in order to fully activate its potential". Teachers should be taken into consideration some measures if they want to achieve good results in the activity with the gifted:
   • grouping pupils according to their performance level, intellectual level, mutual abilities and preferences, similar development level;
   • careful consideration of the schedule, adaptation to the children`s needs in general and especially of the gifted because they have to work in their own pace to have the feeling of continuity in learning and of cognitive accumulation;
   • flexible arrangement of furniture so as not to restrict the possibilities to group children on centres of interest and also enable their access to classroom resources (maps, books, dictionaries, atlases, encyclopaedia, computer);
   • freedom of movement encourages children to take responsibility for their own learning; it teaches them how to use the resources available in the classroom and to work in a pleasant atmosphere along with the others.
All these organizational aspects provide the gifted with the opportunity to benefit from individualised training and cognitive stimulation, even if education takes place in mass schools.

I.5. Learning strategies for an active and creative pedagogy

Economic-financial restraints and even the educational policies do not allow the establishment of special classes for the gifted. These classes require special and specialized conditions from the very beginning. The classes from mainstream education can create a favourable climate for the education of the gifted. One of the conditions focuses on the adaptation of teaching strategies. The teaching strategies used in the education of the gifted are more varied and differentiated than they seem at a first glance. Even though these children have the ability to understand and memorize easily the information, process knowledge more rapidly, they are not all autonomous learners with optimal and fully developed learning strategies.
Therefore, it is important that teachers take into account the following aspects when planning their educational strategies for the stimulation of pupils` abilities who are capable of high performance (Renzulli şi Reis, 1985):
   • cognitive and continuous development;
   • permanent affective-emotional support;
   • development of efficient learning skills;

• development of research abilities and use of reference materials;
• development of communication abilities through oral, written and visual forms.
Teachers can select more strategies to teach the contents but they must be aware that certain abilities and skills are developed only by blending more strategies.

I.5.1. Active learning for the gifted

Modern pedagogy sets active learning as a modern educational paradigm. It facilitates the shift from teaching centred methods to learning centred ones. An activating methodology places the pupils and their learning activities in the centre and it guides the entire educational process taking into account the pupils` interests. The teacher is no longer concerned with the methods of teaching the contents but with the manner of facilitating the pupils` acquisition of notions and development of skills. Teaching changes into learning and the teacher focuses on the development of autonomous learning skills and skills that stimulate continuous learning abilities. Pupils also develop work and problem solving abilities along with other team members – team work abilities. Student centred methods involve the individual in the assessment of his learning process and in setting future objectives of his own development. The advantages of student centred methods are mainly connected to their formative role in the children`s preparation for perseverant, thorough and permanent learning.

Active learning must contain new knowledge processing activities to be efficient for the gifted. Students have to know how to link what they already know to what they learn. Tasks must be authentic, connected to real life and set in a significant context. They shouldn`t involve the mere repetition of things because it leads to superficial learning. Moreover, the tasks should be selected to permit self-assessment, correction and discussions with their classmates in order to get the teacher`s reaction. These tasks and questions require critical thinking and processing of information through analysis-synthesis and assessment processes:
● analysis: "why" questions;
● synthesis: "how", "could you" questions;
● assessment: judgement questions.
These types of questions, called superior rank questions, require the gifted to make their own conceptions on the assimilated information.

I.5.2. Creative learning adapted for the gifted

The efficiency of teachers` classroom activities can be interpreted as a balance between obtained results and available resources. It is important to identify "hidden", potential resources, which are too little exploited by teachers. Teachers need to approach classroom management strategies if they want to increase the efficiency of the educational process with the gifted. They have to fully make use of all available resources.

If teachers want to achieve good results with the gifted and involve them in creative activities, they have to implement strategies in key domains which influence the learners` motivation:
● stimulating learning environment;
● active involvement of all students;
● feedback on their level of performance.
Stimulation suggestions for the activity with the gifted can be a good start in conducting teaching activities in optimal, cooperation conditions based on mutual respect.

Horizontal enrichment involves giving more material with the same level of difficulty to a child who has completed his tasks before other classmates. Vertical enrichment refers to giving more complicated materials, anticipating future lessons. Both procedures have also risks: horizontal enrichment might bore children and make them loose their interest; overused vertical enrichment can bring about disequilibrium in teaching. One of the most efficient activities with the gifted involves a mutual decision upon an individual topic of study. The topics should cover the children's areas of interest. They mustn't be compulsory; otherwise children feel compelled and lose their motivation. Another creative manner to stimulate the abilities of the gifted is their orientation towards reading. Certain specialists recommend the reading of biographies and autobiographies of celebrities as they may find them inspiring.

Each child is interested in a certain field, passionate about an activity, therefore the stimulation of hobbies is recommended by specialists.

If a child is particularly interested in poetry, mathematics or informatics, he should be encouraged to develop in this direction. Educational factors are those which encourage the children's/students` orientations and will guide them in accessing information and documentation work. If their interest is real and they feel encouraged, their learning motivation reaches new quality adaptations. As they grow older, children are encouraged to attend scientific and creation contests, where their effort is rewarded and they get a real feedback.

I.5.3. Differentiated training of the gifted

Another method of optimal educational intervention is individualized training. This strategy emerges from the sine qua non concept that each child is unique, non-recurring, with specific skills and abilities and therefore needs individualized training. Each gifted must benefit from personal education and training. When gifted children are offered an educational programme structured according to their personality and they benefit from support given by educational factors such as: family, school and society, they will develop their personal skills and abilities. The educational path of the gifted requires personalized and differentiated training. The educator, teacher will plan the educational-instructive path of the gifted, considering the following parameters:

● individual and age characteristics of the gifted;
● the areas of interest;
● the fields they show abilities and talents in;
● permanent counselling of the gifted;
● keeping close touch to the family.

These minimal requirements ensure:

●individual development (children/pupils acquire concepts, notions, make judgements, develop abilities for permanent learning);

●taking part in knowledge enrichment activities (children/pupils explore extracurricular areas, become aware of numerous sources of information that they can use in various situations);

●thorough studies (children/pupils have the opportunity to focus on a topic of their interest for a longer period of time; more time is required for investigations and research as well as for writing the paper).

These strategies can be used at all educational levels with gifted children. At higher levels (secondary and high-school education), students are stimulated to allot weekly supplementary time for activities, while they are exempted from unimportant school obligations.

II. Institutional strategies for gifted children

II.1. Excellence centres for gifted children

Special instruction centres are very useful because they use specific training strategies for the gifted and talented children. These centres have a network of fields of study structured on scientific areas, art school, all oriented towards performance. They are pilot centres which select children from the mainstream education by using special methodologies for the identification of the gifted and talented and apply educational strategies specific for the activity of these centres.

The general objectives of these centres are:

●providing educational facilities for children with high abilities and performance;

●providing training according to the personality of the gifted, their intellectual development and creative expression, their specific needs of social and professional integration;

●ensuring conditions and procedures to adopt individualized training paths, a flexible programme which includes their own research and a system of transferable credits.

Curricular development takes place from preschool to post-graduate studies in these centres. It focuses on schooling categories, favouring training and education of the gifted according to their intellectual level and psychological maturity; the criterion of chronological age is on a secondary position.

The centres have programmes of fundamental or applied research, of creativity which are compulsory for the teaching staff and the students. They also benefit from educational programmes with alternative curricular offers or other educational products which will be offered to the educational system or to the educational market. They focus on the following activities:

• selection of gifted and talented children;

• selection of teaching staff trained for the education of the gifted and talented;

• development of educational programmes supported by grants;

• training of teaching staff for the work with the gifted;

• planning educational programmes adapted for the gifted.

Excellency centres collaborate with the Ministry of Education, The Institute for Educational Research, The National Excellency Centre, national NGOs and NGOs from abroad, other international research centres, international organizations in the field, national and international universities, scientists and men on culture from homeland and abroad.

To conclude, we can state that when the gifted benefit from education in their field of ability and when they are closely guided by dedicated teachers, they can develop their performance and abilities to an outstanding level.

II.2. Educational strategies for the gifted capable of higher performance in extracurricular contexts

Present educational policy encourages and develops educational opportunities for the gifted. These policies stimulate their intellectual potential, their talent and creative abilities to reach a higher level of development.

A method considered worldwide is study acceleration . Acceleration is a strategy that optimizes instruction and education of the gifted according to their own development abilities, namely they go through the curriculum faster than other children. This strategy can be reached by:

● starting school earlier. This thing can be achieved in kindergartens, 1st grade, high school, university;

● transition from one class to another more rapidly by covering the curriculum in an accelerated pace;

● setting up study groups with children of different ages but similar intellectual level; this type of organization is practiced during extracurricular activities in children`s clubs, scientific and artistic workshops;

●designing a special curriculum, differentiated on levels of intellectual development or subjects of study; it uses tutoring or mentoring, which are mostly used in Romania with participants in the school Olympics.

All school subjects can be covered in a vertically accelerated pace or in cross-curricular activities, if teachers use an efficient methodology. Irrespective of the chosen acceleration strategy, it is important that the result is a blending between children`s availability, the ways of learning, the opportunity of learning methods chosen to cover rapidly school stages (Boden McGill, J., Carrie Kathleen P. King, 2013).

It is necessary for the gifted to be able to select an alternative education according to their abilities. It matches the acquisition desires to their intellectual development, without encouraging frustrations which occur in standard educational environment. Schools also benefit from these programme of acceleration because they give the gifted the opportunity to stimulate their innate potential. Research conducted after using acceleration strategies revealed positive effects for the gifted. They are visible in learning opportunities adapted to the intellectual level of the gifted, their interests, exceptional abilities, their personality and pace of learning. It has been proven that people with high skills have evolved better when using a curriculum adapted to their needs than with a classicalone, which is too boring for them.

Mainstream schools cannot foresee in their curriculum and regular timetable all the needs of gifted and talented children. Maybe more than other children, the talented and the gifted experience moments when they can`t handle things on their own and need special encouragement. In 1985, Bloom noticed that if an individual`s initial skills and exceptional characteristics are neglected, he will never achieve the most of the potential and abilities without an intensive and long process of education, training and stimulation. Consequently, special programmes are needed in and outside school. Efficient time management outside classroom is very important. Extracurricular activities can be a source of efficient alternatives for the stimulation and orientation of the gifted. Children`s clubs in and outside school, children`s palaces or other institutions can develop attractive activities where gifted and talented children find the right place for the development of their abilities. Certain institutions could develop talent identification and selection programmes using the handiest methods:

a) to create a sort of "arena" where talented children perform one or more task and their performances can be considered superior if they pass a certain scale or criterion according to a definition accepted by the jury;

b) a psychometrical evaluation of those highly capable through standardized tests, considered valid predictors of giftedness .

The first manner highlights some of the special needs that cannot be fulfilled in normal classrooms. Even when there are programmes for selected groups, labs or special classes, not all the gifted can benefit from them, as not all of their needs can be satisfied.

Educational extracurricular activities such as: Saturday schools, summer schools, activities organized by the school after classes complement the educational experiences of the gifted.

These supporting extracurricular activities for the talented and the gifted should take into consideration some aspects:

●incite and stimulate curiosity, determining them to search for information from more easily accessible sources;

●offer a wide range of options which engage students in learning activities: workshops, courses, special programmes and competitions;

●different difficulty levels for activities according to the intellectual level and abilities, so that each child to be properly stimulated and to make an effort in achieving his goal;

●reward the children`s achievements through attractive and stimulating activities and give them feedback through the possibility of having their achievements acknowledged and being successful;

●counsel children and parents and receive pertinent information on the existing programmes;

●stimulate the cooperation between children/teenagers with access to experience s and social contacts; it is beneficial for the socializing activities of the gifted and for their social responsibilities.

Research on the specific application for school situations have spread also towards the extracurricular ones. Children with similar concerns should be able to meet somewhere and learn together, share their passions and aspirations . Learning by cooperation is a good method for the gifted to make friends, overcome their anxieties and loneliness. Learning by cooperation developed around three concepts:

●reward for the whole team;

●individual responsibility;

●equal chances (opportunities) for each member of the team.

The reward is ensured by the success of the whole team. The team`s success depends on each member`s efficient learning; the activity is oriented towards mutual tutoring to be certain that each member of the team can face a form of assessment (grade, certificate, credit). "Equal success chances" means that children contribute to the good of the team by improving previous performance. Research has shown that rewarding the whole team and individual responsibility are essential for the development of basic self-achievement abilities. It is enough to tell children that they need to do something together and they will consider responsibly their responsibilities. The results will thus be as expected. Moreover, research has pointed out that when children are rewarded for improving their own results compared to previous, they will be more motivated than if rewarded for doing better than the others.

Conclusions

As stated above, orientation on the education of the gifted can refer to extracurricular activities carried out in the following directions: nurturing the abilities of the gifted through school activities such as mentoring and training in the field of their giftedness. Outside school, they should be guided by a mentor. The activities they must focus on are: individualization of the educational activity under the tutor`s coordination; stimulating the exceptional abilities through activities in children`s clubs, science and art clubs, contests and school Olympics; training of teachers who work with the gifted; permanent psychopedagogic counselling of the gifted. The children`s progress and their achievements will be monitored through observation, comparison of their academic results, results in competitions and school Olympics and stimulating interventions.

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A Game Theory perspective on Public Institutions - the case of Romanian Education System

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ABSTRACT
Institutional reforms frequently fail because they are based on unrealistic hypotheses leading to limited models. A narrow mechanical vision focused only on hierarchy and roles may not be adequate when trying to understand how institutions work in the context of human society. Such a vision does not take into account human nature. We propose a model based on Game Theory and Behavioral Economics. Our model complements the centralized hierarchical vision about a public institution by adding a new dimension regarding the strategic interactions between agents/players. The case of Romanian Education System is considered as application domain. Three simple games describing common situations that appear inside this system are analyzed. Nash equilibria detected in these games indicate stable states of the system, states from which no player has any incentive to unilaterally deviate. The results help to explain why some reforms are so difficult to implement. Policy makers and institutional managers may find the proposed model useful in making public institutions more efficient.

KEYWORDS: *education, reform, Game Theory, Behavioral Economics, policy makers*

1. INTRODUCTION

Reform is a frequently used word when discussing about education in Romania. Several administrative reforms have been proposed in this field in the last 25 years. However, despite all these efforts, Romania is placed at the bottom of international education rankings (e.g. PISA tests and http://thelearningcurve.pearson.com/index/index-comparison). A natural question is why these reforms have been inefficient.

Reform failure raise some other questions: are the different actors involved in education (students, professors, administrators, and politicians) *really* interested to improve the system? Are they ready to pay the *required price*? Do we have a clear common understanding of the most important problems of the education system? Do we have a common set of values and/or goals? Do we have great educational leaders ready to follow?

In order to analyze a public institution like the education system we need an adequate model (without forgetting that, as George E.P.Box said, "essentially, all models are wrong, but some are useful"). When using a model some aspects are considered essential and others are neglected. What are the most relevant aspects about a public institution - in this case the education system?

A first model that comes to mind is a centralized model. According to this model the most important aspect of an institution/system is given by its hierarchical structure. Each role in the hierarchy is clearly defined. Each actor in the system knows what are his/her responsibilities and acts in accordance to his/her role. A set o policies is defined for each hierarchy level.

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A main hypothesis of this model is that each actor executes the commands arrived from a superior. The outputs produced by an actor may be measured using some performance metrics. In order to increase the system performances it is sufficient to change some policies/rules. This model is based on a mechanical vision about social institutions.

The previously presented centralized model is simple and clear. However, in our opinion, it does not appropriately describe the education system (since all models are wrong, the quality that we are looking for is usefulness). The main reason is the fact that such a system is composed in reality by complex human actors, not by machines executing programs. A human actor is never reducible to a simple role or function inside a mechanism. In a machine-based system it is possible to predict the results when changing a policy but in a social system this is not possible. How can such a model explain salient issues of the Romanian education system such as: abuse, corruption and lack of meritocracy?

Another problem is generated by a vicious effect of introducing quality metrics. Actors' behavior changes when a quality measure is introduced. As expected, in general, the actors are trying to maximize the measurable results by exaggerating the importance of the measured indicator even if their work quality actually decreases (i.e. publishing 4 low quality papers instead of a high quality one because the measured aspect is the *number* of publications).

This problem is generated by the difficulty to appropriately quantify the complex results of the education system. Measuring the output quality of a social system is a very difficult issue. If such a measure may be defined it will be a very complex one, which depends on the quality of the involved actors - an aspect hard to quantify since the actors are human. The mechanical model does not focus on the human aspects and therefore it fails to reveal some essential aspects. This may explain why the results of previous reforms were not as good as expected.

We consider that, in order to better describe the essential aspects of a public institution a different kind of model is necessary. This new model should take into account actor's autonomy and human nature - especially emotional/affective and psychosocial elements (values, motivation, identity, diversity, etc.). How different actors in the system make decisions is an essential aspect of the proposed model.

The aim of this research is to propose a new approach for analyzing the dynamics of a public institution, in particular the Romanian education system. Such a model may help policy makers and institution managers to achieve a better understanding about the system dynamics/behavior. Thus, they will be able to propose more efficient policies and to make better decisions for the common interest.

The next section presents the general principles of the proposed model that is based on Games Theory and Behavioral Economics. Section III presents some examples of games describing typical situations from the Romanian education system. Section IV concludes our paper.

2. A GAME THEORY BASED MODEL FOR THE EDUCATION SYSTEM

The proposed model does not make abstraction of the existence of a hierarchy and several roles in the education system. It only adds a complementary aspect that is considered essential: the actor *autonomy* and their *complex human nature*.

The vision of the proposed model is mainly inspired from Game Theory (GT) [1], [2], [3]. GT has been already extensively used in studying economic, biological, and social phenomena therefore it is also suitable for studying public institutions. Models/theories such as: Prisoner's Dilemma [4], Tragedy of the commons [5], Evolution of cooperation [6], [7], [8], Bounded

rationality [9] and Behavioral Economics [10] have been extensively used to describe social dynamics in classical and evolutionary approaches (see Evolutionary Game Theory [11]).

In GT, the Nash equilibrium is a key notion representing a state of the game where no player has an incentive to unilaterally deviate. Thus, a Nash equilibrium indicates a stable state, an attractor, and suggests a highly probable preference for a player. Nash equilibria may be detected using mathematical and/or computational tools (e.g. the "Gambit" software tool).

According to the proposed model, the actors of the education system are considered players in a game. Player interactions are strategic interactions: the benefit of one player depends on his/her actions but also on the actions of the other players. The system outcome is given by the collective actions of all involved players. An essential aspect is the player autonomy. A structure/order emerges from complex interactions and is not imposed from the top of hierarchy in a centralized manner.

A player aims to maximize a certain payoff that includes different aspects such as: financial, power, social image, self-esteem, identity, etc. The weight of each aspect is different for various actors. System dynamics and output are not deterministic. However, some statistical predictions are possible and numerical simulation may suggest the system behavior. Simplified situations are usually used to understand the model dynamics.

An actor/player may chose from a set of possible actions/strategies. The set of available actions is influenced by the role of each player and also by the player's personal capability to discover his/her options (which may also be different for different actors).

Actions discovery by a player goes beyond the classical Game Theory and requires a new generalized game model where player's actions are not known a priori. In this context it is highly important to understand how the actors/players are making decisions. The World Development Report 2015 "Mind, Society, and Behavior" [12] offers an insight about the mechanisms behind human decisions. According to this study several key aspects need to be taken into account when trying to understanding human decisions:

- People are overwhelmed by information and it is impossible for them to accurately process all this information.
- In order to make efficient decisions people rely on a so called "automatic system" mainly based on heuristics and intuition. The most salient information is used with priority. However, people are also capable of deliberative thinking, which is much more costly in terms of cognitive resources and time [13].
- Most people are not aware about the multiple influences that guide their decisions. They consider themselves as deliberative thinkers but the reality is that the automatic thinking mechanism is prevalent.
- People's decisions are influenced by loss aversion [13].
- People usually respect social norms and expectations.
- People's preferences depend on the context (i.e. social context, poverty, etc.). Their decisions depend on their preferences.
- Many people appreciate fairness, reciprocity and prefer to cooperate. This observation contradicts the classical *homo economicus* model [14].
- The social group highly influences the person's behavior. The reverse is also true: a person may influence a group. Sometimes bad habits such as corruption are very resistant to change because the group accepts them - corruption becomes an informal social norm.
- Culture and education influences person's decision making through mental models (i.e. stereotypes, childhood education/stimulation, etc.).

Describing the entire education system as one unique global game is not a realistic task. Instead, some typical scenarios may be described as smaller games. The next section depicts several games played in the Romanian education system.

3. EXAMPLES OF EDUCATION SYSTEM GAMES

The games presented in this section help us to understand why the system is blocked in undesirable stable states and to estimate in which direction will probably evolve. Three simple games are described in this section.

2.1. The non-conformity game

Romanian education system, similar to other ex-communist countries, has a dark history that cannot be easily neglected. The communist past is responsible with the creation of a specific culture that comes with numerous undesirable mental and behavioral models. As expected, this culture was continued after the regime changed in 1989 since it was impossible to change it in a short period.

In this context, it is important to analyze what happens if one actor tries to change such a system. This actor will be called "non-conformist player". In order to analyze such a situation we propose a game called "the non-conformity game". The players involved in this game are: P1 - the university manager(s)/leader(s) and P2 - a non-conformist player (i.e. a professor) that tries to change the system. This situation is generated when the non-conformist professor proposes some new ideas while the establishment tries to keep the system stability.

This game represents an asymmetric version of the classical "chicken" game [15]. Each player has two strategies:"strong" - sustain its position and "weak" - give up/retract. If P2 chooses "strong" and P1 also chooses "strong" we have a "crash" situation where P2 is severely punished by an amount S (it may lose his/her job for instance - real examples are known) and P1 has a small loss (due to a possible negative publicity). If P2 chooses "weak" and P1 chooses "strong" P2 will have a small loss (at a psychological level) and P1 will have a moderate gain since its power was confirmed. If P2 chooses "strong" and P1 chooses "weak" P2 will have an important gain and P1 will have a moderate loss (in terms of power/image). If both players choose "weak" then P2 will have a small-medium loss (caused by regret and frustration) and P1 will have zero since its power is not challenged.

An instance of this game is depicted in Fig.1. Particular values are chosen for each payoff according to previously stated observations.

Fig.1. The non-conformity game - normal form of the game and Nash equilibrium detected using "Gambit" tool. The values 1.0000 and 0.0000 related to the detected equilibrium represent the probability

to choose a certain strategy by a player. One pure Nash equilibrium is detected: P1 - "strong" and P2 - "weak".

A Nash equilibrium is detected for this game using the tool "Gambit". One pure Nash equilibrium is found: P1 - "strong" and P2 - "weak". P1 obtains a significantly higher payoff while P2 has a medium loss (frustration, low self-esteem). This result suggests that most non-conformist players will give up if they have an idea of changing the system that is not agreed by the manager(s). Thus, this game offers a possible explanation for the difficulty of changing a system using a bottom-up approach. Exceptions are possible since the payoffs have been selected based on very general assumption and also because humans are not purely "rational" (homo economicus). But statistically speaking there is a high probability for the non-conformist player to give up.

2.2. The revolt game

How the colleagues of the non-conformist actor will act? This question leads to another situation that may be also described by a game: "the revolt game".

This game is played by many actors but, for reasons of simplification, we consider only two players P1 and P2 that are both conformist colleagues of the non-conformist actor. Each actor/player has two strategies: "active" – sustain the non-conformist colleague and "passive" - take no action, ignore.

Several aspects should be taken into account for computing the payoffs for this game: the identity, the conformity, the default option and the loss aversion. If P1 plays "active" and P2 also plays "active" they form a team and they both have a significant gain (satisfaction of winning and being together as a group). Within the revolt game, if P1 plays "active" and P2 plays "passive" then P1 is let "in offside" and has an important loss (in terms of identity and also because one is not enough to win so the action fails) and P2 will have a small gain because it chooses the default option that it is also the safest (has a little satisfaction that he escaped the loss that arrived to the other player). A zero gain is obtained for all if both players choose "passive".

An instance of this game based on the previous considerations is described in Fig.2. Particular values are chosen for each payoff according to previously stated observations.

	active		passive	
active	5	5	-7	1
passive	1	-7	0	0

P1 - colleague 1, Payoff: 0.0000
P2 - colleague 2, Payoff: 0.0000

Profiles ▾ One equilibrium by logit tracing in strategic game

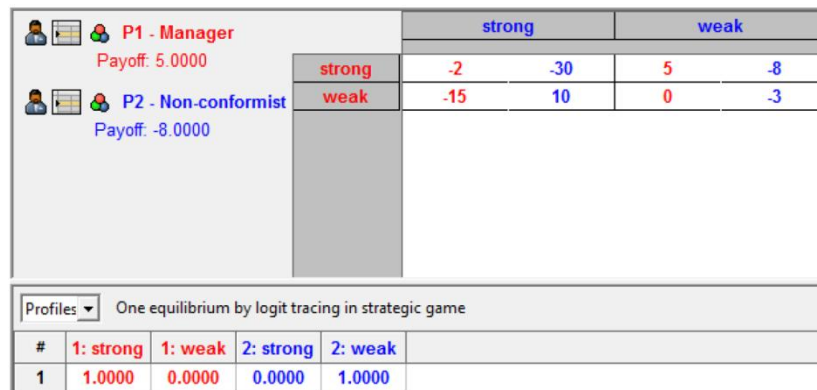| #	1: active	1: passive	2: active	2: passive
1	0.0000	1.0000	0.0000	1.0000

Fig.2. The revolt game - normal form of the game and Nash equilibrium detected using "Gambit" tool. The values 1.0000 and 0.0000 related to the detected equilibrium represent the probability to choose a certain strategy by a player. One pure Nash equilibrium is detected: P1 - "passive" and P2 - "passive".

One pure Nash equilibrium is detected for this instance of the game: P1 - "passive" and P2 - "passive". The players payoffs are zero in both cases. It may be noticed that this instance of the revolt game is equivalent to a classical Prisoner's Dilemma game [4] where both players have a higher payoff if they cooperate but each player prefers to defect because this is the "rational" selfish choice. This game also explains why changes against the establishment are so difficult: the players do not cooperate.

2.3. The quality loss game

Several years ago an education reform introduced an apparently logical principle: the government will finance a university *proportional with the number of students*. Each student involves a cost therefore universities with more students will get more money.

However, the global result for the society may not be as expected. This is due to the fact that, since the number of students is the most important aspect, the education quality, which imply significant costs, will be actually reduced in order to reduce the costs.

Why many students would choose a low quality university? Because they just want to obtain a diploma with a low effort. Why students cheat at exams or bribe a professor to obtain a desired grade? Because the grade is a very salient aspect, since the real learning is just a secondary goal that is sometimes completely neglected. In consequence, low quality universities with a large number of students get the maximum payoff. Additionally, there is practically no penalty for a university that delivers low quality education - a real feedback loop is missing in this case.

A similar situation appears at a smaller scale between professors and students. A game called "the quality loss game" is used to describe this kind of situation that applies particularly to some master studies where numerous students already have a full-time job and they have other priorities than the school. On the other hand, universities need a high number of master students to maximize their revenues.

Let us analyze a simplified situation: the players are: P1 – a professor and P2 - a student. Each player has two strategies: "low effort" - use a cost minimization strategy and "high effort" - use a quality maximization strategy. If P1 and P2 both play "high effort" the will both have a significant gain because they work together and they obtain results and satisfaction. If P1 and P2 both play "low effort" they will have a small gain because they save time and effort for other activities. If P1 plays "high effort" and P2 plays "low effort" the professor (P1) will have a medium loss because of the effort spent with low results and the student (P2) will have a small gain because he/she saves time and effort for other activities. If P1 plays "low effort" and P2 plays "high effort" the professor (P1) will have a small gain because he/she saves time and effort for other activities and the student (P2) will have a medium loss because he/she spent a lot of effort to learn in unfavorable conditions. This may be however compensated with a small-medium gain because he/she learned something despite the professor's attitude.

An instance of this game is described in Fig.3. Particular values are chosen for each payoff according to previously stated observations.

P1 - Professor		high effort		low effort	
Payoff: 2.0000	high effort	5	5	-3	2
P2 - Student	low effort	2	-1	2	2
Payoff: 2.0000					

Profiles ▾   One equilibrium by logit tracing in strategic game

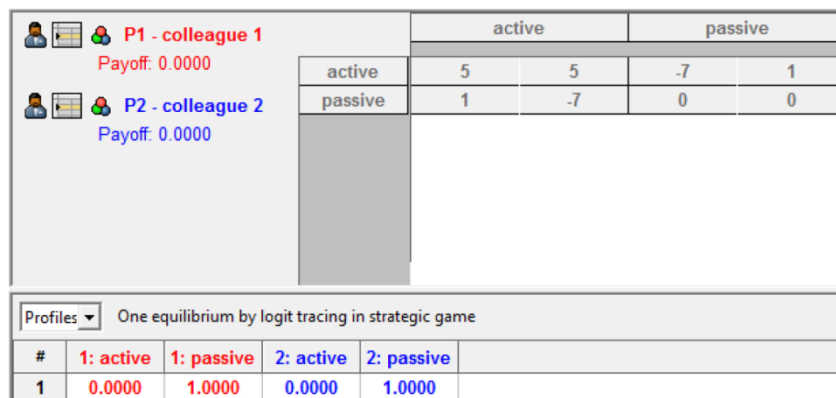| #	1: high effort	1: low effort	2: high effort	2: low effort
1	0.0000	1.0000	0.0000	1.0000
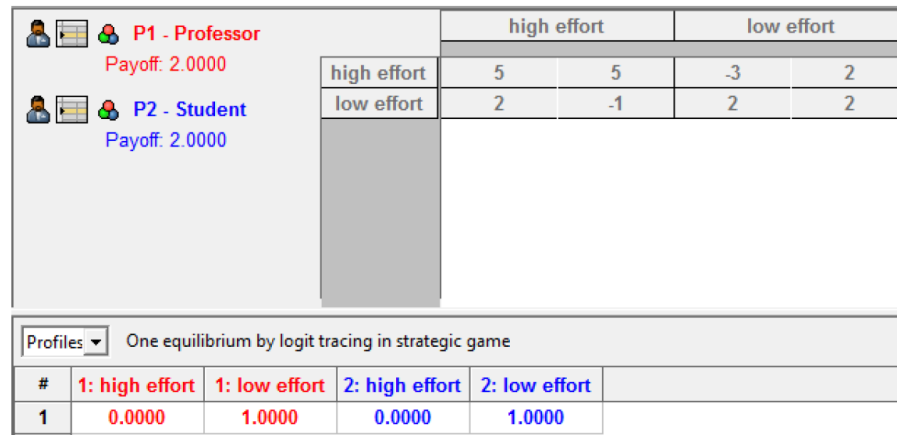
Fig.3. The quality loss game - normal form of the game and Nash equilibrium detected using "Gambit" tool. The values 1.0000 and 0.0000 related to the detected equilibrium represent the probability to choose a certain strategy by a player. One pure Nash equilibrium is detected: Professor - "low effort" and student - "low effort".

