

## THE IMPACT OF USING BOARD GAMES ON THE DEVELOPMENT OF SITUATIONAL MOTIVATION IN PRIMARY SCHOOL CHILDREN

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**Abstract:** *The study highlighted the impact of an activity program in which board games were used to develop situational motivation in first-grade school children. The participants (ages 6-8 years) were primary school students from rural areas randomly assigned to the experimental group (EG; n= 13) and control group (CG; n= 13). The level of situational motivation was measured with the Situational Motivation Scale (SIMS) developed by F. Guay, R. J. Vallerand, and C. Blanchard (2000). After initial testing, for eight weeks, ten board games (Dixit, Domino in syllables, my first 5-second game, Tetris, Vocalopoly, etc.) were introduced twice a week for the development of mathematical and linguistic skills. The results of the comparison t-test on paired samples, as well as on independent samples of the Situational Motivation Scale (SIMS), show that there are statistically significant differences regarding the level of situational motivation in the two moments of the application of the scale, pretest, and posttest in the experimental group ( $t = -15.503$ ,  $p < 0.001$ ), but also between the two groups (experimental and control) in the post test phase ( $t = 10.539$ ,  $p < 0.001$ ). In conclusion, the research results highlight that using board games in the activities carried out with first-grade students improves the motivation of school children.*

**Keywords:** *boardgames; situational motivation; learning through board games; primary school;*

### **1. Introduction**

The game is specific to the young school age, on the one hand, because it responds in the happiest way to the particularities of the age of schoolchildren, and on the other hand. After all, the fun element stimulates children's interest and curiosity to learn.

This research aims to demonstrate how important how we, as teachers, structure the activity in the classroom, how, working with young schoolchildren, especially those in the cycle of fundamental acquisitions, we manage to motivate them to work on hours to develop the belief that they can solve any problematic situation related to learning, and why not, in real life. Our research aims to fill a gap in measuring the effectiveness of using board games in learning to develop motivation in first-grade students, in the framework of communication activities in Romanian and mathematics, and exploring the environment in first grade.

The study by Mahmoud & Tanni (2014) aimed to explore the teachers' opinion on the use of board games in learning English; the research revealed the fact that board games are effective as educational tools that can provide not only fun, pleasure but also personal involvement in learning, motivation. As recommendations, the researchers emphasized the need for these games to be perceived as elements of the teaching process to be introduced in the lesson sequences; experimental studies should be carried out that will analyze the impact of these games in enriching the level of knowledge and skills of reading, speaking, writing and listening.

Another study that analyzes the effectiveness of board games in teaching young school children development, this time psycho-emotional and behavioral, is by Ghițoiu (2020), who proposes to research the board game as a method in school education to assimilate long-term benefits long for children's education. The article's author points out the alarming growth of online games that have isolated children, taking them away from the benefits of board games and board games. The author believes that a delimitation must be made between the didactic game, which combines the instructive element with the entertaining part, thus ensuring a complete unity between the didactic task and the game action. The term board game or board game can

create confusion. Ghițoiu (2020) mentioned the fact that, unlike the Romanian language, in other languages, the use of the term board game highlights the characteristics of this type of game, namely the fact that it requires at least two players, that it is based on predetermined rules and materials and, in particular, that it facilitates socialization and good mood.

Sardone & Devlin-Scherer (2016) pointed out that board game-based learning, as a broad category, has made significant progress over the past ten years, becoming a powerful instructional tool that positively affects student learning. The authors stated that several empirical studies (Klawe, 1999; Rosas et al., 2003; Virvou et al., 2005; Papastergiou, 2009) evaluating the impact of using board games in subjects such as mathematics, language, and sciences recorded positive results in terms of student motivation and learning effectiveness.