One pure Nash equilibrium is detected for this game: Professor - "low effort" and student - "low effort".

These results explain why the Romanian education quality goes down and reflect the real situation concerning the Master studies in Romania. Student needs to be attracted at any price, diplomas are delivered easily, quality goes down but nobody complains - at least nobody from inside. Obviously, exceptions exist but the major trend towards a lower quality is clearly revealed by this game and may also be observed in practice.

3. CONCLUSION

Game Theory and Behavior Economics offer an interesting insight for analyzing the complex dynamics of a social public institution. The Romanian education system has been considered as case study. An essential aspect of the proposed model is the tendency of the actors to choose those actions that maximize their utility and minimize their costs. Utility and costs are estimated starting from real statistical observations, scientifically documented, about human behavior.

Three simple scenarios are analyzed using game-based models: the non-conformity game, the revolt game and the quality loss game. The results obtained with the first two games confirm the fact that the status quo is very difficult to change for at least two reasons: it represents the implicit/default option and it corresponds to an equilibrium state, representing in this case an undesired but a stable state. Unfortunately, to act as a coward when having a different position than the establishment seems to be the rational and thus preferred choice for most actors. It is highly improbable to find brave actors that fight for their ideas against the conformist tendency of the majority and against their superiors. When such actors exist they are not sustained by their rational colleagues - and who can say that in the academic environment the people are not rational? If we add the fact that society perpetuates the culture and the mental models issued from the communist period the conclusion is a not very optimistic one. However, the reality indicates that brave leaders always existed and, at some critical point, they may produce a significant change.

The third game explains why the education quality is decreasing when universities are financed based on the number of students and no penalty exists for low quality education. If nothing changes about this situation the expected result will be an even lower quality of the education.

The proposed approach complements the classical centralized model that does not put in evidence actor's autonomy and human nature. The proposed model may be applied on any public institution. Typical situations may be formalized as simple games. Managers and policy makers may use such a model in order to create better policies for society. To follow a mechanism design, also called reversed game theory approach, for reforming social public institutions seems to be a promising research direction that deserves further investigation.

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"Health education" as matter in the educational process

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ABSTRACT

A lot of Romanian population has currently a deficit of health education, including the lack of awareness of the prevention role. The aim is to highlight the need to introduce Health Education classes in the curriculum as a compulsory subject.

The research objectives are: a) Knowledge assessment of high school students about the personal health topics (personal hygiene, environment, nutrition, behavior); b) Evaluation their opinion about the usefulness of introducing Health Education in the curriculum.

The research is a descriptive and observational study, with transverse approach. It was performed by applying a questionnaire to 364 high school students from Alexandria, Teleorman County. Results: 80% of respondents consider themselves to have information on various topics related to their health. Consumptions and healthy behaviors are not prevalent. Shall be recorded a soft drink and alcohol consumption, smoking, eating fast food, lack of physical activity. Favorable behavior is related to personal hygiene and hours of rest.

Conclusion: it was highlighted the necessity and usefulness health education classes that should be included in the curriculum.

KEYWORDS: *behavior, curriculum, health education, health topics, prevention*

1. INTRODUCTION

The World Health Organization defined health in 1946, as follows: health is wellbeing of physically, mentally and socially, and not merely the absence of disease or infirmity [1].
There are two categories of factors that influence health status. The first category is represented by etiological factors. They are divided into: *negative factors* or pathogens, with an unfavorable action on health, causing health status and appearance altering disease, and *positive factors* or healthy factors, with a favorable action on health status, helping to maintain and strengthen them. The second category consists of the risk factors that are capable of producing disease in sufficient exposure conditions, both quantitatively and temporally. Risk factors may coexist and interact between them, often having synergistic to the occurrence of chronic disease [2, 3].

The main risk factors for chronic diseases are: smoking, physical inactivity, unhealthy diet and alcohol consumption.
The major impact in reducing the incidence of chronic diseases consists of: change in eating habits, increasing physical activity and quitting smoking, which can prevent: 80% of coronary diseases, 90% of cases of diabetes type II and 33% of cancers [4, 5, 6, 7, 8, 9 and 10].

Attitudes that can be taken to these factors, can be grouped into two categories of measures [11]:
- Preventive, which shall apply before the advent of harmful influence of risk factors;
- Curative, which is applied after the occurrence of the harmful effects of risk factors.
There are four levels of prevention [12]:

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- Primordial - aims at modifying risk factors distribution in the population (policy, programmes, regulation);

- Primary - aims to avoid the occurrence of the disease at the individual level (immunization, condoms, seat belt, screening for risk factors);

- Secondary - early diagnosis aims to avoid and / or reduce morbidity (early diagnosis, avoiding complications and screening);

- Tertiary - aims to limit complications and socio-professional reintegration (physical therapy, counseling, palliative care).

A part of the population of Romania currently has a shortage of health education, including lack of awareness of the role of prevention and the lack of habit of presenting to medical consultation in case of a health problem. These factors demonstrate reduced role that the health system gave it to health education programs among the population [13].

Early information accurate and substantiated of the young population, to combat various risk factors and to adopt and maintain behaviors that promote and strengthen health, is the most effective method of prevention in health.

Education for health represent an effective strategy for increasing the capacity of individuals to influence health determinants.

School curriculum include an optional courses "Health Education" [14]. There are no published studies that would confirm or not their usefulness, or application level in schools.

2. AIM AND OBJECTIVES

This study has proposed to *highlight the need to introduce "Health Education" classes in the curriculum as a compulsory subject*.
The research **objectives** are:
   a) Knowledge assessment of high school students about the personal health topics (personal hygiene, environment, nutrition, behavior)
   b) Evaluation their opinion about the usefulness of introducing Health Education in the curriculum.

3. METHODOLOGY

The research is a descriptive and observational study, with transverse approach, conducted in the period January-August 2014.

Study population was represented by 364 students from four High schools in the city of Alexandria, Teleorman County: Theoretical High School "Constantin Noica", Pedagogic School "Mircea Scarlat", National College "Alexandru Dimitrie Ghica" and Theoretical High School "Alexandru Ioan Cuza". Selection has been achieved by the inclusion of 3 classes, from each High school, one from each level (IX, X and XI), depending on the availability of the responsible teacher to participate in the study.

Data collection took place during three months: February – April 2014.

In order to assess opinion on health education of the high school students was utilized a self-administered questionnaire. The tools was composed of 33 Research Questions, of which 23 closed questions, with single or multiple pre-formulated answer, a question with an open answer and 9 Research Questions with mixed responses.

The questionnaire was administered during the class with responsible teacher; the high school students were previously explained how it should go for obtain individual response from each person.

Data collected followed the level of information on issues related to individual health, such as: nutrition, smoking, consumption of alcoholic and non-alcoholic beverages, physical activity, rest time and personal hygiene.

The questionnaire has a section with demographic dates: age, gender, residence area.

Statistical data processing included encoding of the questionnaires, validating and creating a database. All the questionnaires have been validated.

For analyze data it was used software: Epi Info v.7 and SPSS 19.

It was applied statistical significance tests to identify whether there are differences according to age, gender and area of residence. Significant differences adjustable by gender have been identified for these behaviors: smoking, consumption of water, soft drink and alcohol, physical activity as well as to classify these behaviors as being harmful or not for health status.

4. RESULTS

4.1. Socio-demographic data

The questioned population aged between 15 and 18 years, mean age of 16.11 years and standard deviation of 0.8 years.

Main features are: 42.3% are 16 years, 64.3 % are female and 51.9% are the residence in rural area.

4.2. Knowledge assessment about the personal health topics

According to the **smoking**, the distribution of respondents highlights predominance of non-smokers from both genders (figure no. 1).
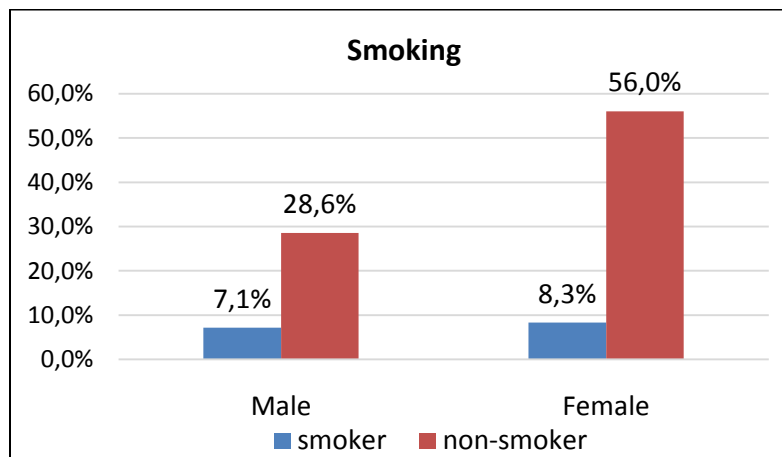
Fig. 1. Smoking in the study population

98% consider as smoking an unhealthy habit. Respondents identified the main categories of chronic diseases are consequences of smoking, such: cancer – 87%, dental cavities – 54%, chronic bronchitis – 36%, stroke – 32%.

Half of respondents believe they have a balanced diet. 44% do not **eat fruit or vegetables every day**. Daily consumption of vegetables is at least 5 to 22% of cases.

93% of the high school students **eat fast food**, given that the 83% of respondents considers this type of food unhealthy.

Eating fast food is: occasionally – 65%, daily – 14.5% and 1-2 times/week – 14%.

The chronic diseases are consequences of fast food consumption are: obesity – 94%, addiction – 33%, diabetes type II – 19%, cardiovascular diseases – 19%.

96% of respondents **consume** *soft drink* (figure no. 2); 74% believe they are not healthy.

Soft drink consuption
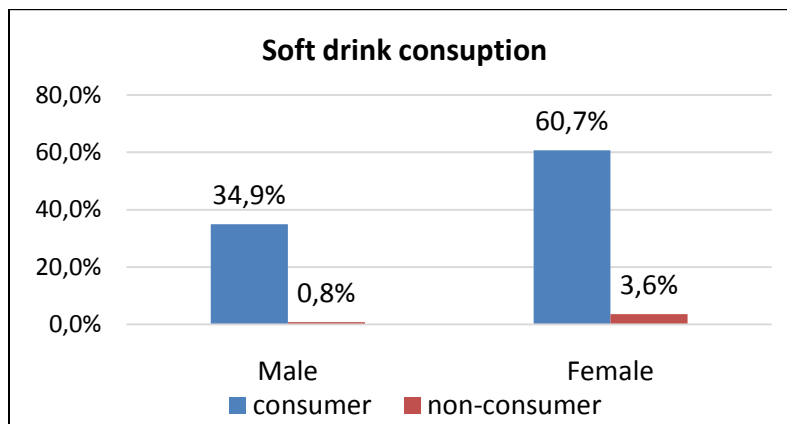
Fig. 2. Soft drink consumption

Drinking is: occasionally - 43%, daily - 35%, 1-2 times/week - 23%. For half of them the daily amount consumed varies between 0.5 and 1liter.

The level of identification of the consequences of soft drink consumption was: diabetes – 61%, gastritis – 50%, obesity – 37%, dental cavities – 30%.

Only 53% of them **drink water**, minimum 2 liter per day.

Alcohol consumption is registered in 47% of the respondents (figure no. 3).

Alcohol consumption
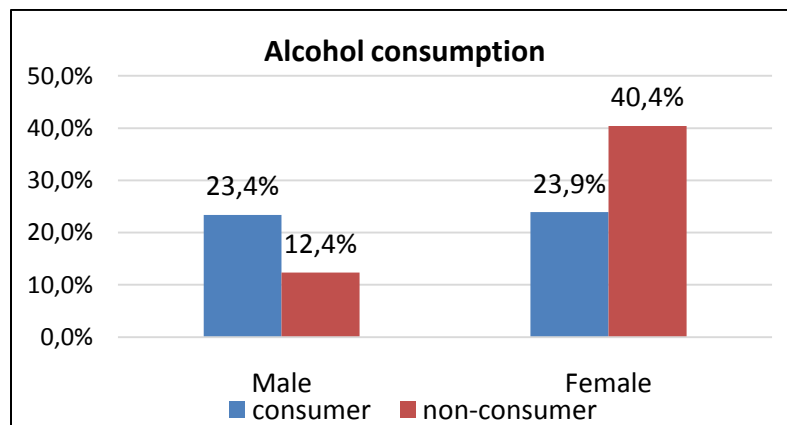
Fig. 3. Alcohol consumption

65 - 67% of respondents prefer wine and beer. Drinking is: occasionally - 83%, 1 times/week - 13%, daily - 1%.

Respondents identified the main categories of chronic diseases are consequences of smoking, such: cirrhosis – 42%, sleep disturbance – 40%, depression – 39%, gastritis – 24%, cancer – 22%, chronic hepatitis – 17%.

Sedentary activity is quantified by number of hours per day sitting at the computer. 98% of high school students utilized their computer at list one hour per day.

Daily physical activity is absent for 20% of respondents.

The consequences of lack of physical activity are: obesity – 73%, depression – 40%, osteoporosis – 31%, hypertension – 21%, diabetes – 14%, cancer – 11%.

The hours of **rest time**, minimum 7 hours of sleep per night, are respected by 64% of persons. The consequences of sleep disruption are: memory disorders – 63%, perception disorders – 46%, depression – 33%, irritability – 32%.

Personal hygiene, washing hands and brushing teeth, is respected in over 82% of cases.

4.3. Evaluation opinion on "Health Education"

The principals sources of information about health behaviors are: internet, parents, physician, mass-media, in over the 42% of cases.

I time, the participation of the high school students in "Health Education" classes was 47%.

82% of persons have a positive opinion regarding the utility to introduce the courses about health education in curriculum (figure no. 4).
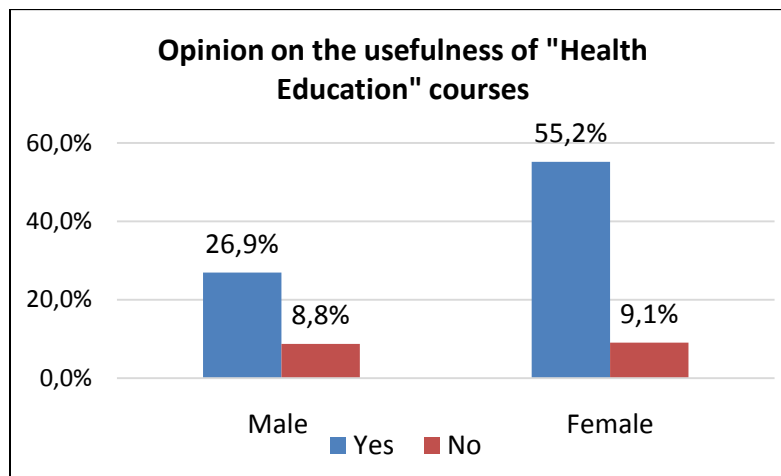
Fig. 4. The usefulness of Health Education

Main topics of interest for health education courses are:
- Diet and Nutrition - 77%,
- first aid - 65%,
- Personal Hygiene - 64%,
- Sexually transmitted diseases - 52%,
- consequences of drug use - 40%,
- responsible use of medicines - 38%,
- basic physiology - 35%,
- Habits harmful to personal health - 34%.

5. CONCLUSIONS

By achieving its objectives, the study suggests a lack of general knowledge about food hygiene, about the different behaviors, that bring risks or benefits for personal health and social services, about the functioning of the human body, and even a little interest, in the subject of health, shown by respondents.

These results highlight the need to implement the courses of "Health Education" in the school curriculum as a compulsory subject, this representing the best method of primordial and primary prevention in health.

ACKNOWLEDGMENT

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Needs and Perspectives of Entrepreneurship Education for Postgraduate Students. A Romanian Case Study

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ABSTRACT

Entrepreneurship education is essential in supporting the main goals of the Europe 2020 strategy. Also, the Entrepreneurship 2020 Action Plan states that it is entrepreneurship that makes the European economy more competitive and innovative.

Despite the fact that entrepreneurs create jobs and bring contributions to the economy, their successes are not presented as role models in the media. For young people, this makes an entrepreneurial career rank rather low in the list of attractive professions and it is a deterrent to those who might want to become entrepreneurs. Therefore, this article will present the results of a survey conducted among postgraduate students from 2 masteral programs at University of Bucharest. The opportunity to be involved in a mentoring activity with a successful entrepreneur was presented as a concept and tested. The need for role models and building a network with entrepreneur mentors are few of the research findings.

KEYWORDS: *entrepreneurship, online mentoring, soft skills, personal development.*

1. SOCIAL CONTEXT AND REQUIRED SKILLS FOR ENTREPRENEURS

According to EU Skills Panorama (2014) Romania Analytical Highlight [1], in Romania, job opportunities for young people are much scarcer than for those aged 30 and over. This results in the employment rate for persons under the age of 25 being three times lower than 25-34 and 35-54 age groups and twice lower than those aged 55-64. Concerning unemployment, the rate for young people is four times higher than the rate for persons aged 25 or above and, in some regions, even 5.5 times higher; 41.5% of the young unemployed have been in unemployment for a year or more [2].

While unemployment rates for the low-skilled and medium-skilled have remained constant in the last years, unemployment among the high-skilled workforce, most of which are young people, has increased. This imbalance is illustrated also by the sharper fall in employment rate for higher education graduates, which is steeper than the EU average. An even clearer picture is given by the fact that in the 2000-2010 period although the total number of those unemployed fell by about 50,000 people, the number of unemployed with a university degree increased by about 50,000 people [3]. This high imbalance is explained by the increase in 2000-2010 in the number of university graduates, hence stronger competition for the relatively limited number of vacancies for the high-skilled. To remedy this situation, local and regional public employment services have been working with local employers to design appropriate training courses for the unemployed so as to improve their skills and access to the labour market [4].

Up to 2020, graduates from the following five fields of study are expected to experience the highest growth in demand by employers: information technology (18% increase in demand),

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health (16%), architecture and construction (13%), business and administration (11%) and engineering (11%) [5].

Starting to develop the entrepreneurship competences for youngsters could be a way of decreasing the unemployment rate and to generate a sustainable growth of society. Entrepreneurship competences can be used across people's personal and working lives [6] as they encompass creativity, initiative, tenacity, teamwork, understanding of risk, and a sense of responsibility [7]. Entrepreneurship competences are not related to a specific occupation, discipline or qualification. The OECD has identified three main groups of skills required by entrepreneurs [8]:

• Technical – communication, environment monitoring, problem solving, technology implementation and use, interpersonal, organizational skills.

• Business management – planning and goal setting, decision making, human resources management, marketing, finance, accounting, customer relations, quality control, negotiation, business launch, growth management, compliance with regulations skills.

• Personal entrepreneurial – self-control and discipline, risk management, innovation, persistence, leadership, change management, network building, and strategic thinking.

Almost twice as many people who regard self-employment as a feasible prospect in the next five years had followed an entrepreneurship course (34% compared to 18%). However, less than half of EU citizens feel that their school education helped them to better-understand the role of entrepreneurs in society (47%) or gave them the skills and know-how to enable them to run a business (41%). Only 28% of Eurobarometer respondents agreed that their school education made them interested in becoming an entrepreneur; although this figure ranged from 65% in Portugal to 17% in Germany and the United Kingdom [9].

Engendering entrepreneurship skills involves developing:

• Specific, technical business-running skills e.g. developing and implementing a business plan, accounting, budgeting;

• Transversal or strategic skills associated with entrepreneurship: an ability to take decisions based on balanced risk assessment and information analysis; recognising and implementing opportunities for business growth; following market developments and managing the products and services offer [10].

2. RESEARCH METHODOLOGY AND KEY FACTS ABOUT HOW ENTREPRENEURSHIP IS PERCEIVED

Between December 2014 – January 2015, applying a non-probabilistic sampling, a research based questionnaire was conducted among students enrolled to the "Mentoring in education and Management" and "Evaluation of educational programs" from University of Bucharest.

The research objectives were:
• to identify the topics to be treated in a mentoring program;
• to find out the entrepreneurial interest of students;
• to identify the usefulness and relevance level of the mentoring program
which were sustained by the following hypothesis:
• more than 70% of students would be interested to be part of the mentoring program;
• the concept of mentoring in entrepreneurship is not so clear for postgraduate students;
• the focus should be more on practice.

38 students answered to an online questionnaire, developed in Google forms, with a gender distribution of 97% females and 3% males. 40% of respondents were aged between 20-25 years old, 21% were between 26-35 years old and 39% above age of 36.

Students are active and present in social media, which is a facilitating factor for organizing the second part of the research, an online mentoring activity with students and entrepreneurs from different business areas. 95% of respondent have a Facebook account and 68% use Google+, which means they have an active Gmail account. Moreover, the interaction between mentor and mentee is appreciated to be realized via email (89%) and via Facebook (58%).

The laptop would be the most used device for accessing and interacting with mentors but 24% of students would use also their smartphones. The score is quite low from our point of view, meaning that communication won't be instant and this might cause some frustration for those who are using smartphone and are able to share a response, a point of view, immediately, in comparison with those who will be in the front of their laptops after a couple of hours.

Asked about what is a mentoring program and what a mentor should in order to develop the entrepreneurship competences of postgraduates students who are studying educational sciences, the top 3 activities associated with this are: counselling and guidance, personal development and training.

Education, IT and human resources are the most important domains where mentoring programs should be offered. Regarding mentoring programs for developing entrepreneurship competences, facilitated by entrepreneurs mentors, students expressed their interest in a higher proportion and more than 55% of them would allocate up to 3 hours/week for this activity. They consider that such a program should focus more on practice than theory.

The results also show that a mentoring program in entrepreneurship should offer examples and practical experiences, to help you learning what is the best from entrepreneurs, to help you transforming your ideas into practice and to offer collaboration/networking opportunities with all entrepreneurs (mentors) involved in the program and also with all the other students (mentees).

Personal development, communication and negotiation, what is doing concretely an entrepreneur and concrete steps in starting a business are the most required topics to be treated during the mentoring sessions.

For the next 12 months, 68% of students expressed the intention to develop their entrepreneurship competences and only 8% want to start a business, to be entrepreneurs. Those who have friend or relatives active in the business field are more tempted to develop their entrepreneurship competences.

The online mentoring program for postgraduate students in educational, facilitated by entrepreneurs mentors, was tested afterwards as a concept, based on the following KPIs: interest, uniqueness, relevance and credibility. All respondents considered such a program would be very interesting and 97% said this is relevant as a top 3 score. 87% see this concept as a credible one and 74% as a unique one, which could be organized by university.

44% of respondents would act as promoters, they would recommend this program also to other students from other specializations and only 27% would act as detractors. The net promotion score is 17% with a 7.7 mean score. We observed also a significant difference on the mean score of those aged 36-40 (8.8) and those between 31-35 years old (5.6), which means that the last group is not very convinced about the advantages of this program.

3. WHAT'S NEXT? RESEARCH OPPORTUNITIES

The results of this research are confirming a higher interest of postgraduates students in developing entrepreneurship competences and an online mentoring activity could be a suitable idea in this respect. All our objectives were met and also the hypothesis were confirmed. Before such a program will be started, a clear difference between the following concepts: training, counselling, guidance and mentoring should be realized from the very beginning. It could be that students will have different expectations during the process which won't be met at the end of the program. Then can associate the mentoring with a training session, it could be that they will expect to attend some formal training sessions considering the lack of knowledge in entrepreneurship but mentoring means combining self-study and then coming in a discussion with the entrepreneur who will help you clarify and consolidate some concepts. Also, the role of the entrepreneur mentor is to guide you in taking some decision, in putting on paper some ideas to be followed.

The online community where the mentoring activities will happen should accomplish the following characteristics:
- to encourage commitment;
- to encourage contribution;
- to have a community manager who will act as entertainer and facilitator of interactions between mentors and mentees.

The next step it to facilitate an online mentoring program with students selected among the respondents of this study and with entrepreneurs who will act as mentors for students. A special attention should be paid and some answers to the questions below are needed:
- How the matching between mentor-mentee will be done? How the mentors will be selected? Will they receive some training in mentoring?
- What mentoring platform will be selected? What are the main features needed on it? How will be integrated Facebook features on it?

4. ACKNOWLEDGEMENT

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Two Referential Sides of Institutional Pedagogy –
Social Pedagogy and Special Pedagogy

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ABSTRACT

In the last ten years, all those who had education as their object of work (theoreticians and practitioners) have been concerned, consciously or unconsciously, with overcoming the magistro-centrism both by promoting a new vision that gives priority to interrelations between students as a new educational environment, nondirective group, experiential learning, self-management, etc. and by building institutional channels specific to pedagogy (the offer-demand channel, the communication channel, the decision and coordination channel, the cooperation and working channel). All these are characteristics of institutional pedagogy that holds forms specific to the transition period that Romanian pedagogy is crossing nowadays. To bring the decision closer to where it should have an effect, the students' cooperation in the group, group education, capitalization of local potential are ways in which the social and special dimensions are joined in the educational action. Our work proposes a reading grid of these changes in pedagogy.

KEYWORDS: *institutional pedagogy, social pedagogy, special pedagogy*

1. INSTITUTIONAL PEDAGOGY

Tom De Coster, Marc Depaepe and Frank Simon [2] presented in a study of the educational reform a situation very mush similar to what is happening in the Romanian educational system. They mention that as in Flanders, at the time of writing their article, the changes in curriculum at the end of last century's England and Wales were presented as radical reform, but actually the curriculum "was in terms of control, extent, content and form, firmly rooted in the English past. It was essentially backward rather than forward-looking, an attempt to preserve under the guise of change". The researchers focus on the "emancipatory tradition" that manifested itself in the educational landscape in the 1960s and its traces in the modern pedagogy. Such a study is needed for our educational system, too.

In the last ten years, all those who had education as their object of work (theoreticians and practitioners) have been concerned, consciously or unconsciously, with overcoming the magistro-centrism both by promoting a new vision that gives priority to interrelations between students as a new educational environment, nondirective group, experiential learning, self-management, etc., new visions which sometimes are reinterpretations of older ones or even their revival or proper implementation.

History records discoveries that have not been given the proper recognition. Such a situation may face the institutional pedagogy, which has faded into oblivion, but its

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characteristics can be encountered in Romanian schools and not only. Institutional pedagogy has its roots in the American social psychology, whose representatives, Jakob Moreno and Kurt Lewin, focused on the role of human interrelations in human development. To these influences, there can be added Carl Rogers' non-directive learning strategy, which postulated that real learning can be achieved only through personal discovery. Meaning, the teacher cannot teach, but only help the student and only if the latter desires it, thus the teacher becomes a facilitator who guides students' growth and development. A partnership in learning is established between the teacher and the student. Rogers [3] believed that positive relationships allowed a person to grow and that instruction should be based on concepts of human relations.

Rogers [6] argued that the primary goal of education lies in facilitating the whole and fully functioning person and that students should play the central role in the classroom, being against the traditional teaching model that placed teachers at the centre, since under the instruction of such model, students were just the passive receivers of knowledge and not able to play creative roles in learning. Students should learn in groups, with the teacher mingling among them, becoming a member of the group, offering help only when asked to. The key qualities of the relationship between the facilitator and the learner are realness, acceptance or trust and empathetic understanding. Realness or congruence stresses the importance of entering into such a relationship without any mask or façade, but exactly as one is: sensitive, enthusiastic or bored, irritated. Facilitators should accept and trust their learners, see them as trustworthy and thus offering them unconditional positive regard. Also, facilitators should stand in their students' shoes so as to become aware of their inner lives, the focus being on the empathetic understanding of their world.

These groups, named encounter groups, are defined by a mutual trust atmosphere, due to the lack of any directing and hence to each individual's freedom to express feelings and ideas. Rogers [6] considered that the educational situation which most effectively promoted significant learning was one in which any threat to the self of the learner is reduced a minimum and a differentiated perception of the field of experience is facilitated. Thus, the focus shifts to building a new learning space, where the teacher does not teach by directing the students, but he gives up his power of "magister" of the classroom, waives the rules and regulations in favour of the group.

Having these ideas as background, a new pedagogy emerged, focused on the learner and on the learning in non-directive groups, namely the institutional pedagogy. It criticised the relationship of dependency of the students to the teacher and promoted the class as a social group, whose main function was to develop students' personalities. The term 'institution' used in Institutional Pedagogy is broader than in its more colloquial sense, To Oury and Vasquez [5], the institution could be defined as: "the places, moments, status of each according to his/her level of performance, that is to say according to his/her potentialities, the functions (services, posts, responsibilities), roles (president, secretary), diverse meetings (team captains, different levels of classes, etc.), and the rituals that maintain their efficacy."

Institutional pedagogy is centred on two factors:
1. the complexity of the learner and the "unconscious" that he or she brings to the classroom. This unconscious, although inspired from the psychoanalysis, is here used with a much broader sense, including the social, economic, cultural and other elements that an educator interacts with in an institutional setting;
2. the role of the institution in the process of intervening.

The focus is on the institution and all it conveys. As part of the physical institution, the classroom extends over its concrete walls and includes its "temporary inhabitants", the learners, seen as "whole people", with their individual differences, the psycho-social factors in learning and even the presence of the "unconscious" in the classroom itself are taken into account in the learning space.

The pillars of institutional pedagogy, as described by Ourly [5] are: materialist (the equipment, the techniques of organising activities, the concrete situations and relations), sociological (consideration of the class, groups and grouping of groups, inter-communication within groups that determine students' behaviour and development) and psychoanalytic (the unconscious features in the class).

M. Lobrot [4] considers that the only educational influences accepted by the institutional pedagogy are:
a. the demand – offer channel: the educator intervenes only if asked to; he suggests activities but does not coheres students to do them;
b. the communication channel: it facilitates dialogue and meeting the other;
c. the decision and coordination channel: the decision belongs to the group, the teacher only facilitates adopting the most appropriate ways to put the decision into practice;
d. the cooperation and work channel: the group are working together, cooperating among themselves and with the teacher.

Although it was criticized for abandoning both the teacher and the student and for empowering too much the students who may not always be able to self-develop themselves, this pedagogy was successful with students coming from underprivileged areas. However, the criticism highlights the importance of establishing equilibrium between leading the students and offering them freedom to act as they want, taking into consideration students' age, the topics and the goals aimed.

2. SOCIAL PEDAGOGY AND SPECIAL PEDAGOGY

The social pedagogy emerged as a desire of making or proving pedagogy to be a science. Its first theoretician, Paul Nantorp [4] defined it as "the science of preparing the individual will for the society, country and humanity", as a science about education should be founded on social life. For social pedagogy, the aim of education is to serve society. The way to achieve this goal is to blend the individual and social aspects while learning in groups or teams: each student's individual peculiarities are respected, his tasks are according to these features, students work together without letting the social aspect prevail the individual one.

These features make it a perfect descendent of the institutional pedagogy. From the methodological point of view, they promote group learning, highlighting as benefits for the students:

We consider that all these characteristics make social pedagogy a good theoretical model to be used in special pedagogy. When working with children with special needs, following the principles of institutional pedagogy as well as its methodology is a logical thing to do as the teacher really is a facilitator, offering help when needed by the disabled person, who knows best when to ask for help. Disabled students learn better when working in groups and putting in their effort on the part they can do (best). Congruence between what the teacher says and feels, manifestation of trust and acceptance, and empathic understandings are absolutely necessary in any successful activity with impaired students.

Other studies [1] have identified ten principles of institutional pedagogy that can be transposed to special pedagogy:

1. Self-learning – students can what to learn, how to do it and when to do it;

2. Horizontal structures – focusing on collaboration in learning;

3. From presumed authority to collective credibility - if traditional learning environments were about trusting knowledge authorities or certified experts, now issues of credibility are of concern;

4. A de-centered pedagogy – the teacher, as the magister, does no longer have that role;

5. Networked learning – individual learning shifts to a socially networked collaborative one;

6. Open source education – school is no longer the only holder of knowledge;

7. Learning as connectivity and interactivity – learning can only be done within a social group;

8. Lifelong learning - the increasingly rapid changes in the world make us continuously acquire new knowledge to face up to the challenges;

9. Learning institutions as mobilizing networks – the traditional institutions for promoting learning should be seen as mobilizing networks;

10. Flexible scalability and simulation – learning must remain open to various scales of learning possibility.

3. CONCLUSIONS

Both special pedagogy and social pedagogy are descendants of the institutional pedagogy, promoting experiential learning. This learning is the best for those with special educational needs as it fully involves the student in the learning process. The school environment should offer the possibility of applying the theses of institutional pedagogy, as schools are changing (on all levels of analysis). A new educational environment centered on the group of students (the learning group being present in non-directive pedagogies) should replace the current class organization (the authoritarian one, centered on the teacher). This requires change to start from the educational policies, focusing on the shift from student-teacher dependency to a mutual empathetic relationship. Individuals change only after the institutions/the environment change.

Institutional pedagogy is related to the Pedagogy of Institutional Autonomy, Ethnology of Education, Perennial Pedagogy, Pedagogy as Socio-cultural reproduction and of course to Social Pedagogy and Non-directive Pedagogy and Social Pedagogy. This is the new way of pedagogical thinking, based on the Institutional Pedagogy, the third wave of the new education.

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The role of metacognitive reflection in developing the learning to learn competency among students with learning difficulties from technical schools

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ABSTRACT

Along with concern of educators to address the issue of learning in terms of active participation of students, the key feature became reflexivity. The main aim of this research is to stimulate the development of learning to learn key-competency by implementing an intervention program to 11th grade students with learning difficulties in the study of Romanian Language and Literature, so that the learner reaches the authentic, reflexive and strategic learning. The sample of subjects includes 106 students from technical high schools and colleges whose limits are situated mainly in the direction of efficiently managing the cognitive, metacognitive, emotional and motivational resources. The reflection on learning in which students were engaged in each stage of the formative experiment, by means of open reflection journals, allowed us to discover the beliefs and opinions of learners upon their own learning process. In the context of metacognitive reflection exercising, there was a significant optimization on awareness of the personal metacognition and significant increase on incidence of planning, monitoring and evaluation of learning behaviors.

KEYWORDS: *metacognitive reflection, learning to learn competency, open reflection journal*

1. INTRODUCTION

"Learning to learn" competency has been identified in many contexts as being fundamental for achieving success in a knowledge based society [1]. Education and training have to secure the learning environment in order for this competency to be developed for every citizen, including individuals that are part of a disadvantaged group as well as through different learning contexts. In recent years the concern of educators and psychologists to address learning and knowledge in terms of active participation of subjects has greatly increase, the key feature for this being reflexivity. In this context, it is becoming increasingly necessary for young people to improve their potential through the formal educational system so that "learning to learn" along with building a better quality learning would transcend beyond the classroom and allow students to solve everyday situations.

A constant concern of teachers should be to stimulate students to reflect on their learning process so that they become aware of their strengths, but also about their weaknesses, which they can compensate by personal ways to explore the information through personal management of information and knowledge, and thus effectively managing their knowledge. Reflection is a cognitive process through which students become aware of what took place during the learning process [2]. The authors state that there are two types of reflection activities: 1) the emphasis is on content issues as student believes that he needs to know about a specific task or area; 2) the focus is on the student's learning in general, such as, for example, if the student understands or

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not the task objectives. In the latter case, reflection on thinking and processes implies students thinking about thinking (metacognition), about actions and processes, as well as transfer of knowledge in new contexts and creating alternatives or opening new possibilities. Metacognitive reflection is "a specific approach which allows students to analyze their own learning process in a systematic manner and to discover their personal hypothesis and constructions of what they are producing as a way for students to identify and question their own strategies" [3]. The metacognitive reflection is people's own beliefs and interpretations about their own cognitive activity. Reflection involves the following: looking back, pulling apart ideas, addressing omissions and ambiguities, drawing conclusions, unravelling questions, considering alternate perspectives, making connections, reasoning and making judgements and can lead to goal setting [4].

Reflection is a more general term than metacognition. "It is much more than "one-off" thinking during which the thinker casts their mind back to an event, situation, person, topic or thinks about anything" [4]. In reflecting, the student engages in an active, persistent and careful analysis of ideas in order to seek a deeper understanding, a broader and more reasoned perspective. Reflection and metacognition are terms that are often used interchangeably even though they are not synonymous. While reflection is required for one to be metacognitive, metacognition is not required for one to be reflective [4]. The relationship between reflection and metacognition is inherent in the definition of metacognition. To consider consciously our own knowledge and how regulation of this knowledge is controlled, reflection is necessary [5]. In the scientific literature, almost all strategies for improving the metacognition contain elements of reflection and also require a certain degree of introspection, self-awareness and self-knowledge [5].

Implicitly, reflection is an intense personal experience. The first major challenge is that some students considered the reflection an uncomfortable process. They prefer to work only in the cognitive domain that they would find less challenging. On the other hand, reflection is a difficult process because the student has to formulate judgments about their own learning, which means that it is possible to change their learning style. In this case, it seems safe not to reflect because the student does not want to change what is wrong and what he/she learned up to that point. While some students have difficulty recognizing discomfort and do not accept reflection, others are able to articulate and reflect beyond their initial discomfort and concerns. Because the metacognitive knowledge could be considered as a "static" knowledge regarding the variables related to task, itself and strategies, reflection is considered to be a more active exploration and discovery [6].

2. REFLECTIVE LEARNING IN CONSTRUCTIVIST VISION

Reflective learning is closely related to reflective teaching. There is a generally considered opinion that a reflective teaching induce a reflective learning. Although reflective learning can be determined, stimulated, maintained by a reflective teaching, it may be delayed, despite satisfying all these conditions. Reflective learning is above all "assumed learning, self-determined, having as main features the following: it is active (even interactive), assisted, self-regulated (self-monitored, self-assessed), constructive, meaningful" [7].

Stimulation of metacognition is reflected in the selection and proposal of tasks that incite, invite and facilitate the questions, meaning any activities that require students, especially those with learning difficulties the opportunity to analyze, in a reflective manner, their own actions. The challenge of situations where students can reflect, requires them to reflect on their specific learning and understanding and to provide explanations regarding the use of strategies and the

mental structures guiding them to choose the strategies. But students, especially those who have learning difficulties, find it difficult to reach a higher level of reflection, query, metacognition, without an explicit model. Therefore, we believe that the role of the class teacher guiding student learning activities must be doubled by the practice of new competency - that of *reflective teacher*. The teacher should give students a model of reflection and action on the proposed tasks, when the student is asking. During their work, teachers can encourage a reflexive attitude towards learning, they help students to evaluate themselves and direct their own meanings. It is not just a work for the teacher, but also students' responsibility to assess and direct their own learning.

For teachers who conceive learning in constructivist vision, student reflection is vital because it helps them to build and develop acquisitions, knowledge and teachers organize their teaching offer. Also, for the practice of an active and interactive instruction, reflection represents a valuable indicator for evaluative approaches, moments of personal reflection constituting authentic evidence of formative assessment. Reflective learning is more than just helpful, it is necessary in the study of all school subjects as "it helps students' thinking that reflect cognitively and metacognitively for future activities, they anticipate and manage their work and their whole activity, as the possibilities to solve a task or problem are multiple. This implies that students are not only faced with repetitive situations that do not require initiative, but also with singular situation, with particular cases, exceptions to the rule, contexts in which transfers of acquisitions are necessary, requiring to practice cognitive strategies to grow their cognitive and metacognitive personal reflection" [8].

3. RESEARCH DESIGN

The main aim of this research is to stimulate the development of learning to learn key-competency by means of implementing an intervention program to 11th grade students with learning difficulties in studying Romanian Language and Literature, so that the learner reaches the authentic, reflexive and strategic, efficient, autonomous/independent learning based on comprehension. In the unique experimental group a sample of 106 students from 11th grade with learning difficulties from three technical high schools and colleges were included. Thus, the sample of subjects gathers students whose limits are situated mainly in the direction of efficiently managing the cognitive, metacognitive, emotional and motivational resources. Reflection on learning in which students were engaged in every stage of the experiment, as well as the ability of making decisions regarding learning strategies by means of open reflection journals, allowed us to discover the beliefs and opinions of those who study upon their own learning process.

So we carried out a qualitative analysis of reflections, which imposed synthesizing the large volume of information which we considered extremely useful for accurate interpretation of the picture of subjects evolution during the experiment evolution. The direction of data analysis was to identify the typology of the assertions contained in the diaries, which allowed us to structure the scheme of qualitative analysis of content. In conducting qualitative analysis of reflection journals were follow the steps below:

1. We lectured students learning logs in diaries completed (names of the students being encoded) in three different stages of the experiment formative.

2. We categorized each document in concepts and themes. Each category includes all materials from all data representing a theme or a concept.

3. Finally, we presented the findings in which the data from the three measurements were interpreted by comparison in the light of theories and literature used in this research.

4. INSTRUMENTS

The open reflection journal was created in a semi-structural manner, the subjects receiving four sets of questions proper to metacognitive awareness and metacognitive regulation (planning, monitoring and regulation of learning). These questions had the purpose to guide the subjects toward an open reflection upon their learning. Most students preferred to go through the list of questions and to respond to each of them in the journal. In order to get perspective on learning of students in relation to the tasks and activities in class, they were asked to complete a reflection journal at the end of the three activities in three different stages of the intervention program. In particular, students were invited to describe the learning objectives for the activity, connection between previous experience and the new task, perceived difficulty of activities, evaluating their performance, self-efficacy related to tasks and activities etc.

5. DATA ANALYSIS AND INTERPRETATION

In this research, reflection journal became a tool for students to demonstrate a better understanding of their own learning. We surprised the student frustrations of trying to cope with a different way of learning. It also demonstrates how students tried to rationalize learning situations and look for strategies to cope with change. In analyzing open reflection journals we identified several themes and sub-themes as follows in the table below:

Table 1. Types of metacognitive reflections present in reflection journals

Metacognitive reflections	Occurrences in reflection journals I	Occurrences in reflection journals II	Occurrences in reflection journals III
Metacognitive reflections on solving the learning task and the quality of its products	64	96	78
Total: 238			
Metacognitive reflections on their own learning	89	93	102
Total: 284			
Metacognitive reflections on the evaluation	54	38	35
Total: 127			

In an initial stage, the students' answers tend not to contain profound reflective elements and nor do they reflect their learning experience as future high school graduates. During the experiment, students have showed an awareness of misbalances in the learning process, as well as the necessity to face the cognitive conflicts they have encountered when dealing with this problem. This situation becomes essential in the learning process, as well as the identification of gaps within their own learning process is a start in taking measures.

As students progressed during the semester, their reflections showed an increased complexity of cognitive skills. Reflections change from simple declarations in the sentences/short phrases form about what they have learned to solve the task, sometimes without them, to laborious formulations on how they process information. There is an articulation of strategies to solve problems and to correct gaps in learning. This is evident in student language through the use of words such as "analyzed", which demonstrates the ability of students to be critical about the information received, to make a conscious effort to use critical thinking in order to argue a solution. There were even attempts in running the program to evaluate the ideas presented by their peers. Writing reflection journals revealed an increased degree of cognitive strategies awareness.

The statements contained in the category of ***metacognitive reflections on the learning task and its products*** have been those relating to the specific requirements and task objectives, use of information sources, product quality of expected learning, acquisitions that they have accumulated throughout solving task, organizing time and management of personal resources. The number of assertions regarding the task and learning products significantly increases from a series of open reflection journals to another, as shown in Table 1. If the number of assertions in the first instance on how they are used sources of information increases from the first (64) to the second series of tasks (96) in relation to the third series subjects make fewer references to this issue (78).

The initial increase may be due to task's originality requirements, various documentary sources, being an indicator of subjects' concern to overcome possible difficulties regarding that requirement.

➢ *"I tried to figure out what I did not know and tried to look for other resources." (S., 1st serie journal)*

➢ *"I read carefully the text, so I can work on it and to meet the requirements." (D., 2nd serie journal)*

➢ *"During solving task, I try to always check so that what they read to be in accordance with the task theme." (E., 2nd serie journal)*

The most common reflections present in the open journals completed during solving tasks were ***assertions about their own learning***. As regards this type of reflections, a constant recommendation throughout the projects development was that students try more and more developed, specific, personalized and contextualised metacognitive reflections.

Increasing the number of assertions from 89 in the first set to 93 journals in the second series and 102 in the third is an indicator for increasing the depth and personalization of metacognitive reflections. This conclusion is supported by important developments in the incidence of assertions about their cognitive approaches and their implications for the quality of learning.

The statements on this group of reflections comprise either their own judgments involved in learning or the awareness of personal characteristics about their own learning activity or practicing cognitive strategies:

➢ *"I've been thinking about learning strategies they've used before and I chose the one that I thought would be best to learn this subject." (N., 3nd serie journal)*

➢ *"If I have some knowledge about this subject that I will learn, this will motivate me because the link between old and new knowledge will help me to learn easier." (R., 2nd serie journal)*

➢ *"I reflected a long time on the theme, managing to understand the message sent by text; I divided the text, I used different colors to mark ideas according to their importance; I am informed from many sources." (S., 2nd serie journal)*

Metacognitive reflections on the assessment have referred to both the quality characteristics of products produced and personal characteristics through self-evaluation reflections type. The decrease of occurrences in journals from 54 assertions in 1st series journals to 35 in 2nd series entitles us to claim that, although initially the announcement in advance of evaluation criteria has an impact on initiation of metacognitive monitoring and control, the reference points provided by lists of assessment criteria are gradually replaced by other reference points.

➢ *"I am pleased with how to resolve the demands received, I do not think I will change*

anything in the way I work." (C., 2nd serie journal)
➢ *"The task seemed a little difficult because the material I will have to read it is almost not hardly known, but the idea of achieving a brochure seems interesting." (M., 3nd serie journal)*
➢ *"When I'm capable to do my task, I feel good because I'm proud that I succeeded to handle it." (D., 2nd serie journal)*

A constant tendency of evolution can be found on assertions regarding the products quality of learning in order to increase subjects' concerns to ensure the efficiency of learning. Examples of statements to that effect:
➢ *"Regarding the objectives of the task, I can say it was a difficult task because the information was very bushy for a simple brochure, a lot of data related to the subject and very difficult to select them. But with the help of colleagues, we managed to get purely the main ideas." (D., 3nd serie journal)*
➢ *"By consulting with colleagues in the team, we concluded that the brochure should contain as many as possible schemes, summarizing the information and comprehensible vocabulary." (A., 3nd serie journal)*

In analyzing qualitative data contained in the open journals, we considered useful to investigate a particular aspect, namely the accuracy of reflections on task difficulty. If in the 1st serie journals set completed regarding the perception of task difficulty the percentage is very high (63%), it drops gradually, reaching 25% in the 3nd serie journals. The initial high percentage may be due to the novelty effect of the whole intervention program proposed to students. Although they mostly stated they had been involved in solving such tasks, they found that the task types proposed in our intervention are distinguished by complexity and contextualization of learning.

6. CONCLUSIONS

In the course of formative experiment, during practicing metacognitive reflection and integrating formative feedback provided by teachers and fellow students, we noticed a more accurate prediction of the quality of learning outcomes. The higher the incidence of self-regulated learning behaviors is the greater the importance given of subjects to such behaviors involved in ensuring effective learning. Qualitative analysis contained in reflection journals and concerns of subjects to increase learning efficiency allows us to find optimization based on metacognitive reflection training, on subjects' attitude towards their learning, towards involvement in the proposed learning situations and increasing availability for metacognitive reflection.

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Explaining Academic Learning from an Attitude-Based Perspective – A Multiple Regression Analysis

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ABSTRACT

In earlier studies we published, we sustained an eclectic approach on academic learning and the influence of learner's attitudes on learning performance. Our latest published study advanced a model for academic learning that encompassed constitutive elements such as attitudes toward learning, learning conduct and learning satisfaction. The current paper intends to shed more light on the model by aiming to test, through regression analysis, the accuracy and relevance of the constitutive elements and their assumed interrelationships.

KEYWORDS: *effective academic learning, attitudes towards learning, learning conduct, learning satisfaction, regression analysis.*

1. INTRODUCTION

Although the human learning process has been widely and intensively studied, leading to interesting and, often enough, intriguing findings and theories, still there is room for research and debate. Starting from what we refer to as learning, continuing with learning might be, also what learning cannot be, and establishing what learning actually is – in terms of validated assumptions - the philosophical discourse transforms into a psychological one, only to become a matter of great pedagogical concern. In schools and universities, learning takes the shape of an organized and systematically pursued process that, we believe, has at least equally to do with students' and teachers' intellectual capacities, as it has to do with their attitudes and affective responses.

2. EFFECTIVE ACADEMIC LEARNING

As mentioned earlier, a model for academic learning was presented in a previous paper (Topală, 2014), stating that learning is presumably influenced by factors that fall into two categories: individual-related factors and instructional-related factors. In these broad categories, we have mentioned the individual's prior learning experiences and a set of individual psychological variables - on one side, and teaching/instructional strategies used in the educational situation – on the other side. In order to claim its effectiveness, academic learning has to be both productive – in terms of learning outcomes- and satisfactory – in terms of learning satisfaction.

2.1. Effective learning conduct

Based on information gathered through systematic observation, interviews and questionnaire-based surveys, we believe that learning in an academic context reaches its full potential when preceded and accompanied – from the individual point of view- by effective learning conduct and positive attitudes towards learning, and followed by learning satisfaction and, yet again, positive attitudes towards learning. In other words, we assume that learning conduct and the attitudes toward learning have at least an equal importance in determining the

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effectiveness of learning as do intelligence, learning style, level of anxiety, locus of control, motivation, self-esteem and self-direction of learning – defined by Lounsbury et al. (2009) as a personality trait associated with satisfaction with school (faculty) and satisfaction with life all together. We will refer to learning conduct as to a configuration of specific actions and strategies, designed, organized and performed accordingly, that a person engages in while learning in an academic context. The learning conduct speaks about mental planning and coordination of strategies for managing the learning tasks, while referring to the actual actions and implementation of decisions regarding the best way to proceed in learning. Effective learning conduct refers to those strategic decisions and actions that allow the learner to obtain the highest level of performance with the smartest use of resources.

So far, the best idea when it comes to effective learning conduct is the use of a metacognitive and self-evaluative approach to academic learning. Effective learning conduct means the judicious decision regarding learning planning and organizing learning resources (prioritize learning tasks, allocate time and establish conditions for learning), the smart choices when it comes to learning strategies (usage of the suitable learning techniques) and self-conscious efforts of optimizing the learning behavior (bettering the understanding process).

We've measured the learning conduct using a 25 items questionnaire that evaluated, through a five-points Likert scale, the likelihood that the respondent is to build learning strategies and adopt consequent learning behaviors, ordinarily using specific learning techniques, to help him/her learn better (more effective) in an academic context.

2.2. Learning satisfaction

Adding an affective flavor to the effective learning equation, learning satisfaction has much to do with *feeling* from content to fulfilled about the learning process, as a whole – its deployment, its outcomes and the people involved. The satisfaction towards learning starts to take shape *during* the learning process, with every element that makes its way to the personal learning context. The learning satisfaction becomes a continue evaluation (mostly non-rational) of the learning experience, and results in a general impression about the process, as a whole. This general shaped affective impression is one of the corner stones of positives attitudes towards learning and a bid bond for future engagements in learning opportunities.

From a methodological point of view, we've measured this construct with an instrument called SLSQ (Topală and Tomozii, 2011) which basically consists of a questionnaire that evaluates, on a five-points Likert scale, the students' level of satisfaction with academic learning, on 6 dimensions: *learning conditions and facilities; learning content; teacher and teaching activity; learning outcomes; learning climate; peer-group relations.* The general score obtained by the respondent indicates the level of satisfaction he/she experienced with the learning process in an academic context.

2.3. Attitudes towards learning

Seen not only as an axiological-oriented perspective, but more as a complex evaluative statements (Robbins and Judge, 2007) that set ways of getting oneself in relationships with the social, cultural and physical surroundings, attitudes matter because they have the potential of generating action. And not only immediate actions, but also in the long-run. A student's attitudes towards learning can be decisive when it comes to getting involved in learning situations and succeeding in resolving academic learning tasks. The attitudes towards learning include cognitive or rational appraisals, emotional or affective evaluations and volitive aspects that give the attitude the spring for action. For example, a favorable general attitude towards learning can

be translated into *ideas* pertaining to the importance of learning (its value for a learner's life and well-being), associated with *feelings* or emotional responses (a person likes to learn because he/she associates learning with doing something important, that fulfills him/her), leading to *specific behaviors* and *conducts* (becoming a student in a class).

3. THE RESEARCH COORDINATES AND REGRESSION ANALYSIS

The main ***objective*** for this research was to identify and rank the strongest predictors, amongst the one chosen, that could estimate the academic learning satisfaction in adult students (ages 25+). The leading ***hypothesis*** for this paper is that we can establish, through multiple regression analysis, a set of significant predictors for estimating the level of learning satisfaction, and we can identify the strongest from that set. The more specific assumption is that learning satisfaction is most accurately predicted by the attitudes towards learning, the learning conduct and the learning outcomes (academic results).

The ***instruments*** used to gather the needed information were questionnaires that measured personality aspects, such as attitudes, learning strategies usage, satisfaction with academic learning, learning motivation, locus of control, learning autonomy. Thus, we used the following questionnaires: *Attitudes towards learning questionnaire* (15 items, five-points evaluation Likert scale); *Students' learning conduct questionnaire* (25 items, five-points evaluation Likert scale); *Students' learning satisfaction* (SLSQ, Topală and Tomozii, 2014); Teresa *Amabile's motivation for learning questionnaire* (Amabile, 1994); *Spector's locus of control Scale* (WLCS, Spector, 1988); the *Self-directed learning Scale* (Lounsbury et al., 2009).

We have chosen to test the following factors - the academic results, the level of internality (locus of control), the motivation for learning (using Teresa Amabile's 4 factors, 2 factors for each of the internal dimension and external dimension of motivation), self-direction of learning, the learning conduct and the attitude towards learning- as *predictors* for learning satisfaction. The reason for which we have chosen learning satisfaction as a *criterion variable* resides in the importance we place on the learning satisfaction as a factor of great value for the learning process. As stated before, this construct is considered to be influential for the measure in which a person is likely to engage in future learning activities and the probability of success in these activities.

For the regression analysis, we selected a sample of 100 students, ages 25-60, m=32 years, that responded to a set of 6 questionnaires pertaining to the mentioned variables (criterion and predictors). Using SPSS 14.0, we established that our regression model - including the mentioned variables - has an explanatory power of 28,2% (Adjusted R^2 = 0,282). This value represents a *medium* explanatory power for a regression model, keeping in mind that, according to Florin Sava (2011), "in the social sciences field, most coefficients of determination are situated between 0,10 and 0,50" (p. 230). Reading the Beta coefficients in a standardized form, in Table 1, led us to believe that the academic results, self-direction of learning and the attitude towards learning are the best predictors for the learning satisfaction.

Table 1. Results of multiple regression analysis

	Standardized Coefficients Beta	t	Sig.
Academic results	,255	2,643	**,010**

Level of internality	,053	,499	,619
Intrinsic motivation-pleasure factor	,072	,551	,583
Intrinsic motivation-challenge factor	-,079	-,618	,539
Extrinsic motivation-recognition factor	,211	1,823	,072
Extrinsic motivation-reward factor	-,122	-1,086	,281
Self-direction of learning	-,246	-2,040	**,045**
Attitude towards learning	,400	3,284	**,002**
Learning conduct	,196	1,735	,087

An interesting issue that appeared in this regression analysis is the sign of the self-direction of learning variable. The negative value indicates that, while the autonomy in learning (self-direction of learning) is increasing, the learning satisfaction decreases. It becomes a matter of paradox, as we are facing the possibility that being more autonomous in the learning process leads to a lower level of satisfaction. The most probable explanation for this result is a systematic error due to the language translation of the Lounsbury instrument (Self-directed learning Scale) and its application on Romanian students, which are culturally different from the student population (American) on which the instrument was originally validated. In reference to our hypothesis, we can indeed establish a set of statistically significant predictors for the learning satisfaction variable, and we can rank them accordingly. Also, in a more specific note, our assumption regarding the predictive power of the 3 variables – academic learning, attitude towards learning and learning conduct- is, at this point, quasi-confirmed. Meaning that only 2 of the 3 assumed predictors were proven to be significant. For the third variable, we will once again cite professor Florin Sava (2011), which clearly states that, if we are dealing with an unilateral hypothesis, in which the researcher specifies from the beginning the direction of evolution for the criterion, based on the predictors values, "we can proceed in halving the p-value in order to test that unilateral hypothesis"(p. 232). By doing this, the "Learning conduct" predictor becomes a significant one. Thus, the initial assumption regarding the top 3 most powerful predictors (from the set we have established), is fully confirmed.

4. CONCLUSIONS

Our goal for this paper was to shed more light on aspects that pertain to the effective academic learning. The aspect we have discussed here is the learning satisfaction and its relations with factors such as academic results, students' attitudes towards learning and learning conduct. Our intention of proving, through multiple regression analysis, that the learning satisfaction is significantly linked to those factors mentioned before has its roots in establishing a more coherent understanding of the effectiveness of the learning process in an academic context. It has been shown that what is most likely to predict the satisfaction with learning are the learning outcomes (academic results), followed by the attitudes towards learning and the learning conduct. In order to achieve good academic results, the attitudinal and behavioral factors of learning (attitudes towards learning and learning conduct) have to be in place for success. From an educational perspective, this finding can be translated into

practice by considering those psycho-pedagogical strategies that focus on the teacher-students and student-student relationships, and on a constructive approach of attaining knowledge, in order to improve the students' attitudes towards learning. Also, teachers could adopt instructional strategies that assist students in getting through learning tasks by using smart learning techniques (that save up time and effort) and a metacognitive approach to understanding and assessment, as vital parts of an effective learning conduct.

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Classroom Relationships Questionnaire: Confirmatory Factor Analysis and Validation

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ABSTRACT
The aim of this study is to validate the Classroom Relationships Questionnaire for the Romanian high school students. The present study examines the psychometric properties in a sample of 118 high school students from Brasov County. The questionnaire has 28 items, grouped into four scales such as student cohesiveness, teacher support, cooperation and equity. Results showed that the questionnaire had good internal consistency; Alfa Cronbach coefficient obtained is 0.894. The findings are consistent with many previous studies and shows good psychometric properties including validity, internal consistency, and test – retest reliability.

KEYWORDS: *classroom relationship questionnaire, confirmatory factor analysis, high school students.*

1. INTRODUCTION

The politics of an inclusive education are more visibly present during the last few years than ever before in the teacher education literature [1] [2]. The schools are at different stages in developing an inclusive culture [3].

Researchers and scientist have studied and developed numerous ways to improve learning and considered numerous factors that can improve and can favor a real inclusion. Studies [4] had demonstrated that teachers who are effective overall with their classes are also effective in working individually with students with disabilities. Researchers noted that the difference between early career teachers and experienced teachers may be due to different nonverbal behavior which may determine and explain the difficulties encountered by early career teachers to create positive relationships between teacher and student [5]. Interaction with the whole class seems to be important in shaping the image that students have about the didactic staff [6]. The teacher is a leader in the classroom, he or she is the one that can shape students interactions through personal example.

The best way, the most effective and cost-free way to ensure performance, achievement and inclusion in schools is for teachers to collaborate, to share form own experience [8]. In that way teachers can help one another to create a favorable learning context, share information and ways on effective teaching methods. When the teacher is the one who has a certain value orientations, then the class will be a real and inclusive context.

In this research the starting point is represented by previous studies that investigated dimensions like Student Cohesiveness, Teacher Support, Cooperation and Equity. According to the specialty literature these dimensions are the most relevant for determining the quality of classroom relationships.

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2. OBJECTIVES

The aim of this study was the validation of the Classroom Relationship Questionnaire. Our main objectives were:

☐ to analyze the psychometric properties of the scale

☐ to evaluate the factor structure of the CRQ in a Romanian sample using confirmatory factor analysis.

3. METHOD

3.1. PARTICIPANTS

The research was conducted with the participation of 118 students. The lot contains 2 students aged 15, 49 students aged 16, 52 students aged 17, 15 students aged 18 years. 68 respondents meaning 57.6% are from rural areas and 42.4% respectively 50 participants are from urban areas, 96 female respondents (81.4%) and 22 of respondents are male (18.6%).

Regarding family composition 22% of respondents, 26 respectively, have a single child status while 51 (43.2%) of respondents have one brother, three respondents (2.5%) have two brothers, 45 (38.1%) of the participants have a sister, two (1.7%) of respondents have 2 sisters respectively three sisters. 84.7% of respondents mothers have completed compulsory education and only 18 (15.3%) attended university studies, which is also the case for fathers' educational level.

3.2. INSTRUMENT

The questionnaire is designed to measure students' perception of their classroom environment, and it incorporates scales that have been used and proven to be significant predictors of quality of educational relationships.

The questionnaire includes 28 items rated on a five-point Likert scale (1 = Strongly disagree, 5 = Strongly agree). We obtained a good internal coefficient for all of the 4 scales Student Cohesiveness (.798), Teacher Support (.883), Cooperation (.901) and Equity (.865).