Another work that analyzes the effectiveness of board games as tools leading to changes in education is *Board Games as Educational Tools." Leading to Climate Change Action: A Literature Review* in which the author Pope (2021) specifies the fact that board games are used too little in education, the emphasis, at least during the pandemic, being on online games. As teachers readjust to face-to-face teaching, the article's author emphasized, the education they provide to children can be reinvented, creating better learning environments. Board games can engage students with different learning styles and inspire individual creativity. (Pope, 2021, p.4)

Analyzing the effectiveness of traditional board games in teaching, Kochel & Stinia (2014) considered that the reevaluation of the effectiveness of conventional board games and their use in the educational process opens a new field for the activity of the teaching staff, expanding the range of didactic materials that develop the motivation in learning and the student's belief that he can overcome the difficulties that arise in the learning process. Working with board games, the two authors stated, allows students to acquire knowledge and skills, forming specific research attitudes. Also, board games allow students to participate in personal development actively. According to the paper's authors, the emotions accompanying the fun and the direct contact between the players contribute to forming social skills. (Kochel & Stinia, 2014, p. 97-110)

## 2. Literature review

D. Vrabie (2000) defined motivation as "the set of internal motives of behavior (needs, tendencies, attractions, interests, convictions, aspirations, intentions, dreams, aspirations, goals, ideals) that support, orient, propel, from the inside, the realization of actions, facts, attitude" (Vrabie, 2000, pp. 147-149). M. Golu defines the term motivation as a "functional, structural component specific to the human psychic system, which reflects a state of necessity, in a broad sense, and the motive expresses the concrete, current form, in which such a state of desire is activated and manifested necessity" (Golu, 2002, p. 69). Motivation in the school context represents a dynamic state that originates from what the student thinks about himself and the environment in which he learns, a perception that causes him to choose one activity over another, get involved, and persevere in carrying out that activity to achieve a particular purpose. The factors based on situational motivation can be internal, which determines the dynamics of learning, or external, which refers to the instructional-educational activity, the classroom climate, the system of rewards, punishments, and evaluation. (Nicorici, 2015, p. 336)

Sălăvăstru (2004) appreciated that the motives put the individual into action due to external or internal stimulation, supporting his activity for some time, despite the demanding situations that appear his way. It is appreciated that the motivation of learning refers to "all the factors that mobilize the student to an activity designed to lead to the assimilation of some knowledge, to the formation of some skills and abilities," motivation being one of the reasons why the student learns or not, but also the effect of this learning. (Sălăvăstru, 2004, p. 70)

So, stated Sălăvăstru, „As teachers, we must know the reasons that, together with temperament, skills, character, contribute to determining the behavior and success/failure of the student in the school activity” (Sălăvăstru, 2004, p.70).

According to Popenici & Fartuşnic (2009), motivation, in a school context, is nothing more than the process that leads, directs, and supports a specific type of behavior desirable for the status of a student: participation in classes, involvement in activities at school or home, solving given tasks. The authors mentioned the fact that, without motivation, no person gets involved or ends up getting involved in solving an action.

Another definition of the concept of motivation in the school context is found in the work of Vallerand & Thill (1993), according to which "the concept of motivation represents the hypothetical construct used to describe the internal and/or external forces that produce the onset, intensity, and persistence of behavior." According to the authors, the beginning implies the intention to move from a passive behavior during the lesson to an active one, with the student directing all his actions towards achieving some objectives. Intensity, according to the same authors, refers to the effort the student is willing to make to achieve the goal, while persistence refers to the duration of the effort. This definition has the advantage of establishing the criteria that allow the identification of motivated students and the establishment of motivating factors, which can be internal or external. Therefore, according to Vallerand & Thill (1993), we identify intrinsic and extrinsic motivation.

The studies carried out in the field of situational motivation (Nicorici, 2015; Popenici & Fartușnic, 2015; Vallerand & Thill, 1993; Zimmerman et al., 1990; Sălăvăstru, 2004) led to the idea that the lessons must be designed in such a way that they can form an indispensable motivation, arousing the student's desire to learn, namely that learning is based on both external reasons such as grades, grades, praise, punishment, and internal, cognitive, social reasons. In addition, referring to young schoolchildren, several researchers (Nicorici, 2015) have concluded that they do not yet have a balanced motivation to carry out certain activities, the emphasis, in this case, being on organizing learning conditions, stimulating discovery, exploration, curiosity by introducing table games, thus revealing the importance of the method that activates schoolchildren in activity.

School practice shows that young students come to school positively toward learning. However, following repeated failures and unpleasant experiences, they end up with a low level of self-efficacy, thus developing a negative attitude towards those parts of the learning tasks in which they consider that they cannot achieve results.

One of the best solutions to motivate young schoolchildren to participate in the activities proposed by the teacher is, we think, the use of board games because they are fun, challenging, and engaging. They not only provide the opportunity to get involved in solving the given tasks for the vast majority of shy schoolchildren but also help students to motivate themselves intrinsically, developing the belief that they can solve problems through their effort, reaching performance. The studies

carried out on the teaching method through the use of games and other types of game activities have emphasized the fact that board games create a practical opportunity that allows students to actively participate in learning, developing memory, self-respect, the motivation to succeed, and the ability to overcome difficult situations, in a pleasant way, especially if it is about learning a foreign language (Mahmoud & Tanni, 2014), in psycho-emotional and behavioral development (Ghițoiu, 2020) or as a learning method that contributes to personal development, to the formation of social skills. (Kochel & Stinia, 2015)

Sardone & Devlin-Scherer (2016) refer to this board game as board games, a category of games that have, as material, first of all, a game board and whose rules and mechanisms are centered around it. They stated that the board game is performed between two or more players, who can play as a team or against each other, aiming to win the game stake, but not including the game of chance here. Board games, they said, develop and create a state of well-being and do not involve material stakes.

Koh, E., Kin, Y. G., Wadhwa, B., & Lim, J. (2012) emphasized that, depending on the type of game, it has a greater or lesser influence on the stimulation and retention of information by students, on their motivation, on improving motor coordination. However, the authors of the article mentioned the fact that these board games are not adopted in education due to their association with gambling rather than with study or work.

Allery (2014) stated that the board game is "a specific learning tool that requires participants to engage in a competitive or collaborative form of action, having a set of predefined rules." The article's author also emphasizes the skills that can be developed with the help of these board games as decision-making, conflict resolution, and negotiation (Allery, 2014).

Bennett (2011) emphasizes the power of board games and play in general in facilitating deep and meaningful learning, arguing that the disadvantages of their use are too short a time and too expensive to acquire.

The conclusion that emerges from the analysis of the definitions given to the board game converges with the fact that through board games, the child develops new skills by taking over strategies from adults,

models of behavior and action, as well as by the fact that his effort is encouraged, it helps the child to increase his sense of competence and confidence in his strength.

Board games are a practical resource that helps develop skills such as turn-taking, increasing frustration tolerance, following rules, developing decision-making skills, increasing the ability to focus on a task, helping them learn to cooperate (especially if they are team games), and finding problem-solving strategies.

### **Research goal**

The purpose of this study is to explore the potential of board games for practicing reading in first grade, enriching vocabulary, formulating sentences, mathematicians' calculation on the one hand, and the other hand identifying the types of board games that increase situational motivation in learning in young schoolchildren.

### **Research hypothesis**

We start our study with the hypothesis that implementing an intervention program based on board game activities maximizes the situational motivation of the children in the experimental group compared to the control group.

Independent variable (a): implementation of the intervention program and its assessment

a1: Pretest assessment

a2: posttest assessment

Dependent variable (x): children's results in *Situational Motivation Scale (SIMS)*.

### **Research lot**

In the study, we used two 1st-grade classes from the countryside. One of the study's authors, primary education teacher Jipa Claudia-Mihaela, coordinated the experimental class at Technological High School No. 1, Suplacu de Barcău. The experimental group comprised 13 students, seven girls and six boys, with an average age of 6-8 years. The control group comprised 13 students from the 1<sup>st</sup> grade, Secondary School No. 1, Borumlaça, the structure of Technological High School No. 1

Suplacu de Barcău; the class has 11 girls and two boys, with an average age between 7-8 years.

### **Research procedure**

Our study occurred in the 2021/2022 school year, during the second semester, in February-May 2022. The intervention program completed a several0severals, twice a week games aimed at developing mathematical and linguistic skills, simultaneously developing the motivational level of schoolchildren in the experimental group.