4. RESULTS

The Classroom Relationships Questionnaire was tested on a sample of 118 students. The reliability is very high, the Alfa Cronbach coefficient obtained for the entire questionnaire is .894, the correlations of each item with the total score are higher than .50 (Table 1).

Table 1. Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.894	.894	28

Regarding the construct validity, there are no differences between boys and girls on either scales: Student_cohesivenes $t(116) = 1.598$, $p = .113$, for . Teacher_support $t(116) = 1.149$, $p = .253$, Cooperation $t(116) = .279$, $p = .781$, and Equity $t(116) = -.973$, $p = .332$.

The exploratory factor analysis revealed a four factor solution that explains 55.66% of the variation with the items presenting a saturation of these factors between 0.70 and 0.85. In order to test the factorial structure of the CRQ, we used exploratory factor analysis. The 28 items of the CRQ were expected to load onto 4 factors. (Table 3).

We have eliminated from exploratory factor analysis 8 items that had saturation below the threshold of .70. In the factor analysis remained 20 items that presented saturation above the threshold of .70.

In order to test the factorial structure of the CRQ, we used the SEM approach (Structural Equation Modeling) by applying the CFA method (Cconfirmatory Factor Analysis).

Table 3. Composition of factors

	Component		Component		Component		Component
Items	1	Items	2	Items	3	Items	4
CRQ26	.857	CRQ11	.816	CRQ17	.734	CRQ1	.762
CRQ28	.838	CRQ12	.752	CRQ19	.725	CRQ4	.756
CRQ24	.793	CRQ7	.736	CRQ14	.721	CRQ2	.732
CRQ25	.781	CRQ8	.734	CRQ15	.709	CRQ3	.721
CRQ27	.761	CRQ10	.720				
CRQ23	.705	CRQ9	.712				

As we can see in table 4 the model is valid. Chi square test reveals the values of $\chi2 = 3.019$, df= 2, p<0.539. Other model quality indices have values that fall within the threshold values: CFI = .983, GFI = .987. The value of the RMSEA coefficient is statistically significant = 0.025, having a threshold of .05.

Table 4. Goodness-of-fit measures for the tested model

Model	$\chi2$(df)	GFI	CFI	AIC	RMSEA (90%CI)
	3.019(2) p= .539	.987	.983	18.006	.025 (.000 − .076)

Note. GFI: Goodness-of-Fit Index, CFI: Comparative Fit Index, AIC: Akaike Information Criterion, RMSEA: Root Mean Square Error of Approximation, 90% CI: 90% confidence interval for RMSEA.

The structure of CRQ and the standardized estimates are presented in Figure 1. The standardized estimates of all items were significant.
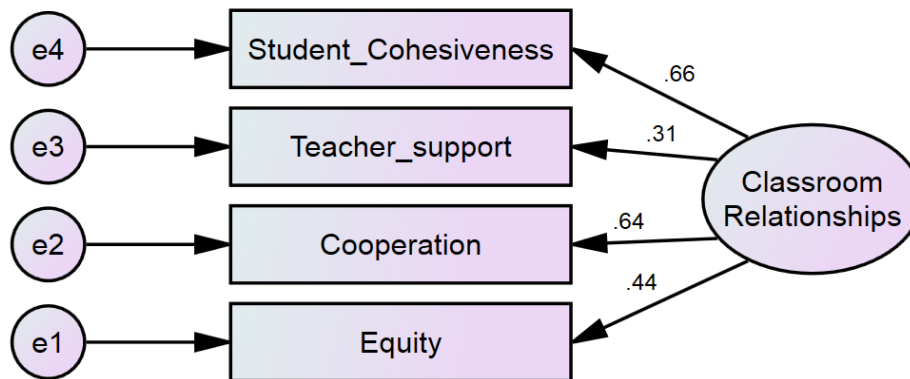
Figure 1 Structure and the standardized estimates of CRQ

5. CONCLUSIONS

The Classroom Relationship Questionnaire was successfully developed and tested for Romanian population, and shows good psychometric properties including validity, internal consistency, and test–retest reliability. The groupping of the 28 items into four factors are consistent with previous findings. The results showed a good level of model quality, confirming the research model, showing that measured factors help crystallize the researched model. Although indicators prove the validity of the model, it is required that the model to be reassessed and validated on other datasets. Thus, a line of research is to test the model and its validation in other circumstances.

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Emotional Effects of Music Therapy on Children with Special Needs

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ABSTRACT

The responses to music are both physiological and emotional, changing the life of a child with special needs. It creates new diverse feelings. The current study explains music therapy's contributions to modeling the emotional behavior of children with special needs by encouraging the expression of feelings and by solving relational issues. The paper is structured on two parts. First part highlights literature concerning the backgrounds, the aims and the effect of music therapy on children with special needs. The second part focuses on the practical area of music therapy bringing up study cases, participants to the music therapy act, children exposed to different types of music that involve active (vocal and rhythmical singing and improvisation) and receptive (music audition) participation. Children are encouraged to express their feelings through art as a part of the evaluation proving that, as predicted, musical experience leads to a positive increase in the children's skills and emotional responses and also develop their learning and thinking abilities.

KEYWORDS*: emotional behavior, musical experience, music therapy, special needs*

Literature review - Music and Emotions

It was demonstrated that music brings emotional responses in people with or without special needs. Therefore, researchers provide a mean of understanding the complex aspects of the relation between music, thought and feeling (emotion). They provide answers to how the brain reacts to music using methods such as the electro-encephalography (EEG) and the magneto-encephalography (MEG) which involves monitoring electromagnetic energy pattern, positron emission tomography (PET) and functional magnetic resonance imaging (fMRI) that work by monitoring the flow of blood and levels of blood oxygen at specific locations in the brain. Music both communicates and induces emotions thought various characteristics: tempo, melody, intensity or sound quality (timbre). It is only one of the benefits of engaging with music.

Methods to measure which emotions are elicited by music and are numerous. For example, the recently developed Geneva Emotional Music Scale (GEMS) includes 33 emotion terms, reduced by factor analysis to 9 dimensions: Activation, Inspiration, Tenderness, Nostalgia, Peacefulness, Power, Tension, Wonder, and Sadness. To these, researchers from University of Kansas added 3 more: Liking, Pleasantness and Joyful Activation. The participants rated special selected music using these dimensions on a scale of liking from "not at all" to "very much." The findings were relevant: people tend to enjoy music that is pleasant. When a particular piece of music is characterized by high levels of all three original emotions (liking, pleasant, joyful activation), the listener likes this piece. It is possible therefore, that listeners seek out these emotions in music. (Anderson et al., 2011)

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The neuroscientists have the same opinion: music lights up the brain, and they explain the importance of the type of music applied by therapists. The right hemisphere of the brain "lights up" when people (or children) learn to read music, understand key signature and notation, and follow the sequence of notes. It is the center of feelings and emotions. It is activated when music is heard. It distinguishes between melodies with a variety of pitch and timbre. The left hemisphere of the brain is responsible for language and logic so, it is analyzing what was heard. Therefore, by playing an instrument or by singing, the brain is activated in the same area that is involved in analytical and mathematical thinking. Also, studies reflect that listening to music stimulates the neural network - the dopaminergic regions of the brain (responsible for learning, memory and reward), as well as the limbic system (responsible for emotional expression).

Listeners usually agree about what type of emotion is expressed in a particular piece, which makes us believe that music actually produce emotion in listeners. The distinction between perception and production of emotions is analyzed not only by psychologists, therapists or musicians, but also by philosophers who relate the analysis of emotion in music with the distinction between *cognitivism* meaning that music simply expresses or represents emotions and *emotivism* saying that music elicits real emotional responses in listeners. Moreover, by learning to play a musical instrument in childhood stimulates cognitive development and leads to enhanced skills in a wide variety of areas. (Bangerter A & Heath C, 2004)

Literature review: Children with special needs - Characteristics

Classifying a child as having special needs or not could vary from one country to another. The diagnoses include attachment disorder, attention deficit hyperactivity disorder (ADHD), developmental disabilities, mental disabilities and learning disabilities. In countries such as United States, the list of diagnoses also includes alcohol syndrome (FAS) and oppositional defiant disorder. All these categories, depending on the characteristics of the disorder are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and require health care-related services and/ or special institutions.

Children may have mild to severe cognitive delays causing difficulty with concepts such as math, telling time, maintaining attention and focus, and difficulty sequencing and remembering events. Depending on the severity, they may have diminished receptive language, difficulty sounding out words, difficulty understanding words or concepts, delayed speech, or problems discriminating between sounds. Poor visual motor, gross and fine motor development and coordination sensory integration problems are common. Motor problems regarding low muscle tone, could also manifest and so are physical over-activity or extreme under-activity motor skills. Often, all these delays or physical problems are joined by emotional problems. For example, non-retarded autistic children are getting normal controls on measuring their emotions' expression and recognition. They recognize and show simple and complex emotions, naming and represent those in pictures, but they manifest difficulty talking about these socially derived emotions, getting embarrass. Through music therapy children with special needs could learn to verbalize their emotions, it only requires time and patience. When a certain level of retard it's evident to a child the therapist must focus on simple or primary emotions, such as happiness, sadness, anger and fear in order to understand the nature and occurrence of social-emotional deficit, knowing that these children are limited in the ability to recognize and communicate feelings through facial expression.

Related to the children with special needs, through music therapy in general, or melotherapy in particular, children obtain a motivating setting in which their social skills can be

improved. Music is used to create a positive experience where the children can enhance their self-esteem with the others. Special songs and techniques are effective in addressing academic skills such as letter and number identification, counting, or problem solving. It is motivating and helps concentration which can allow children to attend to a task for a longer period of time. Moreover, music therapy facilitates communication (language skills), participation to group sessions or in class, and the nonverbal expression. To not forget that singing is an effective technique used to increase sentence length, fluency, rate, and appropriate pitch and volume of the speaking voice. The rhythmic component of music is providing a multi-sensory stimulation in the auditory, visual, and tactile forms, and addresses poor coordination and balance issues. In time, through active or auditory melotherapy sessions, children learn to keep eye contact with the others, to properly touch or hug a peer, and to develop identification and appropriate expression of their emotions. For instance, children may listen to a "sad" (minor key) piece of music while singing about feeling sad and practicing making a sad face, or on the contrary they listen to a " happy" (a major key) piece of music and singing about being happy and practicing making a smiling face.

Research – Method, discussion and findings

The research was made on a sample of 9 children, diagnosed with mild to severe mental deficiency (three of those also having epilepsy), and one of each: Down syndrome, autism, and schizophrenia. They attend one of the special schools in Brasov, part of the national educational system. The diagram of their disorders is presented below.
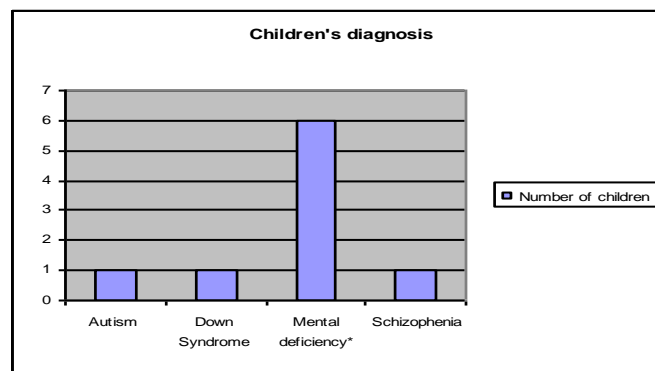
The children started a program with intensive music teaching three years ago, with great results. If in the beginning the children were unable to socialize and to concentrate over a task, they didn't verbalize their feelings and were incapable of showing any type of emotion, with patience, in time, the children ended up not only to recognizing basic feelings such as happiness and sadness, but also to display them in   different situations.

The first music therapy session started with an easy conversation including a presentation and a short background check. This way the therapist could have a full image of the environment the children belong to, a list of their disorders, they familial issues, their skills, so on. During sessions more kinds of alternative therapies could be integrated along music therapy: it's possible to practice *active music therapy* including sound therapy, rhythm therapy, and melotherapy using musical instruments (piano, drums, blockflutte, singing), *auditory melotherapy* (children's music, classical music - Mozart for children), or Art therapy, dance and movement and drama therapy. After few sessions children were able to play roles, to dance in

pairs or in group, to draw and paint. All changes in the children's behavior were noted or recorded as per their parents' permission.

Children were asked about the way they felt during the melotherapy session and their answers were positive, even excited. During the evaluation they verbalized the feelings about playing the instruments or listening and singing the songs. The children recounted their emotions, and accurately labeled their affect expression in chosen pictures. As predicted their emotions were positive, but half of the children manifested some difficulty talking about their emotions. All of them preferred instead to illustrate their feeling in a drawing remembering the musical piece they liked the most. Again, as predicted, children illustrated the songs they've been singing. Few examples are below. With one exception all children finished the drawing.
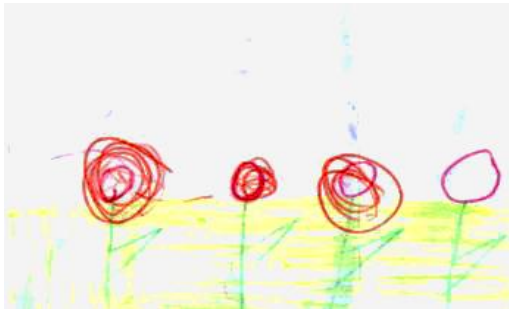
Traian (Schizophrenia)

Mihaela (Epilepsy, Mild Mental Deficiency)

Bogdan (Epilepsy, Moderate Mental Deficiency)

Raul (Mild Mental Deficiency)

Alexandru (Autism)

Gabriel (Severe Mental Deficiency)

The qualitative features of the drawings, such as the colors used, the size and details of the parts, and the shape of the figures may be used for a professional analysis. With the mention that the therapist is not necessary a specialist in interpretation of drawings, on a first look we can see the colors that were used in drawings (in our case the colors were light), and if the images are friendly and illustrating a positive mood or, on a contrary, dark, unhappy images illustrating a negative mood.

At the end, children were tested for their ability to identify the affective connotations of melodies in the major mode. Different from the case of musical fragments the children were asked to match musical fragments with schematic representations of happy and sad faces. The findings were relevant, and the hypothesis was tested: all children recognized the major mode and showed it by drawing happy faces. They were able to show emotions responding positively to the uplifting music, enhancing their self-esteem and showing a positive self-image.
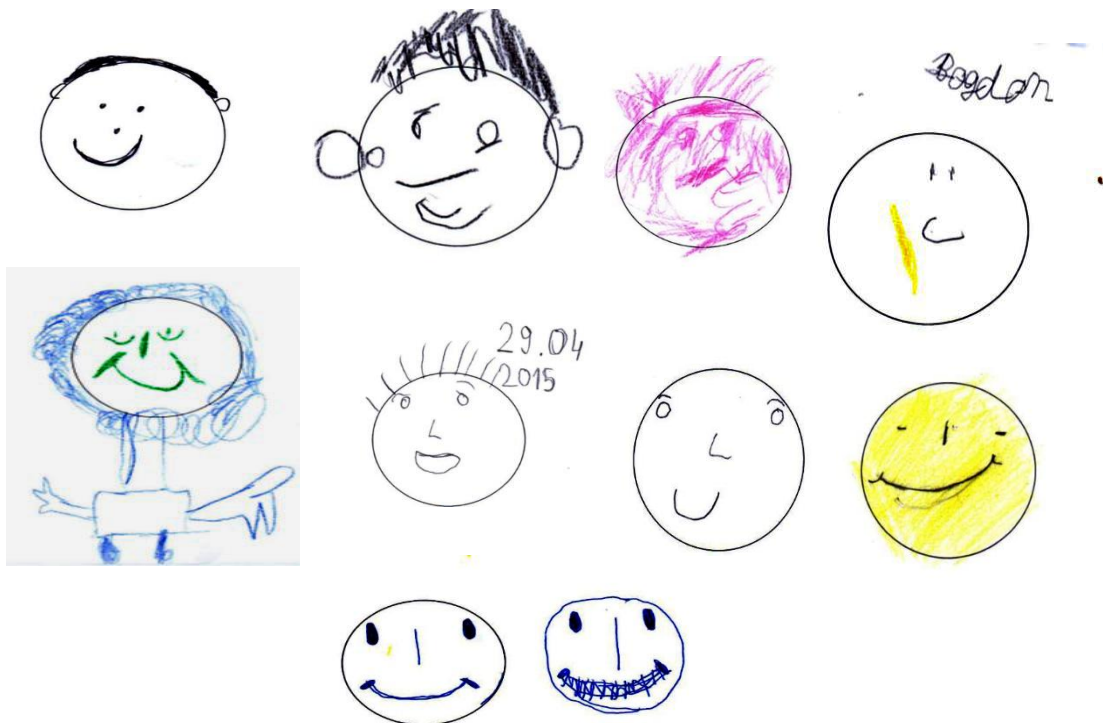
Conclusion

Music brings a sense of security, encouraging children to take risks, to socialize and be more spontaneous in interactions with others, to show emotions. As seen, music therapy can provide additional opportunities for positive interaction and building relationships not only between the therapist and the children - subjects of the therapy, but also among the family members and the child with special needs, who now is seen in a "different light." The family witnesses the child's strength and skill, its joy and spontaneity for the first time. Therefore, as predicted in our hypothesis, music therapy contributes to modeling the emotional behavior of children with special needs by encouraging the expression of feelings and by solving relational issues.

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Methodological inclusive approaches in the rythmical musical education of the pupils in the primary cycle of education

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ABSTRACT

The work suggests a pedagogical flexible and opened model to some other different and individualized approaches in the early musical education. They are connected to the finalities of the rhythmic domain and the specific contents of the syllabi, they are also different and have different degrees of difficulty. They are aiming to the reproduction, the rhythmic reading, the recognizing of the sonorous lengths, the rhythmization using the body movements and the percussion instruments, the spelling of the verses, the graphic representation of the musical signs, the interpretation of some songs and musical games, the listening to some sound sources, the listening to the music, the beating of the rhythm, the marking of the breaks, the sol-faing, the rhythmic accompaniment, the improvisation and the rhythmic musical creation. The contents and the organization of the learning are built to engage the pupils in some constructive efforts to enjoy the learning process.

KEYWORDS: *contents, different approach of teaching, inclusive education, methodological approaches, objectives, rhythmical musical education.*

1. INTRODUCTION

The present study suggests a flexible pedagogical model, opened to methodological inclusive approaches in the musical education of the children in their first forms. An inclusive education can answer to the social and ideological demands and can also lead to a higher level of adapting the school to the requests (special or additional) to teach the children and to improve the teaching-learning of all pupils-e.g.[1].

The analysis of the speciality works emphasize remarkable methodological creation in transmitting the musical rhythm. Presented under the name of "Methods in the musical education", these creations have been presented worldwide and positively influenced even the Romanian musical methodology. *The coded musical creation, The musical educational system "Tonic - Solfa", Jaques-Dalcroze, Maurice-Chevais, Montessori, Gédalge, Martenot, Willems, Kodály, Orff* – e.g. [2].

The authors of all these, identify new solutions to make the contents more understandable in the non-conventional systems of notation the lasting of the sound: arabic numbers (J.J.Rousseau, Pierre Galin, E.J.M. Chevè); big letters, small letters, lines and figures for the breaks (pauses) (S. Glover, J. Curwen, Z.Kodály); syllables and "dactylorythmie" (M. Chevais); roman figures (A. Gédalge), line segments (E. Willems) – e.g. [3,4].

The solutions that have been found, solve only a part of the problem of the teaching of the musical rhythm. We can easily notice that there is no interest in the researches concerning the comparisons of the didactical methodology and the individual abilities of the children and their

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level of the musical development. We consider, that the pedagogical model we propose, manages to achieve a dynamic adaptation of the cognitive knowledge of the rhythmical musical education in the first forms (the time the kids learn the musical notation) to their particularities, by using some strategies adapted to each individual. It means to work different with each pupil.

2. SPECIFIC METHODOLOGICAL APPROACHES IN THE RYTHMICAL MUSICAL EDUCATION IN THE FIRST FORMS - THE STAGE OF MUSICAL NOTATION

The learning of the notation signs of the music cannot start before the pupils contacted practically and intuitive, by listening and then singing the rhythmic elements to be approached by the notation. It is positively important to understand this mentioned notation expresses only visually the musical sounds length and it is necessary the pupils to get even before the sonorous images of the sounds length, the moment they learn to transfer them into graphic signs (musical notes). This way approaching the marking with notes we do not have to start from note to the sound but the opposite, from sound to the note, as the pupil be able to understand the notes are the signs of the singed song as the letters are the signs of the spoken language. As we may notice from the analysis of the targets and contents in this evolution there appears an important advance. The target now is to develop the rhythm sense as an expression of the musicality, surprising the sounds in their length relationship, being more and more skilful to recognize them in the graphic sounds.

2.1. The sounds lengths

If in the previous step the pupils shaped up their rhythmic skills to express in singing the lengths of the sounds in the same time marking the correct times and lengths of the sounds, it is the right time now, to teach them the values of the notes and their symbols that could be even easier. So we suggest the following steps:
- The intoning by the teacher of a musical piece (part of a song) a fragment developing following steps of one measure, half a measure or two measures, according to the length we need;
- The reproduction of the musical fragment by the pupil trying to mark the measure;
- The presentation on the blackboard of the songs; lines spared into syllables;
- The stressing of all these, marking the time;
- The identifying of the appropriate lengths to the syllables in accordance with the time;
- The marking of the measures with graphic signs we taught before;
- The rhythmical reading of the measures succession helping with _Ta_ syllable and marking the measure;
- The communication (transmitting) of the last achievement of notions of a measure, half a measure or two measures- a quarter, a half measure and eight;
- The showing of the symbols of the notes. The presentation of the graphic signs will start with the compounds (the empty oval, then filled, then the right vertical line on the right side, (marked from up to down). In the case of the half time measure we'll explain the time of the measure as well as the two eights group of the measure. It is also necessary to explain the symbols of the measure and of the two eights, in the left side of the oval. Then, it follows the writing on the staff's lines and spaces, mentioning that above the third line (the middle one) the notes will have their line down and left side of the note, except for the note on the third line which can use both directions.

- The pupils will realize exercises of graphic representation of the measures on the lines and spaces of the staff. The using of the graphics will be easier if the kids previously exercised the musical calligraphy.
- The realizing of some specific exercises of rhythmical reading, an important way of combining the learned elements;
- The realizing rhythmic dictations;
- The interpreting of some songs;
- The identifying of the rhythmic elements in songs in games and auditions;
- Activities of rhythmical creation.

The learning tasks are very different and they increase their difficulty level as they develop in order to reach the final goals of the schedule. The teacher can train this way the children in an active manner according to their individual capabilities in reproducing, noting, intoning and recognizing and valuing in a best manner the rhythmic elements.

2.2. The musical pause of one measure

The operational objectives to be focused on in transmitting the one measure pause will be the following ones:

- To infer the coming out of the pause in the song;
- To understand the pauses as silent moments of the music;
- To identify the coming out of the pauses in a given example;
- To identify the length of the pauses referring them to the time;
- To represent graphically correct the pauses;
- To read rhythmically exercises combining the learned measures and pauses;
- To recognize the pauses the teacher rhythmically dictates;
- To respect the pause in the song;
- To mark the pauses in the song;

A following way to reach best methodical results could be:

- To present to the pupils a direct demonstration with a text (a literary or a musical fragment) developed in equal measures (quarters, eights or halfs). Te demonstration will be supported by marking the musical measures.
- The pupils will be asked to reproduce the example in the same time they notices the rhythm and to notate them in their copybooks or on the blackboard placing the fitted syllables under the notes.
- Then the teacher will present a second musical example derived from the first, but some measures are replaced by pauses.
- The children will reproduce the piece and then they will be asked to identify the missing measures. They will notice this way the silent moments and remember these parts are called pauses, their last thing to do being to analyze them and establish the value of the measure.
- The teacher will be then able to transmit the theoretical notion and to demonstrate its graphic representation.

It is necessary to realize exercises of marking the pauses on the staff, exercises of rhythmical reading combining the notes values and the pauses values and in this case to consolidate the notions to use exercises to identify the pauses in the songs, auditions, and finally to put the theory into practice singing songs containing pauses. Initially they can be marked by

slapping hands. But in case the pupils cannot reach a correct reproduction of the rhythm, and pauses, the habit is not realized.

2.3. Some elements of musical metrics

The elements of musical metrics (or prosody) are transmitted according to the schedule, starting in the III-rd form. The normal objectives of this level are gradually designed as the following ones:

- To spell groups of words marking simultaneously the measures;
- To identify the emphasized syllables;
- To show, according to the measures the emergency of an emphasized measure;
- To group the measures length according to the emphasized measure;
- To identify the numbers of each measure;
- To note correctly the measures;
- To read correctly the rhythmical exercises as marking the rhythm (beats);
- To insert in a measure a rhythmical given exercise;
- To identify after the listening, the learned measures;
- To create rhythmical exercises for 2/4 and ¾ measures;
- To solmizate when marking the rhythm (beating);
- To mark the emphasized times of the song slapping hands or tambourine, or marching rhythmically.

The time can be marked in different ways: beating the desk, using percussion instruments or musical toys, marching in equal steps, dancing synchronized steps with the equal measures, beating- as every movement, no matter the direction is marking the time, the measure. In order to consolidate the notions, some rhythmical reading exercises are to be executed. Here, the pupils will combine the notes values with the pauses values or exercises completing measures, or the recognizing exercises dictated, or creating rhythmic exercises in the previously learnt measures.

2.4. The rhythmical creativity in the musical notation stage

The musical creation exercises can ask to identify new methods to combine the lasting of the pauses, in songs as well as in some rhythmical given exercises. In accordance with their musical development level they could also be asked to realize some rhythmical accompaniment formulas, for a little song or for a small work they listened to, helping with percussion instruments, (starting from a given theme as the tempest or the bells). They'll have here to formulate rhythmical correspondences between human impressions, movements, behaviours, suggested by these.

3. CONCLUSIONS

We could notice here a permanently increasing level of the demanding of the musical educational process. This must happen according to the particularities of the pupils age and individual characteristics, their level of musical education development. One cannot launch demands overpassing the maximal capabilities of the kids, to understand, to interpret, to be aware of some new ideas and knowledge. Sometimes we could make mistakes asking for an overhelming effort that could have negative effects as mechanical learning, imitating procedures, the impossibility to solve the practical tasks, stops in the evolution of the capabilities, a lack of interest, fatigue, and so on. The performance level established in the schedules is directly influenced by new methods to permit the increasing of each child and pupil individual value.

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The accessibility of the musical teaching contents capitalizing the substitute ways of indirect presenting of the sound reality

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ABSTRACT

The substitutes presenting indirectly the sounds reality offer some important helpful ways to the pupils better understanding and assimilating the theoretical contents and the ways to interpret and get the musical message. They change into some drawings, body movements and graphic non-conventional representations reliving the different elements of the musical language replacing and anticipating the musical notation. The manner is efficient as the auditive image gets its right visual symbol. The study suggests some proposals of the greatest representative symbols of the musical Romanian pedagogical school (Mihail Gr. Posluşnicu, Grigore Magiari, Marcel Botez, George Breazul, Sabin Drăgoi, Nicolae Saxu, A. Levy Ivela) and also identifies new substitutive ways of the music from the period when it was not graphically represented.

KEYWORDS: *body movements, contents, drawings, graphic representations, musical education, non-conventional ways.*

1. INTRODUCTION

The substitute means presenting indirectly the sonorous reality are coming as true in different shapes, movements, drawings, graphic non–conventional sketches replying different elements of the musical language replacing or provoking the musical notation. They offer a support to the pupils in understanding and assimilation, as well as in the theoretical contents as in the interpretation of the music. Their approach in the musical education of the pupils, is essentially necessary in order to respect the requests of accessibility, of the knowledge interpretation and reception of the musical action. That all, means some didactical transfer to the pupils - e.g. [1]. The access doesn't mean an excessive simplifying of the teaching contents but a new way to formulate according to the stages a new and efficient way to use your skills in breading the sensitive part of the kids - e.g. [2].

The present study offers the proposals of the Romanian musical (Mihail Gr. Posluşnicu, Grigore Magiari, Marcel Botez, George Breazul, Sabin Drăgoi, Nicolae Saxu) and also identifies new ways to capitalize the new methods of the sonorous reality to express in the musical-educational process.

2. THE ACCESSIBILIZATION OF THE CONTENTS OF THE MUSICAL EDUCATION BY USING SUBSTITUTIVE MEANS OF THE SONOROUS REALITY

The present strategy of the Romanian educational system proposes first of all to identify new methods to improve and raise the level of the educational phenomenon, in order to be in agreement with the requests of the highest level of today. The past cannot be changed anyway, but the best parts of it can offer the experience in education and instruction of some important suggestions and proposals able to help the actual musical educational process. The knowledge of

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this tradition is a sine qua non condition to establish the future improvement directions in the field. So we'll present here the best contributions of the Romanian pedegogical school.

2.1. Mihail Gr. Posluşnicu

The teacher and the musician Mihail Gr. Posluşnicu is very well known by his manuals, edited in 1935. They are for the 1to 4-th form under the name A *Treaty of pectical- theoretical musical education*. For the 4-7-th forms the title was *The Music History*. All these contain elements of interest for the teachers as annexes.

The esentialized theoretically and correct contents are permanently exemplified. At the firdt form level book, in order to support the theoretical contente, the author uses different substitutive means presenting the sonorous reality.

We mention first the musical vertical ladders very clearly explaining the succession of sounds coming to replace the horizontal previously presented in his books. The first fig .1 suggests the author idea of the staff, representing the 5 fingers – e.g.[3].
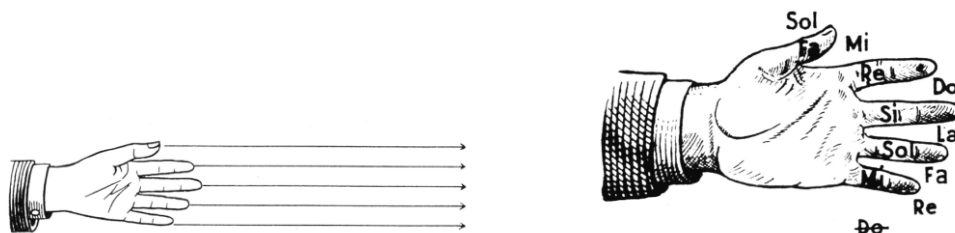
Fig.1. The notes on the musical staff (M. Gr. Posluşnicu)

The interesant way of the substitutes for the sonorous reality is improving by the phononimy used by the author offering the 4-th form pupils another possibility to express the 12 points of the chromatic scale.