### **Description of the intervention program**

Within the subjects Communication in Romanian and Mathematics and Exploring the Environment, various board games were implemented, at different stages of the lesson, to check how they change the initial perception of the motivation to participate in the activities, developing, at the same time, the feeling of personal success in overcoming difficulties, these board games being: Domino in syllables, Puzzle, My first game of 5 Seconds, Tetris, Snakes, ladders and words with x, Vocalopoly, Dixit, Fun math, Animal Globe Whizz, and Globe Whizz. Some games were used as they are; others, due to their complexity, were adapted either by selecting only those game cards suitable for the age and abilities of the children (they read more slowly, they do not have all the necessary knowledge) or by modifying the dice, in such a way that they only show cards with simple questions, such as Choose, True/False, Complete, or by designing new game cards, adapted to the objectives pursued.

For example, the Animal Globe Whizz board game was used in the topic "Animal Curiosities," a lesson to fix and consolidate knowledge about animals in Maths and environmental exploration. After organizing the student body and the furniture, the children were introduced to the game with a story: "Once upon a time, there was a fantastic world of animals. A world in which, by magic, you will enter through a game in the next few seconds. Embark on an unforgettable expedition around the world!" They were invited around the game table, where they discovered the game board, explorer tokens, playing cards, the globe, and the encyclopedia. After being told that they will strengthen and enrich their knowledge about animals through a board game called "Animal Globe Whizz," they are divided into six teams



and cooperate to solve the tasks during the game. To divide them into teams, I used the game "Blind Hand" (each child will choose a specific token from my hand without seeing what they chose). The game's rules were explained to them, the test game was made with one of the teams, then it was on to the actual game. Since we had decided to play the whole hour, the game ended when one of the teams advanced the most on the game board, a few minutes before the end.

Another game similar to "Animal Globe Whizz" was "Globe Whizz" was chosen to recapitulate mathematical operations with natural numbers in the center 0-100, keeping from the original game the game board, explorer pieces, dice, cards of the game being designed in such a way as to respect the tasks on the actual cards in this board game, but with mathematical calculations, graded differently in difficulty: 1: Calculate; 2: True/False; 3: Choose the correct result!; 4: Mathematical terminology; 5: Find out!; 6: Identify the unknown number by calculation!.

To develop the ability of correct oral expression, we chose the board game DIXIT, an exciting game of imagination and knowledge of the opponent, which involves highly well-developed attention to detail. In the following, we present some general aspects to consider if we want to play this game. The DIXIT game is for children from 8 years old. However, it has been adapted to a Communication lesson in Romanian, the theme of the activity being "Creating stories" so that first-grade children (experimental class) can operate with the elements of the game. The children were presented with a surprise box containing DIXIT playing cards, their task being to create a meaningful story using five cards from the ones they drew from the box. The story must be logical and have a title. It was explained to them that they would work in teams, and each member must tell a part of the story, thus ensuring everyone's involvement. In the end, the teams decide on the story's title, and then, in front of the class, they present the story as a team.

### **Research tools**

Situational motivation was measured using The Situational Motivation Scale (SIMS) developed by Guay, Vallerand & Blanchard (2000). This instrument asks for the answer to the question "Why are you involved in this activity?" contains a number of 16 items, the answers being requested on a 7-step Likert scale, with the following meaning: 1-does not correspond at all, 2-corresponds very little, 3-corresponds a little,

4-corresponds moderately, 5-corresponds enough, 6-corresponds a lot, 7-corresponds exactly, there are no reverse scoring items. In the Scale, four large subcategories are identified: ***Intrinsic motivation (IM)*** : items 1, 5, 9, 13 (e.g. I.13: Because I feel good when I do this activity); ***Identified Regulation (IR)*** : items 2, 6, 10, 14 (e.g., I2: Because I do it for my good); ***External Regulation (ER)*** : items 3, 7, 11, 15 (ex. I.7: Because it is something I have to do) and ***Amotivation (AM)*** : items 4, 8, 12, 14 (ex. I.4: There may be good reasons for doing this activity, but I do not see any).

### **Research data analysis**

The administration of the questionnaires was carried out during class hours, both for the experimental group and the control group, using the paper and pencil method, the results being entered in Excel, considering the young age of the students and their lack of IT skills. The JASP program carried out the statistical processing of the results.