The procedure in Fig. 2 is still useful to the actual teacher who conducts intonation exercises and identifying low or high sound expressions – e.g.[4].
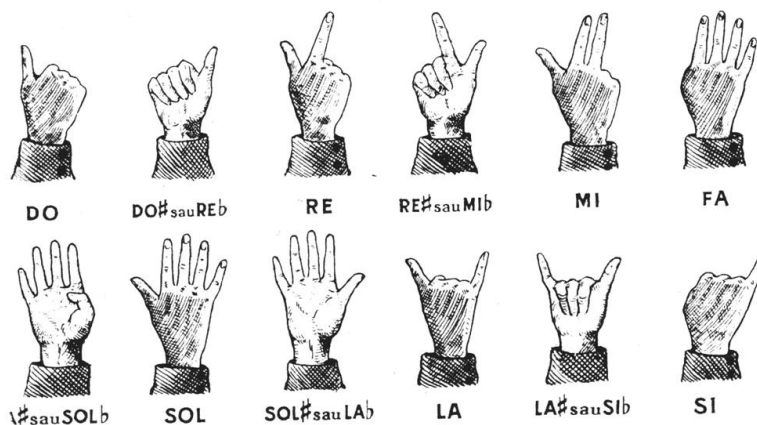
Fig.2. Phononimy up to the model suggested by M. Chevais

2.2. Grigore Magiari

Trying hard to change some school manuals signed by A.L Ivela, Grigore Magiari publishes between 1930-1932 the manuals for 1-7 form. The changes he made elaborats new themes for the study, as the new manuals changes and improve.

Fig. 3 presents the personal contribution of the author in the case of intonation exercises, succeeding a dynamic advance, nominated by syllables - e.g. [5].

do re do re mi re mi re mi fa mi fa mi re mi re do re do
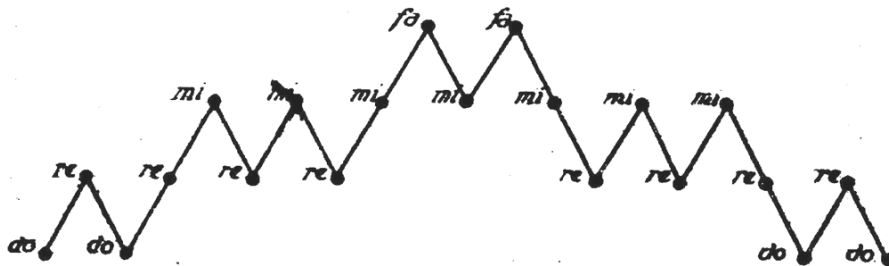
Fig.3. The visual model of sonorous levels (Gr. Magiari)

2.3. Marcel Botez

The professor Marcel Botez is in the interbellic period an outstanding theoretical representative in the scholar education but by its manuals for the Gymnasiums and colleges, valuing an important experience. He notices the particular features of the ages, generally speaking. He putted al that experience in his books. Especially we could mention his plates as a visualizing role, expressing the musical language.

They are very spectacular and more than that, they are useful directly supporting the pupils observations in a permanent run to find out new horizons. In Fig. 4 we expose the musical scales offered by the author at his time – e.g.[6].
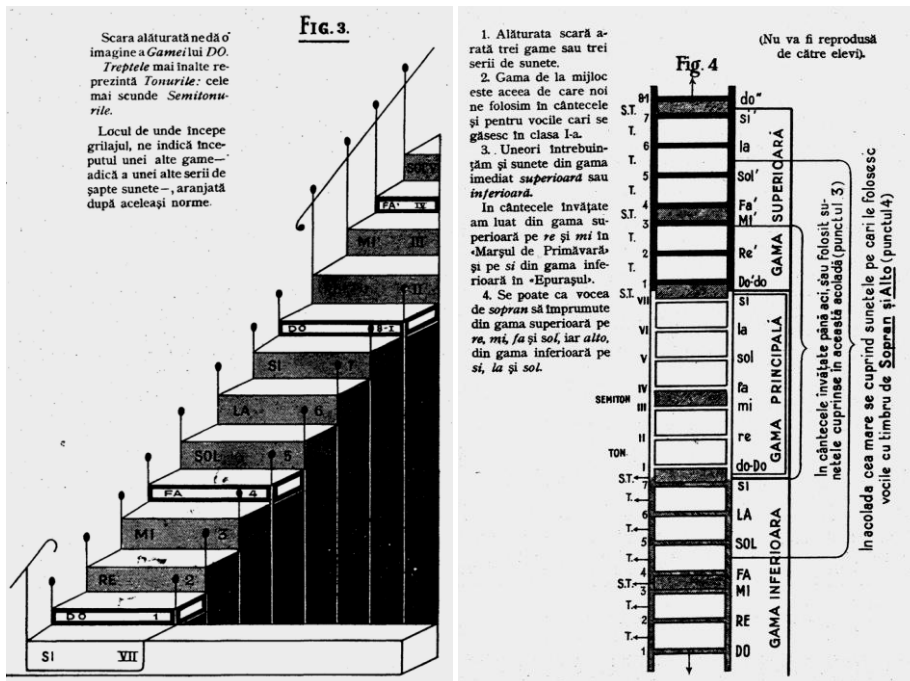
Fig. 4. Visual representations of the Do Game (M. Botez)

The most frequent substitutive means presenting undirectly the sonorous reality, are the representations of the author, of the visual schemes of the Major Musical Scales.

They suggerst a tetreachordic solution of the Scales, a special succeeding order in the Scale, some special measures and spaces in the musical expression. They offer this way to the pupils efficient ways to realize observations and comparisons between all their variants and the model Scales – Do major and La Minor.

The didactical plans created by Mihai Botez manage to accesss difficult theoretical contents for the pupils. His theory Enarmonic sounds is also difficult to understand. His solution is to present the piano keyboard as enarmonical denominated of all those 12 points of intonation of the chromatic Scale. So much inspiration again!

2.4. George Breazul – Sabin Drăgoi

George Breazul together with Sabin Drăgoi ellaborate the manuals for the gymnasim classes. At the first form level we can mention the representation in drawings of the measures height and substitutes of the classical musical expression. The method efficiently supports the lasting of the time and measures helping the pupils tu get the meaning just listening! Fig. 5 representsthe song *Be good to everyone* in different positions and sonorous lasting.
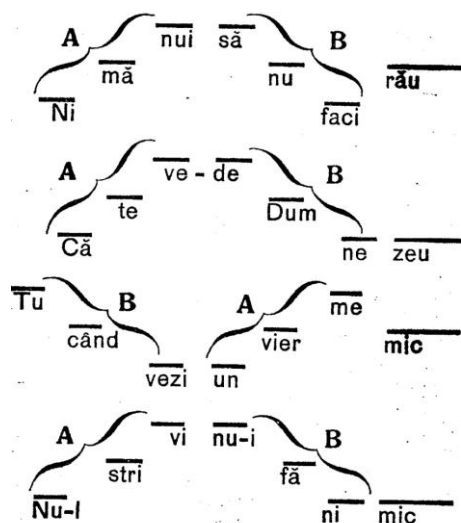
Fig. 5. A model to graphically represent the musical expression (G. Breazul, S. Drăgoi)

2.5. George Breazul – Nicolae Saxu

The four manuals for the primary school in cooperation with N. Saxu in 1937 are characterized by a content pure Romanian, close to the children soul.

They are melodies very simple close to the age of the kids, but also following the schedule lines aesthetic and educational in the same time. The list of the songs is concerning the childhood universe is very well selected to capture the interest of the kids, to make them interested in music and dance to listen and to reproduce the beautiful songs of the Romanian history. The musical materials are ordered first of all up to the accessibility, the melody and the rhythm.

The innovation consists in a graphical system of the musical design which replaces in this case the classic musical notation.

The songs appear as colored waves mounting ad coming down according to the melody road. One can see the lasting of the sounds in some drawings just in order to explain better to the kids, the melodies course. It could be a more attractive way to explain music. All along these colored waves the intuitive figures of the stories are floating the facts and the persons constructing the story, but more than that this help them a lot in the field of the musical notation offering a new sense to the young men.

This syncretism melos- poematic text- drawing in accordance with the song means to get children closer to the music, they become interested, they want more and more to be involved, to take part in the music. We mention here that the image belongs to the painter and graphician A. Sirin. Sixth figure represents the didactical model in the song *Hora* – e.g. [8].

Fig. 6. Non-conventional system of presenting the graphics of a song (G. Breazul, N. Saxu)

In the foreword of the first (secondary) form manual the authors recommend as the interpretation to be supported by gestures of the body suggested by the music and the text. Starting with the III-rd form the authors use some specific graphic representations having the forms of some circles and ovals.

The main goal of all this is to suggest the future musical notation.

And we close these remarks with the simple mention, they have been made in 1938 by the Romanian Academy.

2.6. New ways to value the substitutes means of the sonorous reality

For the period before the musical notation we suggest to use some graphic non-conventional representations in lines of different lengths, drawings, scales, arrows some different lines to express the level of the sound, a rhythmic plane, a content of the text, etc. just to make all that understandable.

In the following period of musical notation, the teacher can make options in using Major or Minor scales the general tone plan, the letters of the musical shape able to express complex musical sonorous phenomenons.

The substitutes we suggested previously could mean the basis of constructing "The Synectica" as a method to develop the pupils creativity.

A teacher can ask inside his musical educational hours only by presenting an electro-cardiogram or a photograph of some mountains or familiar photographs not having anything it do with the music, at first sight.

But starting from here the pupils will get the understanding some similarities with the sonorous art, generally speaking, or with some other elements able to be represented the same way. This way you can translate into music a heart, some mountains, etc.

It is also important to understand the music is working and expressing but in musical sounds, so the materials a teacher uses in his teaching must be a …musical one.

The sketches of the musical theory are nothing but an image of the musical material, they cannot replace the song. It could be absurd.

But the auditory analysis stands they are very useful in fixing the perceptions and the auditory representations.

3. CONCLUSIONS

The substitutive means of the sonorous reality, presented in the study enable us to better understand the difficult and complex contents of the musical education. The procedure can be efficient only if the auditory image find a similar optical image.

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Developing Preschool Children's Socio-Emotional Abilities through Therapeutic Stories

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ABSTRACT

Nowadays constant change marks our children's development, they being increasingly overloaded by tasks. Their resources are not sufficient to meet the challenges, which can lead to emotional imbalances in the form of maladaptive behaviours, thus today's children are lonelier, angrier, more depressed and anxious than previous generations. School relies solely on academic education without taking into consideration their emotional development. In order to offer children the possibility to learn how to manage their dysfunctional feelings, we developed a socio-emotional development programme based on the theoretical principles of Rational Emotive Behavioural Theory/Therapy. This modular programme consisted of sequences of psychological education aiming to develop children's cognitive abilities and behaviours that make them happier and, at the same time, more productive. The present study shows successful results of the programme, conducted over a school semester in a kindergarten group.

KEYWORDS: *socio-emotional development, maladaptive behaviours, REBT*

1. INTRODUCTION

Studies have shown that at pre-school age children acquire the most profound, sustainable and productive mental qualities, which constitute the foundations of mental activity and the emerging personality traits. The psychological profile of preschool children displays a specific development of the psycho-intellectual psychomotor and affective-volitional features, the entire experience being centred on the acquisition of experience, highlighting the role of the family and kindergarten in organizing and coordinating the cultivation of positive experiences that influence the becoming of the child's personality. The pre-school period is characterized by a complex of dynamic opposites that determine the child's evolution, among these opposites standing the relationship between empowerment and socialization, between home and kindergarten, parents and teachers as well as the relationship between the components of the psyche in their evolution from an age period to another [4].

2. THEORETICAL BACKGROUND

One of the major dimensions of socio-emotional development of preschool children refers to the gradual increase of the complexity of the generation and deployment of affects. There are involved more and more elements of emotional memory or confrontations with parental moral requirements. Even at the age three, some children may experience guilt when they cross parental requirements. The four-year-old can be proud of what he managed to do and happy for the reward. At six, children live intensely a prestigious crisis when they are scolded in public or can be disappointed if adults do not give them the attention they expect. Pre-schoolers' emotional resonance to stimulation from the environment is progressively increasing. The child that perceives and understands increasingly better and better the things happening around him

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will be able to live many emotions and feelings, be sensitive and respond to others with joy, sensibility, sympathy, etc.

Because of cognitive development and language acquisition, emotions begin to be mediated by analysing situations (cognitive mediation) which leaves its mark on pre-school behaviour. For example, if a three-year-olds rises from his chair to show the teacher his drawing, around the age of 6 years he is able to wait until the teacher reaches him (the tolerance to frustration increases). At the same time, children gain a key role in their own socio-cognitive development. Interacting with people of the same age and similar level of development enables children, especially during conflicts, understand that others have feelings, thoughts, different points of view and that their behaviour has effects on the others. In this way, children can overcome the egocentrism which according to Piaget characterizes this stage [3].

The expression of the emotional behaviours is enrichment and refined and their regulation mechanisms are emphasized. The child realizes the effects of his emotional behaviours on others and acts accordingly. At the age of 4-5, the child can successfully simulate some emotional states (e.g., anger, sadness, exuberance) to get what he wants from the adult. Similarly, the five-year-old child can suppress showing weeping and anger even if he suffers; he wilfully shows compassion to be accepted. Pre-schoolers are able to observe emotionally expressive behaviours of others and understand their meaning [7].

Kindergarten is the place where new relationships appear with another significant adult, the educator, and through interaction with peers. R. Vincent [6] noted that once temporary separation from the mother is accepted, kindergarten seems to really give the child a sense of security. The child finds here a world to his measure; surrounded by peers, he always feels free and powerful when facing the adult [6]. These new interactions contain very factors important for the emotional maturity. The teacher is a mixture between parental warmth and stimulation to engage and to succeed on their own.

Another dimension of socio-emotional development is the relationships with peers. In kindergarten, says R. Vincent [6], everyone has the same life, everyone is alike. Dealing with peers and interacting with them diminishes the egocentrism which, willingly or unwillingly, is maintained by the family. Even just the presence of peers, which are all addressed in the same way by the teacher makes the child realize that he is not the centre of the universe and perceive the others as equals [7]. Similarly, in this context, empathy is developed and thus children recognize more easily feelings like sadness or joy in the others and modulate better communication and collaboration with them.

The development of socio-emotional skills aims to improve the knowledge of socio-emotional behaviours needed to achieve desirable and sustainable results. It is a personal capacity to face environmental challenges. Children who show deficiencies on the emotional and social skills are likely to develop problems during childhood, adolescence and even adult life in areas such as cognitive development, mental health, school readiness, etc.

The emotional competence can be defined as "the ability to recognize and interpret your own and the others' emotions as well as the ability to adequately manage emotionally loaded situations" [5]. Developing children's emotional skills helps to build and maintain relationships with others, helps children to adapt to kindergarten and school, and prevents emotional and behavioural problems in early and middle childhood.

The social competences refer to "children's ability to form functional social relationships with other children and adults in their lives" [5]. Social competences are defined as the ability to

successfully engage in social interactions and interpersonal relationships and ability to interpret verbal and nonverbal messages [5].

Studies [2, 5, 6, 7] indicate that children with social skills will adapt better to the school environment and will have better academic results. Children with poorly developed social skills are more likely to be rejected by others and develop behavioural problems; as a result, children who are isolated from the group are at increased risk of school dropout, juvenile delinquency and emotional problems - anxiety, depression.

The theory of rational emotive behavioural therapy (REBT) is the expression of the Albert Ellis' labour and work [1]. The theory is based on the assumption that people's behavioural problems often stem from a flawed thinking and understanding of events, not the events themselves. Applying the concepts promoted by REBT in education is conducted under the Rational Emotive Behaviour Education - REBE. Ellis outlines the applicability of his theory using the ABC (DE) model (activator event, beliefs, consequences, disputing, effect) [2]. This model provides a simple but structured framework to address emotional and behavioural issues faced nowadays.

3. RESEARCH METHODOLOGY

3.1. Hypotheses

The general hypothesis of our study was that implementing a demarche for developing children's socio-emotional skills, based on the scientifically validated principles of rational-emotive and behavioural education will have a positive influence on the integration and adaptation in the pre-school community. Namely, if pre-schoolers actively participate in specific activities of rational-emotive and behavioural education, they will significantly progress in terms of socio-emotional development.

3.2. Sample

The sample on which the research was conducted consists of 28 kindergarten children, aged 5 to 6, including 16 male and 12 female, all part of a single kindergarten group.

3.3. Intervention

We implemented the intervention programme for a group of children from Kindergarten No.13, Brasov and the psycho-pedagogical experiment was conducted over ten weeks, consisting of 5 modules, each module focusing on one disruptive emotion. The programme was designed using *Self Kit*, a psychological and educational counselling programme, developed by a group of Romanian psychologists, based on REBT. Both authors of this paper are licenced to use this programme. Each module consisted of a main story, followed by a sequence of highlighting the dysfunctional negative emotional experiences of the character and their association with maladaptive behaviours as well as the presentation of possible adaptive thoughts and their counterpart behaviours. The latter part was aimed directly at children, with a message encouraging rational thinking. The following meeting, the story was reminded to the children and the teacher – counsellor suggested other exercises to enhance the message of the story and the rational way of thinking about certain situations, including role-playing, drawing, making collages, telling similar stories.

3.4. Instruments used

Besides the implementation of the group counselling modules based on *Self Kit, a programme of developing children's socio-emotional competences,* there were also used two assessment instruments in order to measure the impact of these activities on the children's socio-emotional abilities. We used an instrument specially realized for this research: a test presented to the children as a game, aiming at identifying their own and the others' emotions in different situations (called 'Emotions') and an observation grid for the children's behaviour. The children were tested before and after the implementation of the group counselling programme.

3.5. Results

In the initial evaluation, 12 of the 28 children recognized and correctly name the emotions, while 16 children had difficulties in achieving the task. In the final assessment, we found progress, 17 of the 28 children recognizing the emotions suggested by teachers, while 11 children did not fulfill the task.

Tabel 1. Recognition of emotions
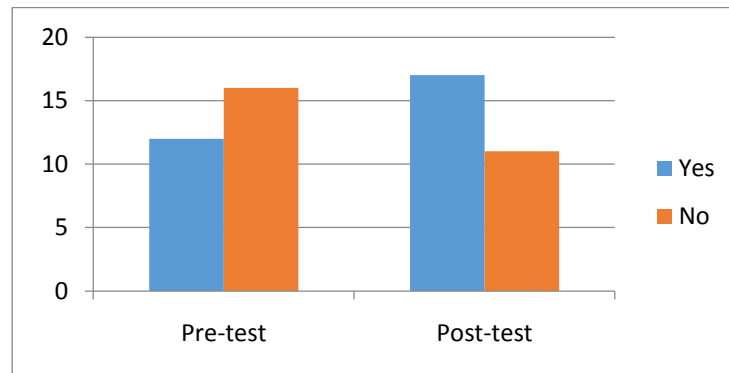
As regarding the ability to define facial expressions of emotion, in the initial assessment phase, pre-schoolers experienced difficulties / problems in listing facial characteristics for the emotions presented, only 11 of the 28 children being able to enumerate at least two characteristics of expressions of emotions, while in the final evaluation stage, we noted a progress, 14 of them being able to list at least two facial expressions of emotion.

Of the 28 children undergoing assessment test in the initial evaluation, 11 succeeded in imitating the emotions suggested by the teacher, manifesting freely and creatively, and 17 children had difficulties in imitating the emotions suggested by teachers, three of them categorically refusing involvement in the game imitating emotions. In the final assessment, 16 children could and wanted to imitate emotions and 12 had problems in imitating them. There was only one case in which the subject refused participation in the game of imitating emotions.

Tabel 2. Imitating emotions
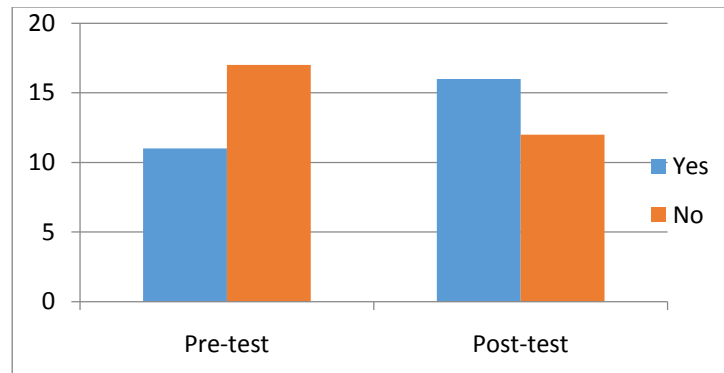
In the pre-test phase, most pre-schoolers (20) had difficulties in identifying classmates' emotions, which entitles us to say that there was deficit in recognizing emotions (anger, joy, sadness, surprise) in people around them. After the implementation of the counselling programme, we registered that 4 out of the 20 children who could not name their colleagues' emotions are now found in the first category, those who are able to verbalise another person's emotions. We consider it a significant step forward.

As concerning the analysis of the observation grids filled in before and after the implementation of the REBT programme, we noticed an improvement in all children's behaviour in the classroom and better relations among them.

Tabel 3. Analysis of the observation grids

How does the child behave? The child....	Rarely (number of children)		Sometimes (number of children)		Often (number of children)	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
separates from parents easily.	5	3	2	2	21	23
is dependent on the adult/can't let go.	10	8	1	2	17	18
defends his rights.	10	9	2	3	16	16
shows enthusiasm when doing things he likes.	3	2	3	2	22	24
accepts and offers help (physical, moral, etc.)	9	7	2	3	17	18
has self-service skills, is independent / autonomous (eating, sleeping, going to the toilet without problems when far from home)	12	7	3	6	12	15
adapts easily to sudden changes in the environment.	5	3	2	4	21	21
express their anger into action	10	10	5	9	13	9
accepts being redirected by an adult when manifesting aggressive behaviours	18	10	2	8	8	10
withdraws excessively from the group	16	10	5	8	7	10
shows interest and active participation in kindergarten activities	5	–	1	1	22	27
smiles and seems happy most of the time	2	1	1	1	25	26

Analysing each item of the observation grid, we noticed that 80% of the pre-schoolers actively participated and showed interest, enthusiasm, joy, being independent in relation to adults. An indicator that caught our attention was the one regarding acceptance of an adult's redirection when manifesting aggressive behaviours: only 8 of the 28 children accepted to stand corrected, while 18 children flatly refused to change their aggressive behaviour when told so, probably they are still ego-centric and expressed their desires and wishes and even acted without taking into account the others' existence and needs.

After implementation of the *Self Kit* programme, we found progress in each member of the group regarding:
- expressing anger during an action: before the programme implementation, 13 of the 28 children expressed their anger through violent actions, whereas after its implementation, only 9 children expressed anger through violent actions;
- active involvement and showing interest in learning activities and games: before the programme implementation, 5 children were uninvolved and showed no interest in the activity whereas after the experiment, only 1 child rarely manifested lack of interest.

4. CONCLUSIONS

The development of socio-emotional skills in the pre-school period plays an important role in children's social adaptation. Designing and implementing a REBT type programme for developing socio-emotional skills is one of the most secure solutions for prevention and therapy of emotional and behavioural disorders.

Although the group was not enough large to perform more elaborated statistical analysis, we may conclude that research hypotheses were confirmed as improvement in behaviour was noted for most participants. Over all, the children in the programme displayed a larger range of adaptive socio-emotional abilities, thus proving its efficiency.

This study highlights the importance of receiving Rational Emotive Behaviour Education, which can help children manage their own feelings, integrate and adapt to the community. Such a demarche will be continued on a larger sample and included in an experimental design that will be presented in a future paper. Starting from these results, our intention is to implement such an approach as an optional programme of personal development that can be offered to other groups of children, too.

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Appropriation of space and well-being of institutionalized elderly people

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ABSTRACT

Due to the increase in the population sector aged over 65 in Romania, and given the expanding popularity of life in nursing homes, the current article aims to discuss the well-being of the elderly people who are institutionalised in residential houses or nursing homes, as far as the appropriation of the new living space is concerned. The novelty factor, the unknown and the aweareness of the fact that it is probably their last home cause anxiety to the institutionalised pensioners. The spatial and territorial appropriation of the new residential universe, which is identifiable by the use frequency of the possessive pronouns and affiliation verbs, is achieved in several ways; some are the adaptive expressions of taking possession and emotionally invest in the room and in the places in the home, while others prove the inability part with the old house. Well-being is associated with the satisfaction produced to the resident by the offering him the autonomy of actively participating in taking decisions that concern him. The institution staff should know the appropriation and well-being degree of the pensioner. This would allow the staff to adjust their behaviour towards the residents in order to facilitate the creation of a 'home' feeling.

KEY WORDS: *appropriation of space, psychological assistance, assistance institutions for aged persons, well-being.*

1. INTRODUCTION

In the contemporary world modifications are being produced in the personal lifestyle, where the profession acquires an increasing share; people no longer get married as much as before or do not have children, the birth rate registering a dramatic decrease. At the same time, life expectancy is increasing due to progress in medicine and to a healthier lifestyle. The demographic aging is a reality of the entire European continent, where it is anticipated that the proportion of people aged over 65 years. The statistical data prove the existence of this phenomenon in Romania as well ; from 2002 to 2011, the share of people aged over 65 years old increased from 14.07% to 16.10% [1].

Today, in Romania, we encounter elderly parents, residing on their own because their descendants are looking for happiness abroad. The above considerations, which are the result of the synthesis of some studies presented in the literature, are generated both by the compassion for the aged and alone people and by the interest to know ways to improve the well-being of this segment of people with special needs. One of the options of the aged people deprived of family support is to move from their own home, where they cannot effectively manage the household anymore, in the public or private residential centres so depreciatively called hostels or even retirement homes.

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The researches carried out in Romania on the well-being of aged people in the assistance institutions are very few. They aimed at the ethical and moral dimension of existence in the assistance centres [2], the social representation of age and residency in Europe [3] or the comparative position of the residing conditions of Romanian elderly people to those from other European countries [4]. The conclusions overview of some studies centred on the issue of transition from life in the personal house to life in an assistance institution can provide interrogation tracks for the Romanian researchers interested in the substantiation of improvement steps concerning the life quality of the residents of nursing homes.

2. LIFE IN THE INSTITUTIONALIZED RESIDENTIAL SPACE

Moving to a residential house for elderly people represents an intensely stressful event, because it is equivalent to leaving a familiar house that signifies above all "at home". Not only the novelty and the unknown create anxiety, but also the awareness that it might be the last house. Despite the comfort that numerous such houses are offering to residents, the event causes equally physical, psychological and social difficulties [5, 6, 7].

The loss of control over the environment, the break from the old way of life, as well as changes at the personal identity level are only some of the changes occurring in the lives of people who are moving to the residential collectivity [8]. The intensity of the stress state depends on many factors, such as the person's individual characteristics (age, health condition, etc.), the more or the less voluntary character of moving in a nursing home, the quality of received services in terms of cleaning, security, tranquillity [9, 10, 11].

For the adaptation to be effective to the new living environment, a social support which should be adequate to the residents' capacities, needs and expectations is required. Researches prove that the well-being of those living the transition from home to a collective living place depends greatly on the interaction between the person's psychological resources and on the organizational and contextual characteristics of the old and the new living place [12, 13, 14, 15].

The options of living outside the personal house (or that of a family member) are presented in two ways: a) homes where mostly the medical care is provided to ill and aged people, b) residences for single but relatively healthy people, to whom it is difficult to manage their domestic problems because of mobility issues. There are many reasons that are determining the aged persons who are still healthy to choose to live in a nursing home, reasons that can be grouped into two categories: the need for security and the need for interpersonal contacts [16]. In the first category can be listed the fear of not receiving assistance in case of emergency, the fear of being the victim of an aggression, the fear of being geographically isolated. The second category includes the fear of loneliness, lack of contact with people of the same age, lack of friends, boredom. The nursing homes offer both existential security and the chance of not being completely alone.

Living in an institutionalized residential space implies the acceptance and respect of the operating rules of the settlement, the timetable and other constraints, which can often be felt as something unpleasant. This space corresponds to Goffman's definition [17] of total institutional space, where the entire activity takes place in a unique universe that encompasses individualities which are treated similarly. To a large extent the process seems similar to the one which occurs at the school entrance where the individuality yields up to the rules and to uniformity. In the residential spaces, where the users do not have another choice of living, it seems to be very difficult to build a "mine", an "at my place" which could provide psychological comfort, apart from the material one.

3. APROPRIATION OF THE INSTITUTIONALIZED RESIDENTIAL SPACE

Leaving the personal house in order to adapt to a new one supposes taking possession of it not only physically, but also emotionally. The appropriation of space is defined by Moles and Rohmer [18] as the specific behavioural schema developed by the individual in its relations with the environment, so that he masters it and is not dominated by it. Fischer claims that the one that appropriates space is changing it by intentions and actions that allow him to detach himself from the banality of everyday life and to create his own identity [19]. The appropriation turns out to be a way of controlling the space and interactions because it is offering clues on the image that we build for the others. By appropriation, the individual materializes a part of the mental universe, the appropriation being closely linked to user identity, which becomes partly visible through the way he arranges the possessed space [20, 21].

Entering a residential house for aged persons means leaving a familiar and beloved place, wearing mourning as for a dear person, in order to attempt integration into a different material universe to turn it into a psychological universe as well. Low and Altman [22] claim that the successful spatial adaptation to their new home occurs after the new environment appropriation has occurred. By appropriation, the individual transforms a space into a primary territory over which he feels he has total control, and whose use is on a long term; in this territory the place and position of the useful objects is organized, converting into a mental scheme that feeds the capabilities of being found effortlessly and of forming skills related to this scheme [23].

In assistance institutions also, the appropriation occurs on two levels: the appropriation of space and the territorial appropriation. In the both forms, the proof of appropriation consists in using the possessive article, respectively the verbs of possession, when the pensioner speaks about space or objects that furnish it. Rioux [24] identifies several ways to take possession of the new living space and to transform the home room into a primary territory. Primarily there are different ways of relating to the old and new living space:

(a) the people continue to invest emotionally in the old house, seeming incapable of investing in the current space;
(b) the people prove a double spatial affiliation, referring with emotion to the old house, but feeling comfortable in the new space as well;
(c) the people are investing themselves totally in the new space and are going through a process of non appropriation from the former house. The home room is the new place of living, the old one being mentioned only as a reference to an accomplished period of life.

The home room transformation into a primary territory, visible through the sense of ownership on the inside objects, can occur in four ways:

(a) the exclusive appropriation of objects brought from the old house, the only recognized as his own;
(b) the absence of ownership sense on any object, regardless of its origin and time of purchase;
(c) the exclusive appropriation of personal objects irrespective whether they come from the former house or were purchased prior the moving, but not to the objects belonging to the institution;
(d) the appropriation of all objects from the room, no matter if they belong to the institution, if they are personal from the former house or were purchased after moving;

It can be concluded that the elderly people are positioned on a continuum of appropriation of space, between the poles of an exclusive appropriation of the former house or the nursing room, eventually going through a double appropriation. In terms of territorial appropriation of objects, there is additionally the possibility of refusing to acquire any object, this being a sign of the impossibility to adapt to the new universe.

There are situations where entering an institution is wished and perceived as a life quality progress, especially by the people whose social network is narrower. [25]. These people are investing emotionally at high level, are participating enthusiastically to the provided activities, are giving their support for the caring personnel, this being proof of the desire for integrating and building rewarding interpersonal relationships, especially with the caring personnel.

4. WELL-BEING IN THE ASSISTANCE INSTITUTIONS FOR ELDERLY PEOPLE

Well-being is the result of the satisfaction towards the past time, of optimism related to future time and of present time contentment. [26]. As a psychological indicator of third age health, well-being is reflected by the positive emotions related to living in an institutional environment often chosen by the person constrained by circumstances. Paradoxically, where the people are being offered many services, the satisfaction is lower because the autonomy and free decisions are limited. But the possibility of participating in elaborating the internal regulations, organizing or choosing activities generates an intense well-being [27] not given by the importance of the taken decisions but rather by the feeling of control over the ensuring events.

From the perspective of the congruence and complementarity model of the factors which influence the well-being of elderly people in relation to the living environment [28, 29], the individual and the environment are united, the individual adapting himself to the environment's reality and trying to shape it. His well-being depends on the degree in which the environment, which he tries to control, can satisfy his needs.

The psychical comfort of residents is associated to activities happening indoor or outdoor of the common spaces, of intimacy in the private room and the possibility of taking guests, especially for elder female residents **[24].** Nonetheless, in time the satisfaction associated with the presence in common spaces of leisure is decreasing, probably because the number of colleagues with whom they have build relationships is diminished by natural causes and the availability of interaction with the new-comers is low.

For this reason, the necessary psychological assistance of residents is imperative, in all life stages in the new home, in order to facilitate the adaptation to the new environment and to create the feeling of "at home"; the liberty given for arranging the room and given assistance for completing the approach are both important. The personal objects from the former house can bring the warmth and the familiarity which, inevitably, are missing in the first stage of a life in a new environment. Consulting the resident before purchasing some new objects generates the feeling of control and participation in a decision which keeps the autonomy and amplifies the satisfaction and thus the well-being.

The competent presence of the psychologist or of another specialist in senescence problems can contribute to the building of the affiliation feeling, taking over the fear of the unknown and integration in the institution's program without important emotional costs. Throughout his activity, the specialist can stimulate the social support for the new-comer by the other pensioners from the

institution, for him to find his place in the social gearing, living the new experiences with satisfaction, despite the inherent stress generated by the unknown.

Investigating the type of spatial and temporal appropriation of the new environment offers useful information for the institution's personnel, for them to adjust their own behaviour toward the residents (at verbal and non-verbal levels) and for helping them to effectively adapt to the new lifestyle. Sometimes, the unsuccessful adaptations are compensated by an enhanced taking of different drugs, fact which increases the assistance costs, and thus a good adaption proves itself a bearer of benefits both for the aged person and for the institution.

The appropriation contributes to the maintenance or amplification of the residents' well-being by increasing the social contacts with the other colleagues, building a wider social network, reducing the loneliness and consolidating the decision-making control feeling [30].

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Matching neurological levels of change for congruence

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ABSTRACT
    „Panta rhei", everything flows, everything changes, the old wiseman used to say. In this flow, this continous transformation man wants to control these changes, because, in his view: „I am not an object, but a project; I am not only what I am, but still far what I should be, what I have wanted to be and to become" (J. Lyotard).
    Congruence is the real need for change. According to Webster Dictionary congruence in a system is „marked by internal harmony, consistency or agreement between the parts". It is perceived subjectively as a personal sense of direction, as a state of internal consistency, which allows you to function effectively.
    The paper will discuss in a reflective exercise individual-world relationship. The relationship between a person and the world identifies, on several levels, individual relationship with himself. We propose to adapt in an integrate vision a model of personality created by R. Dilts. The model provides a framework of change for self congruence. The evolution of a person in a social environment requires a dynamic and malleable self-concept and at the same time, the stability of the ego. Is this really possible?

KEYWORDS: change, congruence, neurological levels, dynamic self, stability of the ego

1.MATCHING SELF AND CHANGE

The inner state required for changing is congruence. According to Webster Dictionary congruence in a system is "marked by internal harmony, consistency or understanding between the parties"[1]. Then, matching self could mean: being in harmony with yourself. The congruence of itself can be defined as a state in which beliefs, values, attitudes and our actions are directed towards the same end, and they are aligned with each other or with the objectives. Therefore, the alignment is the process of becoming congruent. Aligning your values and your vision of yourself, your identity, you become congruent with you. In short, the act congruent with who you conceive what concerns us and what we do is consistent with what we are.

The congruence is subjectively a personal sense of direction, as a state of internal coherence that allows us to function effectively adapted. When we have this personal sense of direction, we are able to solve internal conflicts, manage personal change, allowing us "to move toward a state agrees"

We can link the concept of congruence of the agreement itself, "the one that we are one", we agree with what we are, that is our self, our values, our competences and our goals. A person can perform more effectively when all its parts cooperate with each other to achieve its purpose. This state of agreement may be obtained by managing change at various levels. To illustrate these ideas we bring into question the visions of Ceauşu V. and R. Dilts.

In his „Autocunoaştere şi creaţie", chapter „Eul şi lumea", Ceauşu V. (1983) discusses the individual-world relationship [3]. According to noted author identifies the relationship of the

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individual with the world, on many levels, with individual relationship with him. In other words, between identity in relations with the world and identity are closely connected with it. Guaranteed agree with it when the individual demonstrates acceptance of the idea of himself, an attitude of adhesion to self-image. In such a situation, the individual will focus all its resources to fulfill their aspirations, what brings him in line and with the world. The world becomes for him a "virtual psychic territory", a business space, on which it is based and which he shapes his aspirations. By "we mean business space acts that amount discontinue development environment to the maximum state of indeterminacy, introducing a new order, anti-entropic nature" [3]. All of the events to which the person can appeal to self-actualization and self are in this business space as a result of human interaction with the environment.

2. LEVELS OF NEURO/LOGICAL CHANGE
Complementing this idea comes Robert Dilts (1989, 1990, 1993, 2000), one of the greatest trainers in neuro-linguistic programming [4, 5, 6]. He developed a personal development model, which provides a framework for change obtaining congruence with it. The model was taken from anthropologist Gregory Bateson, author of the book "Towards an ecology of the mind"[4].
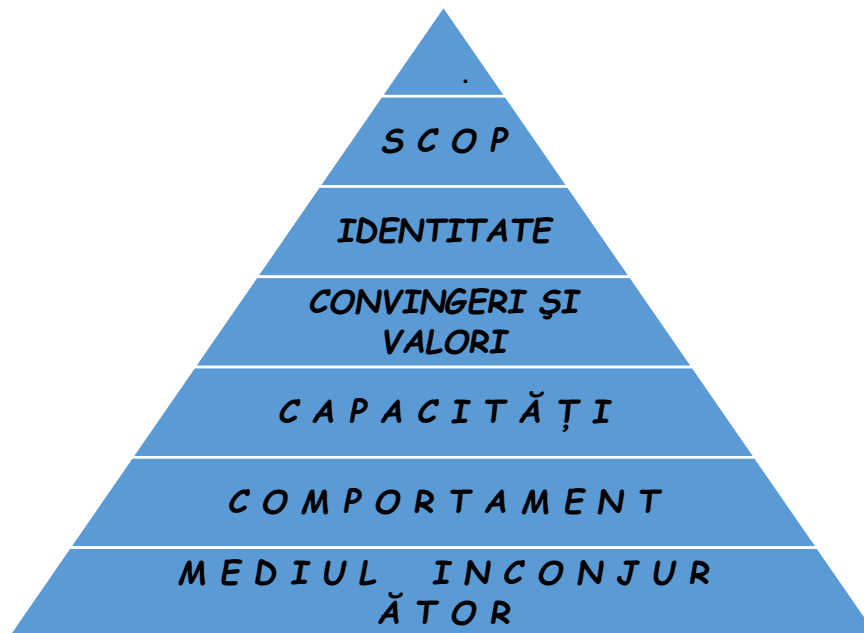
Fig. 1. Neurological levels of change

The premise is that change starts coming from the inside. When our mental model, subcomponents are in agreement, are in accord, then we are congruent. And when we are congruent, we are ready to perform efficiently and adapt our behavior to achieve the objective for living a fulfilling life. The model is called "Neuro/logical levels change" and the author speaks of six levels, which is organized as a natural hierarchy, determining and influencing each other. According to the model, the lives of people in any system they may be, and ultimately dynamic personality can be described and understood the following levels: purpose (self) identity, beliefs and values, skills, behavior and environment. To achieve these levels of self-congruence required to be granted. Here's a brief description:
Level of purpose

It is the level at which we understand our connection with larger systems of which we are part. Realizing this level we understand how we always add value to our lives by what we are, regardless of the system we belong at a time. And, at the same time, we add value to the systems in which we belong.

Level of identity

It is the self-consciousness materialized in our self-identity. It is broken down by how we relate to ourselves and consists of concepts that describe what we believe about ourselves. It is the understanding of the key roles that fulfill our life.

Level of beliefs and values

We operate on the basis of beliefs about ourselves, about others, about work and about the world. Often we take as axioms by which we operate, truths that are not required to be demonstrated. Most often are generalizations which we are much attached, that have a strong emotional charge, which makes it easier for us to process what is happening around us. They function as values, preferential guidelines, according to which we make decisions in our lives.

Level of capabilities

The plan of our ability, normal and automatism, those things that we already know them very well. It includes both practical talents and thinking strategies. When we are in agreement with ourselves we have access to the most valuable skills. Based on our capabilities, we structure behaviors, depending on the beliefs they have.

Level of behavior

The level at which we perform, we prove that purpose, identity, beliefs and our capabilities. Our behavior is the outward manifestation of what exists within our conscious and subconscious mind. Sometimes it is difficult to change our behaviors, because they are dependent on higher neurological levels, in fact, where the change is supposed to be made, says the author of the model.

Environmental Level

It creates the context in which we manifest. Describe the place and time where an event takes place, and those participating in it. Thus is revealed the specific context of each experience: we can act with confidence and spontaneity in a certain place, or certain people, instead we "block" completely in other places or around other people. Sometimes we generalize and say, "I did not trust me," although obviously this applies only to certain contexts; nobody could survive even if it did not trust some of his talents, is not it!?!

3. VALUE AND IMPLICATIONS OF THE MODEL

Neurological levels do not form a hierarchy, as the value: each of the six plans is as important as the others, and they must be "aligned" or "congruent". Whenever we have a "problem" we discover that, in fact, one of the six levels, something not in harmony with what is on the other. Whenever we have a "success", we might discover that all six planes are in perfect congruence. Based on this model, Dilts has developed techniques realignment of logical levels, leading to realignment "problem" to "solution".

All these levels form a network, which can be viewed as a "network of generative systems that converge concentrated or individual identity". Deciphering multiple relationships of these networks can be done by examining how the person manifests itself in relation to significant systems which includes: family, partners' contemporaries, culture, nature, planet, spirituality.

Logical or neurological levels is a particularly useful model, on the process of change and continuous learning. Logical Levels were immediately taken in NLP system because it provides a way as simple as it is effective when you want to understand a certain aspect of our lives, which eventually and we want to improve.

And because the world is a business space for himself, the author of the model believes that we can exist in the world on six levels, and change is needed to address these neurological levels at which our brains work. The model seems to be operationalized relatively easily accessible for both diagnostic stage personality and for the identification of difficulty and the level at which intervention is required for optimization and personal development. The model provides a framework for change and consistency fully congruent with itself.

4. SELF AND SELF WORKING SCHEMES

The evolution of contemporary social person continuously changing requires a dynamic and
flexible self-concept and, at the same time, a stable self. Is this possible? To explain the relationship between stability and change about himself, Markus and Nurius [7] introduced the concept of **self-worker** or **operational worker**. The concept itself is actually a system of schemes about "I". In their view, the ego self of time working or situational manifestation is the expression of the individual, according to the social events that you go through. I shall consist schemes based on self-observation and introspection in different situations. We appreciate that we can make changes to the working self, habits, of habitus, the skills to acquired personal optimization.

While the concept of I / working itself helps to explain the self-flexibility, stability and relative consistency of the Self is given in the opinion of Markus and WURF of 'self-schemes'. They constitute participation in social and cognitive generalizations of information is the subject himself. As a relatively stable structure diagrams can be used by topic ego in processing information about the self and the ego is updated through work. This adjustment function enables operational "I" situations, enabled those attitudes, beliefs, skills to facilitate effective and timely reporting to multiple social roles that we assume to achieve our goals. Above these social roles remain of course a self-stable and consistent general.

After two thousand five hundred years ago the Greek philosopher Socrates argued that "unexamined life is not worth living". The self-awareness is the first step on the road of introspection and auto transformation. It is the foundation of self-knowledge and self-understanding, solid foundation for knowledge beyond itself, considering that all knowledge is by itself, and the self is the filter through which the individual internalizes the world [8].

2. MEDIUL SOCIAL		
INFORMAȚII DESPRE SINE RELATATE	INFORMAȚII DESPRE ALȚII	2.1 *COMPORTAMENT*
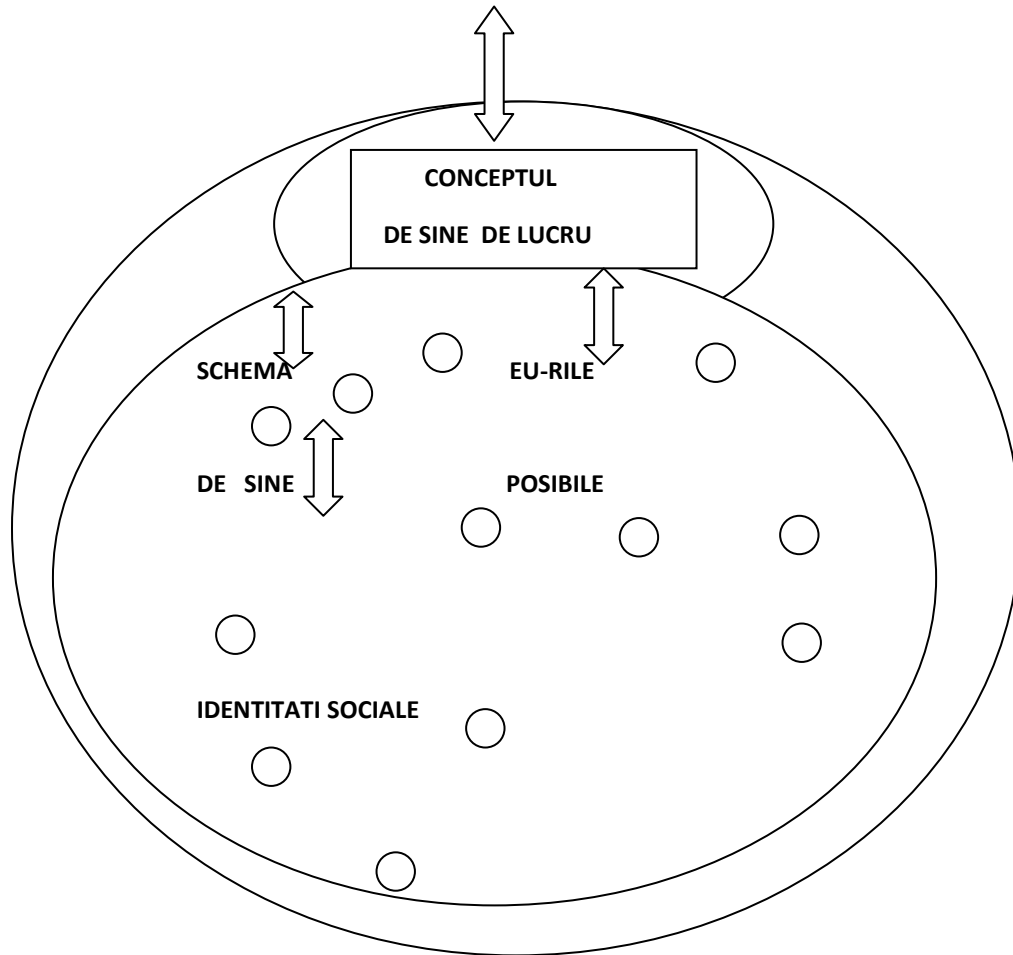
Fig. 2. Self-concept work - adaptation of Markus & WURF, 1987

According to Jean-Paul Sartre, the human being is the only creature for whom "existence" precedes "essence". What the philosopher means is that you create yourself (self, personality) by the daily conscious choices we make. In this context, the awareness, the process of meeting with him in everyday existence precedes self-definition and self-determination. Understanding how you are and how you became who you are, then you can make a positive projection of what you want to become.

Gregory Bateson defines wisdom were talking about at the beginning of this paper, as "the ability to realize that you are part of a system." Paraphrasing anthropologist might say that we are part of a system and that we are simultaneously a system that is required to be understood as a system of self-schemes about "I". This system scheme shape so I about the individual's inner mental world and its perception of the outside world.

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Self-efficacy – Cognitive-Motivational Vector in Performance Achievement

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ABSTRACT

The manner in which somebody describes and evaluates himself, reacts and responds, is based on the way he perceives himself. The self-efficacy represents a cognitive-motivational vector in performance achievement, closely related to the self-image and the self-esteem. In the paper "Sinele şi cunoaşterea lui", P. Iluţ [1] mentions the boost and the strengthening of the self in the context of the clarification of the possible self-concept and of its adaptive functions in the process of self-development. Bandura's [2] point of view is also the fact that the well-functioning of the self is related to the self-strengthening process. He states that a great deal of our behavior is adjusted through self-strengthening and external means of strengthening. In conclusion, we can acknowledge the fact that the self-efficacy represents the perception of the individual regarding the energy he believes he can transpose into the action designated to bring him closer to a purpose.

The aim of the research is to observe the process of the readjustments and reorganizations at the level of the self-efficacy, as a result of attending a coaching program.

KEYWORDS: *coaching, performance, readjustment, self-efficacy*

1.STRENGHTHENING THE SENSE OF SELF-EFFICACY IN A COACHING PROGRAM

The concept of self-esteem is bound to A. Bandura [2] of the personal efficacy, effectiveness own conscience. Self-efficacy refers to auto valorization and self-esteem, both of which related to suitability in dealing with the demands of life. Self-efficacy is seen as an ability to lead and control the events of our lives. It was initially conceptualized as a stable trait or cognition that people have and carry with them. The literature records the overall effectiveness as a feature itself, while the specific efficacy of a domain itself is a valuation based on the area and it is subjected to change. In the present research the effectiveness of self-interest in relation to oneself, expectations that the subjects have on the ability to achieve the objectives in relation to itself and in relation to others. I tested to what extent participation in a group coaching program supported by the coordinator of the year, determined for the first year students increased sense of self-efficacy. I used to test this hypothesis an experimental group and a control group, each with 31 subjects, which I applied pre andpostevaluation.The entire intervention was designed so that participants have the conditions and the tools to achieve success, both in workshops coaching activities and the tasks they have received from workshop to the other. At group level coaching notice an increasing trend with 7.10 points on average levels of self-efficacy feeling as a result of participation in the program. The successes reinforce the sense of self-efficacy.

The t test for paired samples shows that differences in the averages between pre and post evaluation are statistically significant: $t(31) = 4.92$, $p < .001$, $d = 0.77$. Also, we find a strong

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correlation significant positive: r = 0.648, p = 0.000 for, which indicates that a hierarchy of subjects are kept from one measurement to another. Large effect size obtained in this small sample allows us to conclude that the effect is significant both statistically and practically.
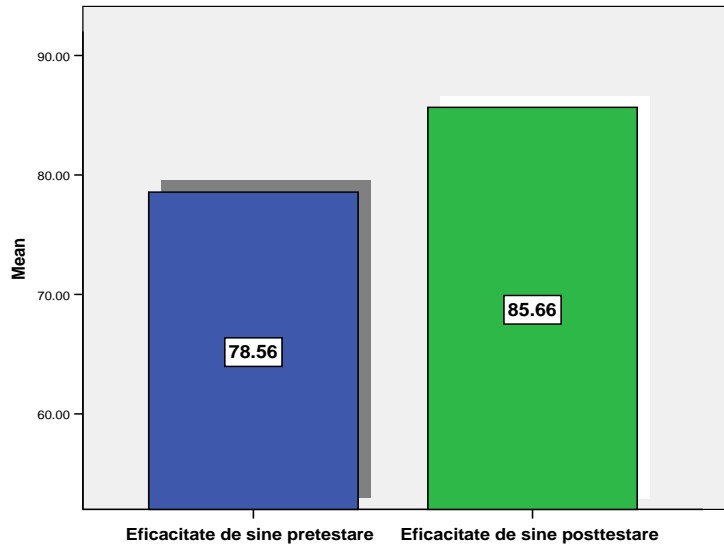
Fig. 1. Increase self-efficacy sense after intervention at group level coaching

Numerous studies have demonstrated the positive correlation that exists between self-efficacy and performance. Consequently, we expect that those who significantly increased their self-efficacy achieve success in achieving their objectives, whether they are related to me or the results of its academic, social relationships or other aspects of personal development.
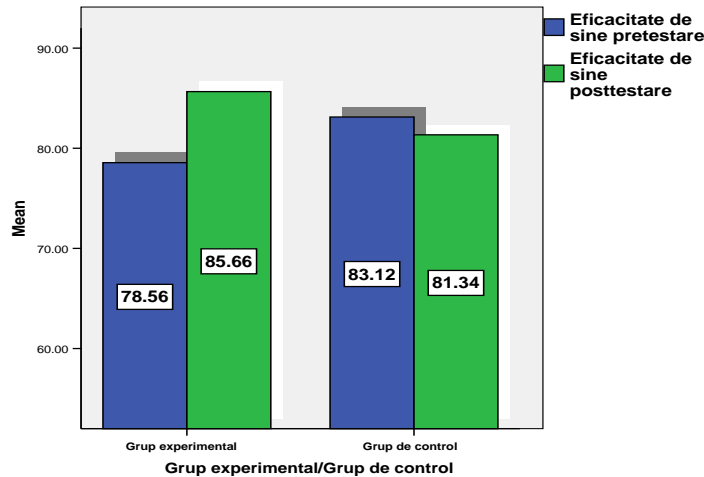
Fig. 2. Differences between the averages in terms of self-efficacy pre / post-test in the 2 groups

When we compare the experimental group with the control group, we find that in the control group pretest self-efficacy has a higher average of 4.56 points versus coaching group. In posttest difference is in favor of coaching, average 4.32 points. The differences are statistically significant: t (62) = 1.99, p <.05, d = 0.57. The average effect size numerically reduced number allows us to conclude that the effect seems to be quite important. Confidence in their own possibilities and achieve success goals is linked with positive feedbacks received by their skills across subjects. We consider that the consistent practice of the ability to provide positive and constructive feedback like "I liked that ....; I would have loved ..., participants strengthened their confidence in their own resources and their own forces to get what they want. To this is added the impact that had on participants believe that experiential approach to each sequence of activity, which made every cell of the body to memorize her success and can reactivate it whenever they want. Dealing with the whole body with success, plus the positive feedback of the group, they are testimonials and confirmations that cannot be neglected, which requires the reconsideration and reassessment of self-facilities. Following the analysis of intra and inter-specific hypothesis, summarizes the results can be represented as follows:

Table 1. The research for the assumed increase self-efficacy feeling

		t	p	d
Self-efficacy	Inter-subject design	t(31)=4.92	p<0.001	d=0,77
	Inter-design	t (62)=1.99	p<0.05	d=0,50

Both inter-subject analysis and inter-analysis confirms the hypothesis that participation in the coaching program will strengthen the sense of self-efficacy.

2. RELATIONSHIPS BETWEEN SELF-EFFICACY AND PERSONALITY VARIABLES

Next we analyze the relationships between self-efficacy and intermediate different personality variables measured 16 PF. Self-efficacy was correlated with the following variables:

Table 2. Correlations between the efficacy of self and other associated factors

|	C	H	O	Q2	Q4	Anx.
EFFECTIVE SELF	0.398**	0.376**	-0.394**	-0.255*	-0.410**	- 0.551**

**P<0.01
*P<0.05

Based on the obtained result, r = 0.398, p <0.01, I can say that a strong, mature, calm, balanced emotional, has rather tended to exhibit a high sense of self-efficacy. Given the small group, we appreciate the significant correlation with practical value. Ego's force, **Factor C**, is defined as the degree of realization of dynamic integration and emotional control. The ability to immediately control and express tensions in a manner appropriate and realistic. Cattell and Eysenck [3] report this factor constitutional matters. Subjects with a strong force of the Ego are realistic, easily adapt to the objective reality, are resistant to the effort, making them to wholesalers in all kinds of projects and have positive expectations about their ability to achieve success. If expectations for various reasons do not come true, they reacts in frustration in a

manner most often mature or simply by rationalization so as to preserve its image and self-esteem.

Participants in the coaching program were familiar with the principle: "no failure, only feedback." According to this principle we learn from every experience in which we live. Their task was to experience the daily life of this principle and to share with the group what changes they brought this principle. The purpose of this axiom is to preserve their self-esteem and sense of effectiveness, regardless of the results, and to cultivate a positive attitude and reflective opposite the strategies they use to achieve success.

There is a reciprocal change in accordance **Factor H** (caution vs. courage) and sense of self-efficacy, Pearson coefficient of $r = 0.376$, $p < 0.01$. Attitude of interest in social relationships, courage in making contacts and anxiety sometimes associated with impulsivity tend to correlate with high sense of personal efficacy.
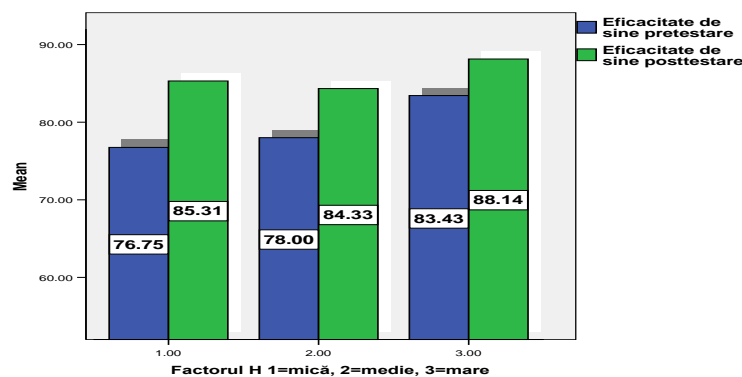
Fig. 3. Impactul programului asupra eficacităţii de sine prin raportare la Factorul H

People feel free to participate in social life are often those who have positive expectations related to social relationships and trust in their abilities to manage these relationships. Starting from the idea that any goal we have to achieve, it is easier in a team and often more fun and were encouraged to develop a support network that goes beyond a coaching group. This has worked very well for them: they had a common address mail that made information move freely; informing each other on different aspects such as books of interest arising, specialized courses, social events; requesting help for various projects etc. Group dynamics and enriched thanks to extra-group coaching meetings and projects. We believe that all these activities, along with coaching activities have contributed to increasing sense of self-efficacy.

There is a significant link between the tendency to blame negative **factor A** (schizophrenia vs. cyclothymia), and sense of personal efficacy, $r = -0.394$, $p < 0.01$. Subjects with elevated feelings of guilt, distrust of others, suspicious rather have a low sense of self-efficacy, negative projections of the future and their ability to produce desired results. In conclusion, the greater the confidence and resilience to stress, increase self-efficacy and sense.

We set out in the program in addition to enhancing confidence and creating a positive and optimistic view of human nature in general, given that the most important resource that will work will be human resources. I cultivated the school NLP principle [4] according to which: "behind every behavior there is a positive intention." We can judge the behavior, we can assess as negative or inappropriate, but more interesting and more useful is to find the positive intention

behind behavior. This is the first step to behavioral change. Once I learned the benefits that we have from that behavior can slow or resistant blamed shift our efforts, we can think of alternative behavior at a target with a new behavior, including positive intent. The discovery may diminish the positive intention and feeling of guilt, resource-intensive and allow us to focus our energy maybe on the desired change [5].

From Table 2 we find a concomitant low intensity variation **Factor Q2** (addiction group vs. personal independence) and self-efficacy,r = -0.255, p <0.05. There is a tendency decreases as the dependence of the group to increase the feeling of self-efficacy. In other words, the more the attitude of personal independence, coupled with the ability to decide alone, and increases the effectiveness of their own conscience. We choose to keep the attention this covariance in the event of extending lot of research.

We also note that calm, nonchalant people, often self-satisfied and confident in their resources have the ability to control events in their lives. The correlation between self-efficacy and **Factor Q4** (weak ergic tension vs. high ergic tension) is: r = -0.410, p <0.01, as a result, lowers blood since the greater sense of personal adequacy and ability to provoke awareness and control events in our lives. An energetic tension is associated with a poor way to live calm, relaxed and nonchalant, the person is generally self-satisfied. All these events are a prerequisite for a high self-efficacy.

Factor I (adaptation vs. anxiety): anxiety is associated with low self-valuation and positive self-perception of personal efficacy, proof lies correlation coefficient: r = -0.551, p <0.01. There is an inverse relationship between systematic quantitative factor anxiety and self-efficacy. The high level of association indicates that the trend is that subjects who achieve low scores in anxiety scores have self-efficacy. In conclusion, the feeling of personal adaptation tends to correlate with confidence in their own possibilities and achieve personal goals [6].
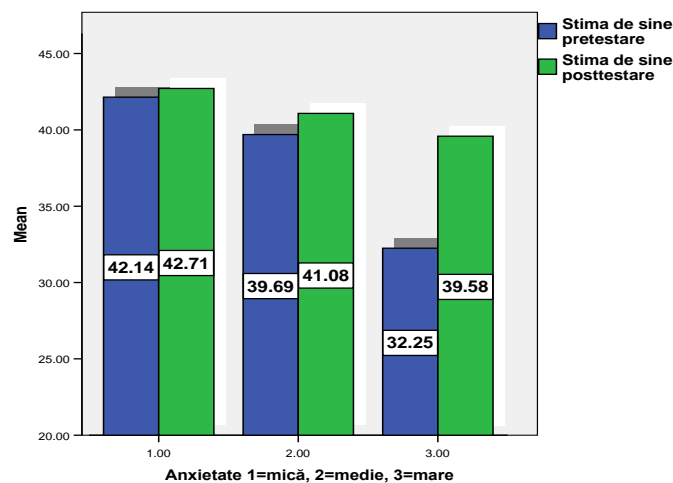
Fig. 4. Impactul programului asupra stimei de sine prin raportare la Factorul anxietate

In conclusion, the most benefit from the intervention program by increasing self-efficacy feeling prescreen those who exhibit: high emotional instability, are shy, reserved, inhibited and fearful, with a sense of personal inadequacy or moderately stressed, those who have a high

anxiety. We can talk again about a risk group, a group with certain vulnerabilities, some constitutional, others modeled through coaching group that managed to increase their sense of self-efficacy. We consider this a very important win, even if we only think the relationship of self-efficacy positive association with performance tasks [7]. From this point of view, the coach is a modern Pygmalion's prophecies are today axioms that promotes the principles of life post.