Taking into account the objective of the study and the working hypothesis, in the presentation of the results, we will highlight the impact of board games in the development of situational motivation and the general self-efficacy of the young schoolchildren participating in the study, from the two batches, in the two stages of the testing. Due to the fewer participants, data analysis was performed using non-parametric tests, independent samples, and paired samples.

The first objective of our study was the descriptive analysis of the answers given by young schoolchildren, both from the experimental and control groups, in two stages, pretest, and posttest, to the Situational Motivation Scale (SIMS).

In Table 1, we present the analysis and interpretation of the results of the descriptive study regarding the answer to the question: Why are you currently involved in this activity? Addressed both to students from the experimental and control groups in the pretest stage.

*Table 1: Descriptive analysis in PreTest and PostTest of the responses to the question: What is the reason why you are involved in this activity?*

Descriptive Statistics	
Descriptive Statistics	
1.1 DnetTest	1.7 DnetTest
1.2 DnetTest	1.4 DnetTest
1.5 DnetTest	1.6 DnetTest
1.7 DnetTest	1.8 DnetTest
1.9 DnetTest	1.10 DnetTest

We can see from the figures above that although the differences between the pretest and posttest results of the two groups are obvious, there are some exceptions. We draw particular attention to **Item 1: *Because this activity is interesting***, where we observe a particular increase in the experimental group in the pretest obtaining  $m=1.692$ ,  $as=0.751$ , and in the posttest  $m=5.308$ ,  $as=1.702$ , while the control group (2) remains relatively constant in results (in pretest:  $m=1.385$ ,  $as=0.650$ ; in posttest:  $m=1.769$ ,  $as=1.166$ ).

Obvious increases in the means of the experiential group can also be seen in **Item 2: *Because I do it for my good*** (in the pretest obtaining  $m=1.692$ ,  $as=0.855$ , and in the posttest  $m=5.462$ ,  $as=3.308$ ) and **Item 10: *Because that is what I want*** (in the pretest obtaining  $m=2.000$ ,  $as=0.913$ , and in the posttest  $m=5.692$ ,  $as=1.182$ ), but unlike item 1, the control group's scores also increased, albeit to a more moderate extent (Item 2 pretest:  $m=1.615$ ,  $as=0.650$ ; posttest  $m=3.308$ ,  $as=1.750$  and Item 10 pretest:  $m=1.769$ ,  $as=0.832$ ; posttest  $m=3.00$ ,  $as=1.915$ ).

An exception to the rule of growing is observed in **Item 8: *I am doing this activity, but unsure if it is worth it***, where although we would expect the results of the experiential group to increase in the post-test stage, they show a slight decrease (pretest:  $m=4.077$ ,  $as=1.115$ ; posttest  $m=3.154$ ,  $as=1.519$ ), while the control group shows a moderate but expected increase (pretest:  $m=2.923$ ,  $as=1.801$ ; posttest  $m=3.385$ ,  $as=1.710$ ). Possible causes will be discussed in the sections below of this article.

The high averages highlight that first-grade school children lack motivation, not establishing any connection between the results and actions, considering that specific external forces determine their behavior.

To verify the hypothesis that carrying out a program of activities that include board games in the lessons will lead to the development of the situational motivation of schoolchildren in the experimental class, we compared the results of the experimental group by applying the same

scale in two different stages, pretest, and posttest, using the Wilcoxon test, of non-parametric comparison, on paired samples, the results can be viewed in Table 2.

*Table 2: The results of the paired-samples comparison t-test on the Situational Motivation Scale (SIMS), in the experimental group, at two different times*

	<b>Control Group</b>		<b>Experimental Group</b>	
	<b>t</b>	<b>p</b>	<b>t</b>	<b>p</b>
<b>Intrinsic Motivation (IM) Pre-PostTEST</b>	- 1.945	0.0 76	- 8.345	< 0.001
<b>Identified Regulation (IR) Pre-PostTEST</b>	- 2.994	0.0 11	- 18.450	< 0.001
<b>External Regulation (ER) Pre-PostTEST</b>	- 1.389	0.1 90	- 7.559	< 0.001
<b>Amotivation (AM) Pre-PostTEST</b>	- 1.848	0.0 89	4.85 7	< 0.001
<b>Mean SIMS Scale Pre-PostTEST</b>	- 5.455	< 0.001	- 15.503	< 0.001

Analyzing the data contained in Table 2, it is deduced that there are statistically significant differences regarding the level of situational motivation in the two moments of the application of the work tool, pretest and posttest at all levels analyzed, which means that the hypothesis is supported.