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Emotional Impairment and Psychology in the Classroom

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ABSTRACT

This paper addresses students with emotional impairment and the educational psychology behind aiding these students in the classroom setting. Learners in the K-12 grade levels have a variety of emotional impairments that can affect classroom behavior and performance. Behaviors and actions are caused by many underlying psychological stressors and triggers. In examining these, specific strategies and teaching techniques to help emotionally impaired students become a working part of the learning environment are important for their achievement.

KEYWORDS: *Behavior, Classroom, Education, Emotional Impairment, Learning, Psychology.*

1. INTRODUCTION

The purpose of this paper is to shed light on emotional impairments in the public education system, and to emphasize the need to address and include this portion of students using successful strategies. Many teachers and parents alike do not fully understand the needs of students who suffer from emotional impairments, generally leaving them excluded from classroom learning. By raising awareness, and identifying symptoms and key behavior patterns, both parents and educators can improve learning practices for these learners. Additionally, the learners themselves will be part of and engaged with participation to remove inhibitors and break through perceived limitations by recognizing emotional impairment teaching instructions. Teachers are empowered through knowledge and information on the criteria of emotional impairment. With skill and applied practices in place, tools to improve learning and connect with emotionally impaired members who can benefit from these methods to overcome learning hurdles.

2. EMOTIONAL IMPAIRMENTS

Emotional impairment, or emotional disturbance, is defined by the Individuals with Disabilities Education Act as persons exhibiting at least one of the following; "(A) An inability to learn that cannot be explained by intellectual, sensory, or health factors. (B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.
(C) Inappropriate types of behavior or feelings under normal circumstances. (D) A general pervasive mood of unhappiness or depression. (E) A tendency to develop physical symptoms or fears associated with personal or school problems" [1]. Each of these criterion can be commonly seen as comorbid with other symptoms. As many students are seen with symptoms of the listed or emotional impairment like, one must see a professional psychologist to be properly evaluated and officially diagnosed.

The most common emotional impairments seen in students K-12 are depressive, bi-polar, post-traumatic stress, obsessive-compulsive, anxiety, and phobia disorders.

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3. PSYCHOLOGY

The DSM-V is the official guide containing the criterion for diagnosing emotional impairment in the United States. It has been found that about 1% of students in the United States have emotional impairments, which are receiving special education. The preadolescents and adolescents estimated to have emotional and behavioral impairments are between 16% and 18% [2]. In this case pre-adolescents are considered to be between the ages of birth to twelve years old and adolescents are thirteen to seventeen years of age.

There are a few tools to read intellectual impairment and functioning. The Child and Adolescent Functional Assessment Scale (CAFAS) is a relatively new measure that looks across eight domains; school, home, community, behavior toward others, emotions, self-harmful behavior, substance use, and thinking [3]. The CAFAS has statements that psychologists answer with a minimal/none scale to severe. An older second instrument used to diagnose emotional impairment is the MACC Behavioral Adjustment Scale. This scale rates the psychopathology present [4]. Lastly, teacher rating scales and parent rating scales which are very common use for psychologists assessing students from childhood to adolescents. Both of these assessments allow the recording of observable behaviors of the student that are divided into different age appropriate forms [5].

Psychological stressors and triggers such as trauma, major life changes, and biological changes in chemical productions are largely seen in students as influences for their emotional impairments. The same psychological stressors are seen in adults, and this is why many of the emotional disorders seen in children/adolescents are still present as they mature into adult life [6]. Also, to be included and considered with psychological stressors and triggers is witness to life altering experiences, significant loss, profound hardship, and survival experiences (most commonly associated with post-traumatic stress disorder).

4. INSTRUCTION

Many students with emotional impairments have comorbid diagnosis linked with behavioral issues. Understanding both the behavior and what is causing the behavior is key in being able to accurately teach these students. Numerous students are excluded in school due to their emotional impairments. As found in the J*ournal of Emotional and Behavioral Disorders*, "school exclusion remained one of the most common disciplinary responses, it is not considered an effective strategy for improving problem behavior" [7]. Many of the disciplinary actions used in education are rigid and automatic. John R. Kelly also states, "Historically, youth with emotional and behavioral disorders (EBD) have experienced higher rates of absenteeism, lower grade point averages, and higher course failure than their non-disabled peers; as a result students with EBD are at significant risk of school failure, dropping out of school, and experiencing poor life outcomes" [8]. Again, this is why educator understanding is important in cases with emotional impairment. By understanding the individual and the specific impairment teachers can educate, to the best of their ability, the students with impairments.

There are some instructional programs such as the Prevention of Emotional-Social Disorders for Children with special needs (PESS). This program is in place to aid in the understanding of education for these students inside the home and the classroom alike [9]. It is very important for teachers and parents to be united and under the same understanding when addressing student needs.

Emotional impairments break into two categories, internal and external. Internalized students tend to have an over-controlled and inhibited style. Characteristics of this are often seen as withdrawn and lonely. On the other hand students with externalized emotional impairments

are often seen with uncontrolled and acting out styles. Each category can exemplify additional traits and characteristics.

These two categories both have students that have poor academic performance due to the lack of attendance as mentioned above. Students with emotional impairments are less likely to be set in regular general education classrooms and they are less likely to perform as well as other students. Since they are less likely to attain the achievement and academic performance of other students, teachers need to be especially aware of their learning needs. Most students have been found to perform at least one grade level lower than their current grade placement, and closely perform at the same level as students with learning disabilities [10].

It has been found that students with emotional impairment that combinations of methods works best to meet their learning needs. Computer-assisted instruction combined with teaching-mediated instruction showed a significant increase in learning, take away, in students with emotional impairments [11]. Combined teaching strategies worked again in a study by Cerar, in which students benefited from multiple small instruction steps that broke down the process into individual steps (on paper) to complete the assignments, after verbal instruction was given [12]. Both studies used teaching strategies, but were not limited to, outlined in figure one. Educating students to be able to help themselves succeed as well as perform well in an academic setting is the underlying goal as educators. Ultimately, having the student know accomplishment and successful results improves the total learning episode.

Emotional/Behavioral Disorders:
Instructional Strategies

- Present materials at independent level, not frustration level
- Provide short, manageable tasks
- Set short-term expectations
- Repeat directions frequently
- Use special education staff for problem solving
- Follow through on everything
- Be willing to modify classroom expectations and homework problems
- Request students to demonstrate verbally their understanding of directions/expectations
- Materials should be presented for all learning styles; e.g., auditory, visual
- Use study skills support
- Provide mini-breaks between lessons
- Allow for peer tutoring
- Provide positive reinforcement
- Individualize work assignments
- Structure classroom environment

Fig. 1.
Teaching Strategies for Students with Emotional Impairments [13]

5. CONCLUSION

The best way to educate students with emotional disorders is to understand their disorders to the fullest and teach with combined styles. In using combined styles of teaching, it is very important to relate the information to the students. If it is not relevant to their lives, the motivation and underlying need for knowledge will be squandered. Parent and instructor

involvement in identifying successful learning applications can build improved education results. Individuals will require a variety of methods to be established. Upon identifying the successful educational styles, a customized foundation can present itself and be used to build further successful teaching applications for student progress and growth inside of and outside educational settings.

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Learning to read: suggestions for teachers and educators regarding dyslexic children

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ABSTRACT

Problems in reading development are part of Specific Learning Disorders, which are called dyslexia. The main objective of the research is to synthesize the most important theories, authors and researches results on dyslexia to create guidelines for teachers and educators. The guidelines will be helpful in the education and teaching-learning process at school to support teachers in their educational and didactic choices. In fact, every dyslexic child has a personal profile that has to be identified, in order to support him/her in the learning path with the right instruments and advice. The purpose is to work out a table containing details on different approaches to dyslexia, such as authors, theories, hypothesis on causes, educational and didactic methods, technological devices, games, etc.

KEYWORDS: *dyslexia, educational and didactic approach, guidelines, specific learning disorder*

1. INTRODUCTION

The history of our ancestors makes us understand how the learning of reading is a cultural invention of the human being. Each country has adopted conventional systems of graphic symbols to represent the sounds used to communicate in the oral speech. Learning to read has to be conquered. The reading and writing skills are not something natural, but are a social superstructure which needs to be acquired in the first years of education. In fact, different cultures have adopted conventionally their own systems of graphical signs standing for sounds used to communicate [1,2]. Therefore, learning to read and write is a daily achievement of every individual, having only in part to do with cognitive processes. Children with learning disabilities aren't lazy or dumb. In fact, most are just as smart as everyone else. Their brains are simply wired differently. This difference affects how they receive and process information. Actually, dyslexia is a common type of learning difficulty that primarily affects the skills involved in the reading and spelling of words in children of all intellectual abilities, from low to high intelligence. Difficulties with reading and writing, often called 'developmental dyslexia', is a complex condition which in some cases presents with other difficulties in maths, short-term memory and concentration. The difficulties in reading and writing learning process, known as Specific Learning Disorder [3] have been the main topic of a lot of studies and research along the last 20 years. The ability to read and write is a very complex process distinctive of these sophisticated skills, involving a wide range of functions, such as cognitive and secondary aspects (visual-spatial attention [4,5], hearing attention [6] motor-skills [7] phonological [8]

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psychological and emotional aspects [9] visuo-auditory-kinesthetic-tactile functions[10,11], perception[12]). Hence, unlike the rather easy process connected to oral learning, reading is a much more hard process which can represent a real obstacle for a lot of children. However, dyslexia must not be considered an intellectual deficit, as it has been shown in a lot of researches.

Researches on dyslexia are in ongoing evolution taking on a new direction every time. With the present research we aim at providing a general view of the studies, putting forward the main viewpoints of the experts working in this field.

2. THE RESEARCH PROPOSAL
2.1 The Aim of the Research
The final aim of this research is work out some guidelines for teachers and educators working with dyslexic children. The guidelines are intended to be a reference tool and a helpful resource for students with special needs in a learning environment. Its primary purpose is to look at some of the wide issues that can affect teaching and learning processes with these students. These guidelines can be used by all teachers, and should also be accessible to a range of other experts directly involved with the student's education, at all levels or in other educational settings. In detail, specific objectives are:

* providing useful information on the causes, symptoms and diagnosis of dyslexia, as well as presenting practical teaching techniques and methods to implement in the classroom;
* documenting a wide variety of methods and approaches;
* fostering educational strategies that work on strengthening the learning skills;
* suggesting strategies a teacher can implement in the classroom to help a dyslexic student do well and understand the different skill sets, such as spelling, reading, writing;
* listing strategies, teaching techniques and approaches incorporated by teachers into the teaching process that may help dyslexic learners overcome their difficulties.

2.2 Method and Activities
The first step of this research was to look for the most important theories and research results, different kinds of treatment and therapies. The sources at the basis of our research are at international level, examined in their original language. In all the theories we took into account some aspects such as:

-authors of the theories
-definition
-core symptoms
-key words
-training and methods
-research results
-strong and weak points of the theory
-level of curiosity and interest
-Bibliography and websites

After comparing and selecting the observed data, a meaningful synthesis has been worked out. The second step focused on a possible match of didactic and educational games as well as technological devices to specific cases of dyslexic children. Every game is associated to a specific theory in this field, thus supporting students who struggle with Reading, Writing, and

Spelling to build up lost confidence, give opportunities for self assessment; encourage attendance at study skills workshops and make them willing to study.

The following step is to work out a desk research where we will demonstrate the benefits of all kinds of games according to some criteria such as:

-age

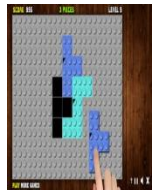-target

-brand

-source of production

-year of production

3. RESULTS

The research is still in progress: it started in January 2013 and will end in November 2015.

3.1. The main outcome

One of the main product consists of a table with the fundamental theories and the researches' results in order to create guidelines for teachers and educators. The outcome of the current research can make educators aware about the problems and the possible solutions to take into account these children. An individual didactic approach will be fostered and effective improvements will inevitably be proved, thanks to these considerations.

Here is an example of the scheduled data:

Name of Theory	Authors	Definition	Core symptoms	Key words	Type of research	Research result	Educational games or technological devices	Reference
Visuo-spatial deficit	M. Lipowska	The visuospatial deficit is recognized as typical for dyslexia only in some definitions.However r problems with visuospatial orientation may manifest themselves as difficulties with letter identification or the memorizing and recalling of sign sequences, something frequently experienced by dyslexics.	Space-time organisation disorders; Laterality disorders; Inadequate awareness of the body image.	Specific learning difficulty Visuo-spatial working memory dyslexia Attention skills	The experimental group consisted of 62 children with developmental dyslexia. The control group consisted of 67 pupils with no diagnosed deficits,matched to the clinical group in terms of age. They used the Clock Drawing Test (CDT), the Spatial Span subtest from the Wechsler Memory Scale–third edit.	Level of performance of a drawing by 10-12-year-old students with dyslexia was typical for children aged 8.	Legor 3	Lipowska M., *Dysleksja i ADHD,* Wydawnictwo Naukowe SCHOLAR, Warszawa 2011

3.2. Further developments

As secondary results the following items are expected:

- working out a whole table with some tools to help *teachers* to support pupils with *dyslexia;*
- providing teachers and educators with advices and methodologies to follow in the teaching learning process;
- bringing a list of possible solutions to facilitate learning and creating successful class environment for students with dyslexia.

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Being a Teacher in the Inclusive School

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ABSTRACT

Why this topic? Because our official statistics force us to talk abou it - almost 20% of school age children are not enrolled in the educational system. Measures taken have not proven to be viable solutions. We propose a responsible approach of dropout by extending the term inclusive school and adressing the inclusive teacher's skills. To promote inclusive classes or schools means a win for all students and teachers. I submitt to your reflection two concepts that are commonly used in meetings, debates and events that have been discussing (for more than ten years) the need for change in education. These concepts are 'integration' and 'inclusion', often used indiscriminately. Inclusive education reflects the values of a fair and democratic society that offers everyone equal opportunities to enjoy human rights and human development goals [6]. In other words, `inclusion` emphasizes the idea that schools and education in general must change and adapt to student needs, must value diversity and find solutions to the needs of different types of learners, while `integration` signals the need do something for the marginalized population - individuals or groups - by the standards and conditions of the dominant social group.

KEYWORDS: *inclusive education, integrated education, children with SEN*

1. INTRODUCTION

Some Romanian pedagogues make a distinction between the concept of inclusive education and inntegrated education. *Integration* can be defined as a student's access to mainstream education, where he or she often adapts to the policies, practices and the existing curricula of the school, while the school itself remains largely unchanged. *Inclusive education* is "an approach that specifies that all children should have equal opportunities to attend school together and learn together, irrespective of their cultural, social, ethnic, racial, religious and economic background or their skills and intellectual or physical capabilities" [12]. The *integrated education* "assumes that all disabled children are accepted in regular schools and classes. There still appears no significant concern towards the adaptation of regular classes / school environments. It also offers partial access to education for children with severe disabilities. In inclusive education, it is argued that all are accepted, naturally, in schools" [12].

The main forms of integration, says the same author, are:

a) vocational integration - students are placed in the same building with mainstream school, but they are included in separate units or classes or follow a different curriculum;

b) sociale integration - students attend classes or special units but have the opportunity to socialize with students from the mainstream school (on the playground, at lunch, at joint meetings of school);

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c) functional integration: provides joint participation in educational programmes that include all students.

2. GUIDELINES AND TRENDS IN TEACHER TRAINING

We noted a few guidelines and trends in teacher training, as they have been structured during the past two decades in Europe and in Romania. Iucu Romiţă, professor at the University of Bucharest [5], identifies a few tendencies of the teaching career development through evolutionary processes of:

- training or professional development;
- initial and continuing training - professionalizing the teaching career;
- professionalisation of the teaching career model – from the pedagogical ability to the pedagogical competence;
- orientation of the training systems towards pedagogical competence and educational performance;
- quality and training - teacher training standards;
- mobility and career development through the professional transferable credit system;
- induction programme / mentoring / practical training for the teaching career debut;
- curricular dominants of the training programmes - practical orientation;
- managing the teacher training systems - from a systemic approach to programmes and projects approaches;
- accreditation of training programmes - training providers - the training market;
- E-learning / distance education - support for the continuous training of teachers.

2.1. How could teachers promote inclusive education?

We know that previous educational systems have placed children with learning difficulties or who were different in a separate section, a `special` one. The training of teachers who were not specifically and concretely involved in special education was started from the premise that they would not have to manage classes with pupils with SEN. These students are in special schools and have teachers with an adequate training. Today, the inclusive education approach supports the fact that students with special needs should be educated with their peers in mainstream schools.

In the work "To understand and respond to the children's needs in the classroom" [11], the directions and principles which all teacher training must rely on in order to support school inclusion of all children:

- all students are at gain when teachers adapt the school curriculum and their own teaching style to accommodate the great diversity of children in any class of students (which requires a lot of creativity);
- it is very important for teachers to realize and strengthen the partnership with other professionals to be supported in their efforts;
- links between schools in a neighborhood should be strengthened, as well as partnerships with other community groups so that educational requirements can be met both in school and outside it;
- to enable people with disabilities to participate effectively in society;
- to achieve the right to education, without discrimination and with respect for the principle of equal opportunities, an inclusive education system will be ensured at all levels, as well as lifelong learning, directed to: development of human potential, of

the sense of dignity and self-worth, consolidating the respect for fundamental human rights and freedoms and human diversity;

- development of disabled people's personality, talents and creativity, as well as their mental and physical abilities, to their full potential.

We consider that we can speak of an *inclusive* approach when schools help pupils overcome barriers to learning and where (good) teachers have the skills necessary to help students succeed. The inclusive vision on the educational process assumes that teachers have social responsibility and professionalism, that they are traained, supported and empowered for the knowledge and application of teaching technologies for curriculuar adaptation/ differentiation, evaluation and promotion.

2.2. Methods of developing teachers' teaching skills for inclusive education

To support the implementation of inclusive schools, we must take into consideration the following facts [10]:

a. The initial training, performed in colleges and universities;

b. Trainings for teachers'continuous training and for the teacher trainers;

c. Conducting teacher training programmes in schools.

a. The teachers' initial training for inclusive education

The teachers' initial training is vital because, "in order to prepare pupils for the EU's increasingly knowledge-based society, teachers are required to teach a new range of skills, which often require new teaching methods. In addition, there is a growing demand for teachers to teach classes that have pupils from different cultures, mother tongues, with different levels of skills and with special needs" [2].

To meet learners'diversity, we should reflect on the problem of developing a curriculum for initial teacher training to support these modern pedagogical skills that could and should provide future teachers the training necessary to prepare them to face an inclusive educational system. "The curriculum for teacher training should be based on learning outcomes. Therefore knowledge and competences specific to education sciences should always be combined with knowledge and skills specific to the subject matters included in the curriculum" [1].

But how can we make future teachers familiar with special educational needs issues? Here are some possible approaches: the topic can be treated as a separate subject matter or it can be integrated in other subjects (as part of a course on differentiated teaching or on special educational needs in general); the topic can be approached from a dual perspective – being treated in special modules and being integrated within broader topics.

As regards the training of teachers for inclusive education, there can be identified three models of initial training:

a) "the general training model;

b) the training through collaboration model;

c) the unification model.

In the general training model, students will be able to attend one or two courses covering inclusive education.

The collaborative training model asks students to attend several inclusive education training classes while doing practice in inclusive classes.

The third model is the unifying one, where all students have the same curriculum that prepares them to work with inclusive classes where there are children with special education needs" [9].

Teacher training should take into account other elements, such as learning difficulties and disabilities, emotional and behavioural problems, techniques and technologies of communication, symbolic representation, meaning and multiculturalism, diverse curriculum, teaching methods and techniques, educational relations, cultural self-critical reflection placed in the context of training in real situations and with authentic examples, the ability to bring all students to at an optimal learning level.

In terms of attitudes, beliefs and values in initial teacher education, we must highlight the importance of junior teachers' positive attitude in the inclusive school as well as the importance of the beliefs that influence future teachers' attitude towards inclusive education, which in turn influences their intentions and behaviours and the need to create a "sense of belonging". Training students as future teacher must therefore be focused on promoting teachers' attitudes and training skills. The complexity of inclusive education should be adapted to include labour in training teacher attitudes and beliefs rather than "relying exclusively on a technocratic, competent approach, more suitable for the transmission of bureaucratic and procedural knowledge" [4].

b. Trainings for teachers'continuous training and for the teacher trainers;

Emil Paun, professor at the University of Bucharest, noted that professionalizing teaching career is "a process of developing a set of skills and competences in a given area, based on a set of assimilation of knowledge (theoretical and practical), process controlled in a deductive way by a model of the respective profession" [8]. The professionalisation dimensions are highlighted:

1. The first dimension regards professionalization, which involves the description or drawing of a "professional identity", so as to outline a set of knowledge and skills structured in a "professional model" (the professional standards), which can be assimilated systematically, scientifically;

2. The second dimension of the professionalisation for the teaching career is the effort to legitimize the teaching profession in field of social activities and professions. This requires a model of the teaching profession, which is relatively difficult to achieve given the specifity of the educational activity;

3. A third dimension of professionalisation involves "a broader effort of rationalization and alignment of the entire process of initial and continuous teacher training on professional standards. The teachers'activity must be understood and studied not only as the fulfillment of a vocation and personal qualities, but as an activity that is subject to specific and precise rules and constraints. It is based on skills and knowledge assimilated in different ways, which involve training based on a rigorously developed professional model. This is not easy to achieve given the specificity of the educational activity, often involving variables whose standardization is neither possible nor necessary. `Travail humain sur l'humain`, this is the specific of the teaching profession. Therefore, its analysis oscillates between the description of the conditions and standards and the emphasizing of the creative, personal, non-standard aspects [8].

In 2001, *The strategy for developing the system of teachers' initial and continuous training in secondary education in 2001 - 2004* was developed. Some of developmental directions and objectives of the strategy [5, 9] were:

1. The design and implementation of national standards for the teaching profession - complex evolutionary standards (normative and excellence ones) for a dynamic and flexible teaching career;

2. Obtaining the teaching degrees.

What can result in the professional field from special education educators and mainstream school teachers working together? First, the development of new capabilities related to: consultancy offered to teachers and parents; curriculum in mainstream education; best practices in incluzive classes. Secondly, trainers who are knowledgeable in the field of mainstrea education but also in special education and who understand very well inclusive practices are valued.

The study *"Special requirements in the classroom"* [10] presents the mechanisms for the self-training and self-development of school in order to support implementation of inclusive schools all over the world. The improvement in schools requires cooperation between teachers and a coherent and lasting policy in this respect, for each school. The necessary directions identified in the school are: joint analyzis of the development policy of the school; assistance for the lessons among teachers; group discussion of the issues arisien and the solutions found; honesty in assessment; positivism in tackling learning difficulties faced by children; real partnership with parents; call for community services to solve limitations [10].

3.CONCLUSIONS

The central idea that emerges can be formulated as: it is profitable to work in parallel, using the same strategies and means, both in the teacher training and in the classroom learning activities. It is considered that the common methods (interactive, participative, inclusive ones) bring both efficiency and quality in teaching and teacher continuous training.

A new phrase, "collaborative teaching" is more often used in the anguage of teaching. To design and implement an inclusive educational system, the collaboration between leading professionals in education is crucial. The professional team should include the presence of a teacher, a support teacher or itinerant teacher, a speech therapist and a psychologist. Teamwork enables easy monitoring of student progress in the classroom and observing behaviours and problems faced, offering the possibility to give immediate support.

Education for inclusion should be seen in terms of meeting the learning needs of all children, youth and adults. Teachers must constantly adapt to the specifics of a changing generation, so we consider opportune presenting and defending the claim launched at European level and which stipulates that "teachers should receive appropriate training to work with students at risk of leaving school early or who face insecurity, live in areas with social problems or are at risk of exclusion. Therefore, we need modern teachers, able to integrate in a multicultural and multidimensional learning environment" [3].

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Augmentative languages, general characteristics and practical applications

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ABSTRACT

The article highlights the main characteristics and practical applicability of augmentative and alternative communication. As a new area of interest, especially because of the high practical applicability in the educational field, the therapeutic approach of augmentative and alternative communication is a topic which can be widely extended. The article achieves distinctions in terminology and describes few systems and augmentative communication devices and techniques used worldwide.

KEYWORDS: *augmentative, alternative, communication, device, language, system*

1. Augmentative and alternative communication-conceptual delimitations

Some disabled people can't use speech as a primary means of communication and they are forced to use specific techniques and means. The idea of augmented communication is to use all the available skills of the disabled person, in order to compensate for impairment of verbal communication. With the technology that is continuously developing, new opportunities open to the disabled people, in order to reach an increasingly better level of functional communication. Augmentative and alternative communication refers to all methods and means of communication intended for helping/replace speech (and / or writing) when they are affected.

With the apparition of the80s augmentative and alternative communication as a discipline of its own, researchers and specialists in psychology and communication have begun to use new technologies available at that time to improve the communication skills of the subjects, their vocabulary level and achievement complex tasks related to communication. (Beukelman & Mirenda, 2005)

"Augmentative communication refers to any form of communication that replaces or expands the speech. Every single individual uses some of the techniques and means of augmentative communication. Long before having access to oral language, healthy children interact with adults by means of augmentative non verbal techniques such as smiles, visual contact or differentiated vocalizations. Such communication is evidence of an intention early interaction and is very strong through communicative effect"(Vanderheiden et al., 1986).

We can define an augmentative and alternative communication system "an integrated group of components, including symbols, communication auxiliary, strategies and techniques used by the individual to support communication" (ASHA, 1991, p.10), this definition emphasizing the use of multiple ways and components and also incorporating all residual communication skills of the child. These skills can mean any remaining speech or vocalization capacity, gestures, hand signs,

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the ability to use communication boards and electronic devices for issuing voice. That's the reason why the AAC is a form of communication.

AAC is also a way of intervention that uses manual signs, communication boards with symbols and devices that emit multimodal synthesized voice communication, allowing to children to use any means to express their thoughts, and also all communication methods fated to help / replace speech and writing when they are affected. (eg in cases of: cerebral paralysis, stroke, movement disorders such as neuronal, dysphasia, aphasia or learning disorders)

AAC is required when a child doesn't normally acquire speech and there is a significant delay in development. Ideally, the AAC includes more than one communication system, the child using the most appropriate depending on the people who communicate with the circumstance and activity that is involved in.

2. Classification

From the point of view of the means used, it defines two categories - direct and intermediate augmentative communication.

Direct augmentative communication – gesture based - relies on gestures, body postures and facial expressions. It does not require additional equipment or material and relies on gestures, for example, MAKATON manual system. Since imitation of signs requires a rather low intellectual level, these methods can be applied to subjects with severe mental delay. Another advantage is that they are available anywhere and anytime, requiring no materials or equipment. The disadvantage is that it can be communicate only with people who are familiar with this type of communication, because this system does not enable understanding by subjects who have not been taught those signs.

Mediated augmentative communication refers to using graphic symbols in communication, that are present in books / brochures or boards, which the child carries, or involves a very complicated software system with an extensive vocabulary, which can be used in various situations. Symbols are based on very realistic icons such as system designs MAYER-JOHNSON, up to abstract code symbols as BLISS symbol system or alphabet. Therefore, this type of communication is addressed also to subjects with severe delays (autistic spectrum disorders - TSA, genetic disorders, cerebral paralysis, etc.). The advantage of mediated communication is represented mainly by higher productivity and flexibility that these techniques ensures, which can be based on portable equipments such as, for example, synthesizers. It has, however, some disadvantages, because they depend on the availability of computers; they can lock or stop working when the batteries are discharged.

2.1. Hand sign language- Makaton sign system

The Makaton system contains 200 signs with semantic equivalences in basic lexical fund, is divided into 8 stages of growing complexity, pursuing normal pattern of language development in ontogenesis. The first steps include essential signs, so that an individual who, because of neuropsychological deficit can't move forward, to have a means of communication, although limited, yet functional. A 9th stage presents additional vocabulary, which can be inserted into any of the eight previous steps as needed. The beneficiaries of this way of communication are children with severe mental disability, those with Down syndrome or genetic disorders, autistic spectrum disorders and even those with varying degrees of cerebral paralysis.

2.2. Communication through graphic symbols

Communication through graphic non-oral symbols is mediated methodology, which requires a device that consists of a set of icons. These symbols can be portable or placed in a

computer or synthesizer, high-tech device that adds name written and oral to symbol, recorded on magnetic tape, forming the so-called lexigrams. Standardized pictograms systems are black and white drawing and represents nouns category, verbs, adjectives, usual adverbs. They included or not their name shown, and is designed for children with lower mental age. Nowadays are used systems such as symbolic communication by icons Mayer Johnson, Rebus system, Makaton and Picsyms symbols. As ground rule, graphic symbol systems are recommended for children with neuro-psycho-motor disorders, and also for those with mental disability and those with autism spectrum disorder. At the same time, they are also used for adults with aphasia after stroke.

2.3. The pictographic system

Augmentative pictographic systems differ depending on the type of subjects who use it and their communication needs. The most common pictographic systems are PECS (Picture Exchange Communication System) and PCS.

Graphic symbol system (PICTURE COMMUNICATION SYMBOLS - PCS, Mayer-Johnson, 1981) is like a kind of album with a set of detachable sheets, comprising over 3,000 images in three different sizes, in squares with different sides of 1.8 cm, 2.3 cm and 5 cm. Images caught in springs can be removed, Xeroxed, and desired symbols can be cut. The designs with bold black and white border lines can also be colored as similar to reality.

The role of the therapist in the communication process is to interpret the message of the speech impaired person, but also to extend it in different contexts and situations.

2.4. Communication via electronic devices

Over time, especially American and British specialists have developed and tested various types of electronic communication devices, including: Hawk system; Cheap Talk; Teach Speak; Teach Talk (AMDI); Go Talk; Portable voice; Super Wolf and Wolf (+ portable voice words) etc. to facilitate communication of children with severe disabilities.

Nowadays, electronic communication devices are being connected to a computer or are portable with embedded software; both are intended to generate verbal language. Thus the child with severe disabilities selects either a symbol or a picture or a word / phrase and the computer turns synthesized voice message through verbal-oral statement.

3. Intervention strategies by AAC

The multidisciplinary team involved in the education and therapy of children with communication disabilities (teachers, therapists, doctors, social workers, parents) must build a communication system adapted to each case. Even if an alternative learning communication can follow certain steps, recommended by specialists internationally - the result - the communication system - it will be strictly individualized according to the possibilities and needs of each child.