In Table 3, we present the means of the working tool, at different times of its application, in the both experimental and control groups.

*Table 3: Means on the working instrument Situational Motivation Scale (SIMS), in pretest and posttest, experimental and control group*

Descriptive Statistics												
Descriptive Statistics												
	Media_Moln_PreTest		Media_Moln_PostTest		Media_RegId_PreTest		Media_RegId_PostTest		Media_RegExt_PreTest		Media_RegExt_PostTe	
	1	2	1	2	1	2	1	2	1	2	1	2
Valid	13	13	13	13	13	13	13	13	13	13	13	13
Missing	0	0	0	0	0	0	0	0	0	0	0	0

From the data analysis, it can be deduced that higher means were obtained in the post-test stage after the activities in which board games were used in both groups, with the specification that in the case of the control group the difference is not as large, the experiential group obtaining a mean of  $m = 2.721$ ,  $a.s=0.334$  in the pretest, and in the posttest a mean of  $m=4.827$ ,  $a.s=0.262$ , while the control group obtained a mean of  $m=2.149$ ,  $a.s=0.539$  in the pretest, and in the posttest a mean of  $m=2.880$ ,  $a.s=0.613$ .

*Table 4: Group Descriptives of subscales indicators in pretest and posttest, of the both groups (EG=1, CG=2)*

Group Descriptives

	Group	N	Mean	SD	SE	Coefficient of variation
Mean_IM_PreTest	1	13	1.731	0.657	0.182	0.380
	2	13	1.442	0.579	0.161	0.401
Mean_IM_PostTest	1	13	5.462	1.446	0.401	0.265
	2	13	2.115	1.184	0.328	0.560
Mean_IR_PreTest	1	13	1.865	0.506	0.140	0.271
	2	13	1.750	0.568	0.158	0.325
Mean_IR_PostTest	1	13	5.673	0.710	0.197	0.125
	2	13	3.115	1.613	0.447	0.518
Mean_ER_PreTest	1	13	2.981	0.807	0.224	0.271
	2	13	2.173	0.921	0.255	0.424
Mean_ER_PostTest	1	13	5.615	1.069	0.296	0.190
	2	13	2.577	1.678	0.465	0.651
Mean_AM_PreTest	1	13	4.308	0.309	0.086	0.072
	2	13	3.231	1.082	0.300	0.335
Mean_AM_PostTest	1	13	2.558	1.242	0.345	0.486
	2	13	3.712	1.262	0.350	0.340
Mean_SIMSPreTest	1	13	2.721	0.334	0.093	0.123
	2	13	2.149	0.539	0.150	0.251
Mean_SIMSPostTest	1	13	4.827	0.262	0.073	0.054
	2	13	2.880	0.613	0.170	0.213

As can be seen in Table 4, in the experimental group the averages for the following subscales increase: Intrinsic motivation (IM) from  $m=1.731$  in the pretest to  $m=5.462$  in the posttest; Identified Regulation (IR) from  $m=1.865$  in the pretest increases to  $m=5.673$  in the posttest; External Regulation (ER) from a pretest mean of  $m=2.981$  to a posttest mean of  $m=5.615$ . In the subscale Amotivation (AM) we observe a decrease from  $m=4.308$  (pretest) to  $m=2.558$  (posttest). This decrease is explained by the reverse coding of the subscale items.

In the control group, although we observe an increase in averages in the posttest phase, this is slight. Unlike the experimental group, the control group recorded or increased the averages on the Amotivation subscale.

To check if the differences between the averages obtained by the two groups in the pretest and posttest phase, the t-test for independent samples was applied. We present the test results in Table 5.