3.1. Creating motivation for communication and awareness of child to the fact that the adult is his partner in communication, are the first steps you should take to begin implementing the program. The motivation for the child communication is very important because without it the child will not be interested to communicate. The first attempts to change the message should be focus on what the child likes and interest.

Adults will be able to interpret the signs of child: vocalizations, stretching hands, smile, eye fixation, or conversely, crying, agitation, in order to establish what he likes and what he does not like. Things are more complicated in children with severe disabilities, because they can show what they like by subtle clues: change of muscle tone (muscle tightness) or respiratory rate (acceleration).

To learn what motivates the child or draws his attention, we need to do test cases by choice. Place the child in front of one or two types of food or toys and see the reaction. (Reichle, York, & Sigafoos, 1991). Another effective way of finding out the type of motivation can be done by noting the child's reactions, when and who / what are caused: smile, cry, laugh, restlessness. Watching the coincidence of certain undesirable objects / persons can deduce what arouses interest of the child.

Often, children do not communicate simply because they do not need (needs are met before they get to communicate), is not expected to do this or not given enough time to do it. Therefore is very important the strategy of "my turn, your turn", in which the child is told that is his turn to communicate, stopping us from what we do looking at him and waiting him to give the answer.

3.2. Intentional communication

For a child with disabilities who's not yet communicate intentionally, the purpose of this study should be to obtain intentioned communication. More specifically, the child should learn that certain behaviors (those through he communicates something) will be answered specifically and by using them deliberately he can obtain some control over his life. In this moment the child is in pre- symbolic development stage, so photos or other graphic symbols are not indicated to be used. It is recommended to start from existing behaviors in the child's repertoire (eg, gestures). For example, the extent of hand, fixing his eyes or facial expressions may be used regularly by the child, and the aim should be to learn to use them for communication purposes. We mean, we should give to the child an immediate response (offering object) for each communicative gesture that he performs, in order to connect the responses it receives from the environment as a result of his reactions (Van Tatenhove, 1987). Gradually, the child will learn to produce behavioral response to get that response. It is useful as an adult to comment aloud all reactions of the child, giving him gestures significance (ex. you raise your hands, it means you want to take you in my arms) to increase the child's ability to understand spoken language (receptive language).

Game activities and daily routines are very suitable for learning intentioned communication. Structured routines should be created, predictable around each daily activity such as dining, bath, and dressing, going to the toilet or to sleep. The goal is that the child to gradually anticipate the different steps of various activities and respective routines. Also, simple games based on repetitions (ex. Boo, the old man passes by salon) are indicated for initiating an intentional communication answer from the child; periodically the game stops and we are waiting for the response / reaction from the child. These types of activities lead the child to understand the cause-effect relationship. The basic functions of intentional communication are: make choices, demand and rejection, request of adult attention. These will have to be formed to the child before proceeding to the next step.

3.3. The introduction of graphic symbols / icons

Once the child masters non-symbolic communication (ex. requires something by showing or looking at the object, or removes an unwanted object, choose between two objects), the next

step is learning how to use symbols. This is very important because it allows the child to communicate about objects, people, events which are not present at the moment of speaking about them. Also, symbolic communication is essential for the acquisition of academic skills.

A child, who is in the stage of pre-symbolic communication, will have to start learning and interaction by using concrete objects and then move to other symbols with increasingly higher degree of abstraction. Van Tatenhove (1987) recommends for intentional symbolic communication development, training in child the capacity to ask, to reach for an object in the visual field. It will put two identical objects that make the child happy, and when he reaches for one, will be given identical pair, thus forming ability object-object representation. When the child understands that indicating an object gets his pair, he is already starting to develop understand symbols.

After the child learns to indicate an object to get the identical pair, it is time to place a picture under each object the child requires. Whenever he asks for the object, it creates and strengthens the link between object and image. Gradually, their position will be changed so that the photograph is in the spot light and the object is in a secondary place. The object may even be covered by hand so that child rather guesses its presence. Then it will remove the object altogether, leaving the child to show only the image when he wants that object. Strengthening the connection will be done by giving immediately to the child the object he requested. From the pictures it moves to the images that are similar in size, shape, colors to the indicated object and after that to gradually reduce the size, then the colors, using eventually icons. Similarly it will be done for learning sign language, another system of symbols, along with the graphics symbols. If a child is already capable of intentional symbolic communication, you can skip the steps above and you can jump on learning the icons and hand gestures and, if possible, to acquire letters and reading-writing skills.

People learn to communicate, just by communicating in situational contexts. In order to develop the children speech, we have to give them the context of social communication and means of communications with the important people in their lives. Naturally, AAC systems used by different persons are strictly individualized based on age, level and type of deficiency, the abilities and communication needs. For example, some children with severe and associate disabilities can benefit from AAC: gaining a greater ability to concentrate attention, to increase mobility and to play, to use a switch, to acknowledge the relation between cause and effect, and to make a choice between several options - representing a set of transferable skills useful for communication, before the formal communication system to be introduced to the child and used effectively by this. Using AAC and speech development should be simultaneous purposes for therapeutic intervention. Classic speech therapy and speech stimulation and AAC intervention is good to be done in the same time. The degree to which the focus is more on one or the other must be determined by evaluating the child in various communication situations and daily routines specific to his age. In the same time, the therapist, with all the multidisciplinary team should pay attention to the difficulties that children with special needs encounter when interacting with alternative communication means used in therapy and to adapt the strategy to the specific needs of the child, managing to overcome its communication limitations and the progresses to be considerable. (Beukelman & Mirenda, 2005).

Conclusions
In conclusion, when a child has a disability that affects his verbal and communication skills, using ACC leads to significant communication opportunities at school, social, supports

and develops communication skills of children in the context of normal social networking, even if by other means than speech. The aim is to empower children with a functional communication mean and the system AAC is only one way to achieve the goal.

It should be permanent considered that language and communication are by nature fundamental aspects of social life, so they must be permanently extended the ways of communication using AAC system to help integrate the most of children with special communication needs. And here we are referring both to the development of the techniques we listed above and the inclusion of language issues, cognitive and social aspects of communication in specific programs. In addition, easier access to communication for people with special needs requires a whole series of circumstances that facilitate communication, which we could create both with the technology and with professionals and the family help.

The adjustments the educational system and society need to make to facilitate the inclusion of people with disabilities should be part of a national strategy that would help find the most appropriate methods and techniques to achieve social inclusion of the people with disabilities, so they could benefit from active participation in social life. And is very important to do that because there are so many examples of nonverbal people with multiple disabilities who succeed to live independently.

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The pedagogy of diversity – a framework for transformative learning

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ABSTRACT
The article is focused on the role of pedagogy of diversity as an essential condition for transformative learning. The theoretical premises of this research are to be found in the studies and theories about constructivist learning, transformative learning and human development. Transformative learning is more than learning,it is a real opportunity to develop social competences. Social competences can be developed in the social context through cooperation with "the other", which is different.For developing social competences only theoretical knowledgeis not enough: certain behaviours, in different social contexts, which promote tolerance, empathy and human diversityare necessary. A new school culture, for all educations actors: a transformative learning culture is necessary.

KEYWORDS: *pedagogy of diversity, transformative learning, social competences.*

1. Introduction

In our contemporary postmodern world the social competences are important to cope with the reality and the dynamic of labour market. Social competences, emotional intelligence, networking and cooperation, communication and the ability to adapt have become indispensable. In this context, the important questions are: Where do students learn how to adapt to a dynamic world? How do they learn? Are schools the only place for social learning? What kind of teachers can develop social competences, if they think "analogically" and students think "digitally" [1]?

Schools are almost the same in the world. It is not difficult to see a building and you know it is a school which has desks and chairs, labs and schedules etc. A lot of proofs "talk" about the school history: the students and teachers' photos, students and teachers' results, students' pictures, poems or diplomas.

School as an organization has not changed very much, but students have.

Young people today, corresponding to the description of "Homo zappiens", with the specific requirements of the world in which they were born and live, consider school "just one of the focal points of life", much more important for them being the relationships with friends, part-time jobs and going out at the week-end" [1.p.11].

A solution for this situation is the pedagogy of diversity and the transformative learning.

2. Pedagogy of diversity as a framework for transformative learning

As A.Nedelcu[2] shows, the term "pedagogy of cultural diversity" means generically an accumulationof response reactions andstrategies for managing pluralityin theeducational space. The pedagogy of diversity is not a new topic, but today this pedagogy is an answer for how can teachers make school more attractive for students.

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The teachers must accept, understand and promote human diversity: diversity of values: social values (democracy, tolerance, justice, etc.) and individual values (independence, individualism, hedonism, etc.), diversity of learning styles, diversity of needs, etc.

For this goaltobecome a reality, the pedagogy of diversity must be actually felt in school life, from the curriculum, which should includeelementsfrom differentcultures,toteaching, learning and assessment which should be personalized, respectingstudents' style andpace oflearning,fromprogrammesfocused on the student to socially oriented programmes.

Given thestudents' and parents' increasing disinterest in school, teachers' demotivation toadoptinstructional strategiesandteaching stylesthat lead tochange, we support the opportunity of promoting the pedagogy of diversityfor the following reasons:

• the need tomake schoolmore attractive tostudents.This isreallya requirement ofpost-modernpedagogy, which, according to the constructivist principleofaffective-cognitiveunity, promotes a positive attitudetowards learning.

•the need to put school closer to the reality ofeverydaylifebylearning through "authentic tasks", through problem solving, projects, role playing, etc.

• the needto develop thesocialskillsso necessaryin adynamic, globalized world. The socialskillscan be developedby usinginteractive groupmethodsand throughcooperative learning.

• designingandimplementinginstructional strategiesbased on real life experiencesthat studentshavelivedin different contexts.[2]

The pedagogy of diversity became a condition for transformative learning, which has usually been defined as transformations of meaning perspectives, frames of reference, and habits of mind [3]. This learning is not only in agreement with the principles of the constructivist pedagogy, but aims the person entirely, with its lifelong learning, in different contexts. This learning is capable of producing transformations in individuals' minds because it fully involves the individual in learning and invites to introspection, reflection and reconstruction.

Transformative learning is more than learning, it is a real opportunity to develop social competences. The socio-emotional development is a key factor for students to succeed in life. „Social and emotional development involves the acquisition of a set of skills. Key skills among them are the ability to:
• identify and understand one's own feelings,
• accurately read and comprehend emotional states in others,
• manage strong emotions and their expression in a constructive manner,
• regulate one's own behaviour,
• develop empathy for others, and
• establish and sustain relationships." [4]

A lot of studies [5,6,7,8,9] show that students with social competences are more able to: express their ideas and feelings, display empathy towards others, manage their positive or negative feelings, feel self-confident, etc.

All these social competences can be developed in the social context through cooperation with *"the other", which is different.*. Social competences need time: time for interaction with different students or teachers, time for social exercises and time for reflection. Social competences need different social contexts: at home, at school, in community,etc. Social competences involve transformative learning and the opportunity to make significant things: "Students acquire a sense of significance from doing significant things, from being active participants in their own education" [10,p.158].

In otherwords, the social competences are not developed in to authoritarian environment where the teacher is dominant and uses "classic" methods. For developing social competences only theoretical knowledgeis not enough: behaviours which promote tolerance, empathy and human diversity are necessary.

Teachers cannot promote something in students that they themselves do not possess. Interestingly, teachers who score at the higher levels of Kohlberg's framework do tend to implement a more democratic classroom organization and give students more opportunities to make decision, to help children become creative, self-directed, and responsible [11].

It is necessary to create a transformative learning culture, which is open to change and human diversity.

3. The role a pedagogy of diversity for develop social competence through transformative learning- a pedagogical research

The main purpose of this research was to demonstrate the role of transformative learning in developing social competences.

*Methods: A*questionnaire regarding students' attitudes on human diversity and a focus-group, as well as an analysis of the activity products (reflexive journals) were used.

Research hypothesis: the more diversity experiences students have, the more transforming learning effects occur, resulting in critical thinking, spirit of cooperation, tolerance. A number of 1oo participants - third year students at "Transilvania" University of Brasov. The students were selected taking into consideration the diversity experiences they had had. The selection criterion was the number of intercultural experiences (minimum one during the last year) and their duration (at least a month), working together with colleagues with special needs, working together with colleagues from another country or who are from another religion.

4. Findings and Results

Both the quantitative and the qualitative analysis of the results have shown that diversity experiences involve transformative learning.The formative effects are felt primarily on the socio-emotional level. The most frequently formative effects are shown in the table below:

Formative effects of transformative learning	Frequency
Empathy	37%
Tolerance (accept to human diversity)	23%
Communication skills development	15%
Awareness about human diversity	12%
Other (sense of life, cognitive effects, motivation, self-efficacy)	13%

Table 1. The formative effects of transformative learning

Conclusions

Firstly, this paper is an argument for giving students and teachers the opportunity to participate in their own classroom or school for transforming themselves and their schooling into caring and learning communities. The framework for the transformation is the pedagogy of diversity.

Secondly, a practical conclusion of this paper is that the teachers must promote a new school culture, which is based on the pedagogy of diversity which involves cooperation between different students and teachers in different social contexts, through projects between students from

different levels/schools, or students with different learning styles, team-teaching (teachers from different schools/countries) and open the learning experiences towards the community.

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FOR A BETTER QUALITY OF LIFE IN ELDERLY

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Currently, those aged 65 years or above comprise about 6% of the world's population. The reasons for this explosion in the older population in the world in general, and in the develop world in particular are many, and are not just a result of increasing life expectancy. Other factors including the declining fertility rate, declining child mortality, education and economic development play a big part. The ageing population of the world presents major challenges for society and for health services. Mental health issues are extremely important, as mental disorders, notably dementia and depression, are common in old age. Mental ill-health can profoundly affect the quality of life of elderly people and has a significant impact upon the use of health and social services.

Taking into account the fact that the mild cognitive impairment is considered as a prodromal phase of dementia, it is important to identify it early and to start the primary prevention. The primary prevention refers to the specific treatment of cognitive features and to changes of the lifestyle. The compliance and the lifestyle can stop the progression of the disease. Early detection and the treatment of mild cognitive impairment can maintain the elderly at a maximum level of functionality as much as possible. It is therefore important to improve quality of life the elderly, so that to maintain healthy and functional as long as possible, to prevent their admission to hospitals or homes-hospitals.

KEYWORDS: Mental health, elderly, mild cognitive impairment

Introduction

The last century witnessed an unprecedented increase in the average human lifespan. The estimated total world population of older people was about 200 million in 1950 and is expected to rise to 1.9 billion by 2050 – nine-fold increase in 100 years.[1] Currently, about 6% of the world's population comprises those aged 65 years or above.[1]
The reasons for this explosion in the older population in the world in general, and in the develop world in particular are many, and are not just a result of increasing life expectancy. Other factors including the declining fertility rate, declining child mortality, education and economic development play a big part.
The ageing population of the world presents major challenges for society and for health services. Mental health issues are extremely important, as mental disorders, notably dementia and depression, are common in old age. Mental ill-health can profoundly affect the quality of life of elderly people and has a significant impact upon the use of health and social services.

Normal ageing

There is no satisfactory definition of the normal ageing process. It can be defined as a cumulative process of adverse changes in physiological, psychological and social functions that characterize average older people. Normal ageing as a social concept refers to an accepted range of variation in health, appearance, and performance of adults at different stages of their lives. However, it is always difficult to make a distinction between normal and pathological ageing.

According to ***biological theories***[1], the ageing process can be divided into primary and secondary ageing.

Primary ageing refers to those declines in function that are genetically controlled and *secondary* ageing consists of random changes resulting from acquired disease and trauma. These theories suggest that if the hostile events related to secondary ageing could be prevented, life would be extended, but because of primary ageing decline and death are inevitable.

Psychological theories[1] of ageing can be divided into cognitive and personality theories.

The Cognitive theory is based on studies of cognitive changes associated with age. In general, adults with higher intelligence and education tend to show minimum decline in their performances with increasing age, while a significant decline is observed in adults with lower intelligence and education. Older adults in general tend to perform less well in new and novel situations.

The Personality theory: Most studies have reported relative stability of personality traits from adulthood into late life. When personality changes occur, they appear to be related to losses, particularly those involving health and social support systems. Some studies have reported sex differences in personality in older age, men tending to become more dependent and nurturing and women tending to become more individualistic and more aggressive as they become older. [1]

The most frequent mental disorders in old age are: dementia, depression, anxiety disorder, drug abuse and psychosis.

Dementia

The prevalence of dementia increases with age. Most studies have shown a prevalence of 0.8% in the 65-70 year age group which increases exponentially to 28.5% in the 90+ age group.[1] Dementia has an enormous impact on persons with the disorder and on those around them. The quality of life of individuals with dementia is affected by their cognitive and functional impairments, as well as the behavioral and psychological symptoms that often occur.

Mild Cognitive Impairment (MCI)

MCI is an etiological heterogeneous condition characterized by cognitive decline greater than expected for an individual's age and education level, but that does not interfere notably with activities of daily life, subjects performing poorly on a variety of cognitive, functional and behavioral parameters, compared with normal person of the same age, but the cognitive decline is not enough severe to characterize dementia.[2]

For diagnosis of mild cognitive impairment are used[3] the Peterson criteria (2001):
 - memory complaint, preferably corroborated by informant,
 - impairment is 1.5 standard deviations (SD) below peer norms,
 - impaired memory function for age and education,
 - preserved general cognitive function,
 - intact activities of daily living,

- not demented.

Use of term MCI by clinicians is increasing, as they see more and more such patients in clinical settings as the populations ages and awareness of the treatability of some forms of dementia grows. According to an evidence-based medicine review, the American Academy of Neurology recommends that MCI is a useful clinical concept worthy of attention. This is because persons with MCI progress to dementia at a rate of 10% to 15% per year, which is in contrast to the normal elderly cohort that convert at 1% to 2% per year. [2] The transition is usually to Alzheimer's dementia, and less commonly to vascular dementia. In referral clinic populations, most patients with a diagnosis of mild cognitive impairment either persist with mild cognitive impairment or progress to dementia, and on autopsy such patients have characteristic neuropathological findings of Alzheimer's disease, including senile plaques. [4]

Etiology of MCI

The cognitive decline etiology includes (1) genetic factors and (2) environmental factors (viral infections, food, smoking, stress).

Fat diet increase the risk of disease. Depression is secondary to stress, and untreated depression is a major risk factor for cognitive impairment and for dementia. [2] Another risk factors for mild cognitive impairment are: cardiovascular disease, abnormal blood pressure, too high or too low, metabolic disorders, low levels of physical, social and mental activity, fewer years of education. People who have higher levels of social, mental and physical activity seem to have less risk of MCI and dementia.

Symptomatology of MCI

The patient with MCI complains of difficulty with memory. Typically, the complaints include trouble remembering the names of people they met recently, trouble remembering the flow of a conversation, and an increased tendency to misplace things, or similar problems. In many cases, the individual will be quite aware of these difficulties and will compensate with increased reliance on notes and calendars. Most importantly, the diagnosis of MCI relies on the fact that the individual is able to perform all their usual activities successfully, without more assistance from others than they previously needed.

Prevention of MCI

The *primary* prevention of MCI involves the prevention of the appearance of the disease by measures applied to the individual and the environment.[5] The treatment of risk factors includes the treatment of hypertension, hypercholesterolemia, diabetes, hypothyroidism, depression, sleep disorders and other psychiatric disorders that may adversely affect cognitive status.

Alcohol in moderation may slow the appearance of cognitive deterioration and dementia progression in people who already have cognitive impairment. In addition to the specific treatment related diseases mentioned above, MCI's primary prevention includes physical activities and Mediterranean diet. Other non-pharmacological interventions which may have effects on memory and their removal are: stress factors, sleep low, taken medication (anticholinergic and sedative).

Secondary prevention lies in identifying and treating asymptomatic or pre-symptomatic persons having a risk factor of developing the disease; if MCI, secondary prevention can be achieved by use of anti-aging treatment, such as: omega-3 acids, natural products on herbal

(vinpocetinum, Rhodiola Rosea, gingko-biloba), nootropics (piracetam), antioxidants (vitamin E,C, A, alpha-lipoic acid, Coenzyme Q10).

An alternative method consists in the administration of extracts of Rhodiola Rosea strain containing bioactive alkaloids, polyphenols and phenyl-propanoids. The effects on the brain function are: cognitive stimulation, memory improvement, learning improvement and improvement of abstraction capacity.[6] The effects of Rhodiola Rosea are augmented in combination with Piracetam or Ginseng.

Cholinesterase inhibitors are typically used to treat early and mild stages of dementia. Treatment of Alzheimer's dementia could be extrapolated and used for the treatment of slight cognitive deficit. Cholinesterase inhibitors are donepezil (Aricept R), rivastigmine (Exelon R), galantamine (Reminyl R) and tacrine (Cognex).

Tertiary prophylaxis prevents association factors that lead to disease, preventing complications from occurring

Treatment of MCI

Presently, there is no specific treatment for mild cognitive impairment, the treatment for Alzheimer's disease could be extrapolated and used for patients diagnosed with mild cognitive impairment. The adequate treatment for mild cognitive impairment includes non-pharmacological and pharmacological treatment.

Non-pharmacological treatment

Physical activity

Regular physical activities seems to improve the memory loss to persons over 50 years with cognitive impairment, according to a study done in Australia, publicized in Journal of the American Medical Association in 2008.[7]

Diet

Recent research has shown that diet plays a major role in preventing cognitive impairment and reducing the risk of MCI conversion to AD. Mediterranean diet is currently considered the most healthful diet because high intake of fruits and vegetables.[8] Mediterranean diet contains large amounts of beta-carotene, vitamin C, tocopherols, tocotienoli (vitamin E), polyphenols and essential minerals such as selenium, magnesium, zinc, iron, calcium and iodine.

Cognitive intervention

The goal is to slow cognitive stimulation rate of cognitive decline using functional approaches in order to strengthen cognitive function.[3] In art therapy it is possible to express ideas and feelings that cannot be converted in words and this is important for people with language impairment.

Art therapy

Art therapy have been used initially in Germany in the rehabilitation program of patients diagnosed with early dementia.[9] Art therapy is a nonverbal form of therapy that uses visual imagination. In art therapy it is possible to express ideas and feelings that cannot be converted in words. This is important for people with language impairment.

Pharmacological treatment

Several classes of drugs have been studied for the prevention of progression to dementia, these includes: antioxidants, nootropics (piracetamum), anti-inflammatory agents (rofecoxib), hormones (estrogens), other drugs which modify brain chemical levels and cholinestherase inhibitors (donepezil, rivastigmine and galantamine).

Antioxidants

Antioxidants (vitamin E,C,A, alpha-lipoic acid, Co-enzyme Q10) are substances which may protect brain cells from the oxidative stress.[10]

At least one randomized, placebo-controlled, double-blind, multi-center trial indicates that vitamin E may delay the progression of moderate-to-severe AD[12], but, the research is still underway to determine its efficacy in MCI. The combination supplemental of vitamin E(400UI/day or more) and vitamin C (at least 500mg/day of ascorbic acid) but not either vitamin alone reduce significantly the incidence and prevalence of dementia. The administration of vitamin E in combination with selegiline delays the institutionalization and the progression of dementia. There are clinical trials looking at vitamin E plus selegiline (a mono-amine-oxidase inhibitor) as a treatment for dementia and for preventing progression of cognitive impairment. [2]

Coenzyme Q10, or ubiquinone, is an antioxidant that occurs naturally in the body and is needed for normal cell metabolism. One of the apparent benefits that are thought to come from coenzyme Q10 is prevention of cellular damage caused by free radicals.

Selezin ACE represents a unique and balanced combination of minerals – selenium and zinc – enriched by vitamins A, C and E. All contained vitamins and minerals have antioxidant effects, which protect the human body against the negative influence of free radicals.

Ginkgo biloba

Ginkgo biloba has been used medicinally for thousands of years. Ginkgo has been used even as treatment and as dietary supplement in Europe and in Asia. Ginkgo is used for the treatment of numerous conditions, many of which are under scientific investigation.[11]

Ginkgo biloba has antioxidant properties and inhibit the formation of β-amyloid protein with a role in forming amyloid plaques in patients with dementia. Administered in a dose of 40 mg three times a day, ginkgo improve the cerebral flow. [11]

Rhodiola Rosea

Herbal alternative treatment for mild cognitive impairment, this plant grows in the mountains of eastern Europe, Siberia and the Far East at 3000 meters altitude. Its beneficial effects on the body have been mentioned 1,200 years ago in the writings of Tibetans. Reprots in the alternative medicine literature indicate that its extract (bioactive alkaloids, polyphenols and phenylpropanoids including tyrosol, rosavin, rosin and rosarin) have effects on brain function . The extracts of the roots of this plant have been found to favorably affect a number of physiological functions including neurotransmitter levels, central nervous system activity, and cardiovascular function. It is being used to decrease depression, enhance work performance, enhance learning and memory, increase accuracy in mental performance for prolonged periods of time, eliminate fatigue and prevent high-altitude sickness.[22]

Nootropics

Nootropics are drugs that boost brain activity and memory and enhance the brain function. *Piracetam* is the most used nootropic, increases performance in a variety of cognitive tasks, appear to be effective in dementia and mild cognitive impairment. The dose of piracetam used for cognitive decline is 1600mg/day and the side effects are few, transient and mild.

Anti-inflammatory agents

Anti-inflammatory agents have role in reducing inflammation in the brain as having a role in reducing risk for cognitive deterioration. Researchers and clinicians have shown that individuals who consumed NSAIDs have a reduced risk of dementia, taking non-steroidal inflammatory (*ibuprofen*) taken over two years decreased risk of Alzheimer's dementia. Other

studies have demonstrated the effectiveness of *aspirin* and *acetaminophen*. *Celebrex* and *rofecoxib* (cyclo-oxygenase 2 inhibitor) had comparable effects with ibuprofen administration.[10]

Statins

Epidemiological and experimental *in vitro* and *in vivo* studies have indicated a link between cholesterol metabolism and the development of AD [23]. It is assumed that there is an influence of cholesterol on the formation and accumulation of amyloid-beta. In a 26-week randomized, controlled, double-blind trial, 80 mg *simvastatin* was administered to 44 patients with normal cholesterol levels and 40 patients with AD. A significant reduction in CSF Aβ that correlated with a slower progression of clinical symptoms were observed.[24]

Platelet Aggregation Inhibitors (Triflusal)

The effect of the platelet aggregation inhibitor *triflusal* on cognitive parameters and conversion to dementia has been studied in patients with amnestic mild cognitive impairment. The analysis of the data showed a significant reduction in the rate of conversion to dementia. In addition to the antiplatelet effect, triflusal has an anti-inflammatory effect, which may explain a potential secondary preventive effect.[25]

Hormonal treatment in MCI

Replacing the *estrogen* lost at menopause can prevent many of the manifestations of aging including osteoporosis, cardiovascular disease and decline in cognitive functions. Hormone replacing therapy after menopause have benefits for menopausal symptoms, for cognitive function – neuro-protective inhibit neuronal apoptosis and modulate Apo-lipoprotein gene expression. [2]

Drugs that alter brain chemical levels

Medications more commonly used to reduce the symptoms of Parkinson's disease may help normalize the effects of mild cognitive impairment

Control of cardiovascular risk factors

Arterial hypertension is a risk factor for mild cognitive impairment. Multiple mechanisms has been proposed to explain the correlation between arterial hypertension and MCI. Arterial hypertension is a risk factor for cerebrovascular diseases, and these are risk factor for MCI.

Cholinesterase inhibitors

Cholinesterase inhibitors are typically used to treat the early and middle stages of dementia. Alzheimer disease treatment can be extrapolated and used for mild cognitive impairment. This is because the deterioration in the production of acetylcholine accelerates over time, as more and more brain cells become damage did. These include donepezil (AriceptR), rivastigmine (ExelonR), galantamine (ReminylR), and tacrine (CognexR).

Cholinesterase inhibitors are used for long term treatment**.** Cholinesterase inhibitors improve or at least retard the rate of loss of cognition, the drugs can improve a person's quality of life.

Tacrine considered a first generation of cholinesterase inhibitor, used for cognitive decline in 1980 is no longer use due to hepatotoxic effects.

Currently there are three FDA-approved choline-mimetics: donepezil, rivastigmine and galantamine.[13-15] These medication are not curative but they have been shown to minimize morbidity in AD by improving cognitive functions such as memory, language and praxis. Recent evidence also suggests that such medications are effective in managing neuropsychiatric and behavioral symptoms in AD patients.[2]

Donezepil, the second cholinesterase inhibitor, is approved for treating mild dementia. The maximum daily dose of donepezil is normally 5−10 mg. This dose is taken just once a day,

either in the morning or in the evening. It is well tolerated, the adverse events observed after administration includes nausea, vomiting, headache, insomnia and dizziness.

Rivastigmine is a reversible acetyl-cholinesterase and butyryl-cholinesterase inhibitor and was found to be superior to placebo in clinical trials. The maximum daily dose of Rivastigmine is 6–12 mg. The drug is taken twice a day with meals (typically breakfast and dinner).

Galantamine has a dual mechanism of action, an cholinesterase inhibitor and has additional properties at nicotinic receptors, increasing cholinergic activity by activating presynaptic nicotinic receptors. The maximum daily dose of galantamine is 16–24 mg, and it is also taken twice a day with meals. The side effects are usually gastrointestinal related, like nausea, vomiting, diarrhea.

Other substances

In addition to the above-mentioned drugs a number of other substances have been investigated in terms of their effectiveness and benefits for persons with MCI. These include intranasal *insulin*, *melatonin* and *nicotine patches*. However, only studies of small sample size and short duration exist. Based on these data, a recommendation for the use of these substances for the treatment of MCI cannot be given.[21]

A few substances are currently in phase II trials: *ladostigil*, a dual acetylcholine-butyryl-cholinesterase and brain selective monoamine oxidase (MAO)-A and -B inhibitor Other drugs under investigation for MCI include *levetiracetam*, *atomoxetine*, *pioglitazone*, *insulin*, *human growth hormones* and *immunoglobulins.*[21]

Conclusions

Taking into account the fact that the mild cognitive impairment is considered as a prodromal phase of dementia[20], it is important to identify it early and to start the primary prevention.

The primary prevention refers to the specific treatment of cognitive features and to changes of the lifestyle. The clinicians should advise the patients to try to maintain a healthy lifestyle. The compliance and the lifestyle can stop the progression of the disease.

Early detection and the treatment of mild cognitive impairment can maintain the elderly at a maximum level of functionality as much as possible.

It is therefore important to improve quality of life of elderly, so that they maintain health and functionality as long as possible, to prevent their admission to hospitals or homes-hospitals.

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