*Table no. 5 Means of Independent sample T test of subscales indicators*

#### **Independent Samples T-Test**

	<b>t</b>	<b>df</b>	<b>p</b>
Media_IM_PreTest	1.188	24	0.247
Media_IM_PostTest	6.454	24	< .001
Media_IR_PreTest	0.547	24	0.590
Media_IR_PostTest	5.234	24	< .001 <sup>a</sup>
Media_ER_PreTest	2.379	24	0.026
Media_ER_PostTest	5.506	24	< .001
Media_AM_PreTest	3.450	24	<b>0.002</b> <sup>a</sup>
Media_AM_PostTest	-2.349	24	0.027
Media_SIMSPreTest	3.252	24	<b>0.003</b>
Media_SIMSPostTest	10.539	24	< .001 <sup>a</sup>

*Note.* Student's t-test.

<sup>a</sup> Brown-Forsythe test is significant ( $p < .05$ ), suggesting a violation of the equal variance assumption

As we expected, the differences in the posttest phase are significant at a  $p < .001$  for the first three subscales: IM, IR and ER. We find the difference in the AM subscales where  $p < .05$ , these results being explainable due to the inverse rating of the answers. Finally, it can be observed that in the posttest there are statistically significant differences ( $p < .001$ ) in the averages of all analyzed items.

In the pretest phase, we observe a significant difference between the two samples ( $p < .05$ ) at the average of all items, possibly explained by the difference only in the averages of the AM subscales, the one rated inversely.

Also, comparing the results obtained in the posttest phase between the classes included in the study on the Situational Motivation Scale (SIMS), we established with certainty that the increased level of situational motivation in experimental group was due to experiencing success by involving the children in easy games, interesting, attractive, the table above showing the means of the Situational Motivation Scale broken down by class.

From the analysis of the data, it can be deduced that higher averages were obtained, in the posttest stage, in the experimental group, after the activities in which board games were used in different stages of the lessons and lower in the control group, the conclusion we drew being that the motivation to participate in the activities actively increases if activating didactic strategies, such as board games, are used.

In conclusion, we can say that the hypothesis of the research is supported by the results obtained, the intervention program through which board games activities were introduced was efficient, increasing the school motivation of the first-grade students for learning.

## **Findings**

The central idea of our research was to identify an attractive, interesting way, as close as possible to the understanding, enjoyment and level of mental and intellectual development of young schoolchildren, which would contribute to finding the necessary resources to overcome difficult situations, to the development of motivation to actively participate in school activities.

This way was the board game. Putting the board game into practice within the subjects Communication in Romanian and Mathematics and exploring the environment in first grade, we can say with certainty that it is synonymous with motivation, constituting a real incentive for young students, as well as genuine moments of pleasure experienced as entertainment, not as coercion.

The results of this study suggest that the use of board/board games in school activities constitutes methods that develop the motivation to actively participate in the activities, producing changes in terms of

attention, self-efficacy, satisfaction, team spirit, self-control, logical thinking, it contributes to the identification of the resources necessary to overcome difficult situations, it stimulates dialogue and represents pleasant lesson design alternatives.

Implementing this program helped us identify some challenges that teachers must know they will face if they want to implement such learning activities based on board games. Of these, we enumerate, e: not all students get involved in board games, they are time-consuming careful planning of the activity, buying the right board suitable also means high prices, they cannot last more than 15-20 minutes because young students quickly lose concentration. At the same time, like teachers, we must pay attention to board game selection because games must be carefully selected not to be too complex or competitive.

As it emerged from the experiment in the experimental class, board games were implemented to form skills and habits, consolidate and fix knowledge, or recapitulate/systematize the acquisition of some notions.

Summarizing the findings, the pedagogical experiment revealed that board games improve schoolchildren's motivation, contributing to identifying resources that help them overcome moments when they are at a standstill.

While activities that do not use board games have benefits, their implementation increases or influences the learning and retention of information in young school children.

Our research has some limitations. On the one hand, the research instruments were completed by children aged 6-8, so there is a high chance that these answers do not correspond to their honest opinion. Another limitation concerns the small number of study participants.

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