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**DOCTORAL SCHOOL: EDUCATION, REFLECTION,
DEVELOPMENT**

**OPTIMIZING THE DEVELOPMENT OF VERBAL SKILLS
THROUGH THE "SMART VERB" PLATFORM. APPLICATIONS IN
SIMULTANEOUS SECONDARY SCHOOL TEACHING**

ABSTRACT

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Key words and phrases: simultaneous teaching, Romanian language and literature, verbal skills, vocabulary, syntax, text comprehension, Smart Verb platform, digital natives, ICT, Curriculum.

Introduction

The problem of simultaneous teaching is a current one, especially if we refer to the situation in Romania in recent years. Thus, during the 2021-2022 school year, 10% of primary school students learned in simultaneous classes, to which 3.4% of secondary school students are added.

In addition, from the point of view of the area of origin, 92% of the students who were part of the simultaneous teaching during the mentioned period were in the rural area and only 8% in the urban one. It follows that in the countryside there are the most simultaneous classes.

And the situation of the teachers who teach in such classes, as well as the learners, who should benefit from the best possible conditions to prepare themselves to be later admitted to high schools, to be able to complete their studies or to other forms of education to then integrate into the workforce, is difficult because there are no programs that prepare them to face the challenge of teaching in simultaneous classes. And then even the learners cannot benefit from the best learning conditions.

So, the problem addressed is not only a complex one and difficult to improve in its weak points when we refer to the local environment, but it gradually increases in complexity and when some possible solutions are offered that come to the aid of the teachers who teach at such classes, as well as the beneficiaries of the educational act, i.e. the students, especially when the solutions proposed in the present paper refer to tools that are part of the ICT sphere, a very vast field.

So, in order to reveal the current state of research regarding teaching in simultaneous classes, in the first part of the paper I made an analysis of the specialized literature, also revealing some of their limits.

In chapter I **A synthetic analysis of the situation of simultaneous teaching at the global and national level**, I have started with a short history of simultaneous teaching, I continued by presenting according to the dimensions that involve any educational act the problems faced by teaching in simultaneous classes, respectively learning and then assessment.

In Romania, simultaneous teaching is carried out to a very large extent in the rural area, namely with a share of 92% of the total classes that operate in this regime, compared to that in the urban area that reaches only 8% of the total classes in which this teaching system is applied.

And the forms used in the organization of this learning system in Romania are those in which students learn either two classes at the same time, or three classes, and in some areas there are even schools where teachers teach classes composed of students who are in first, second, third and fourth grade. So, it can be said that in such classes, students who are part of almost all the classes that make up the primary school, except for the preparatory class, learn at the same time.

However, it is considered necessary to mention that the Romanian legislation clearly specifies that not all students who are part of the primary school in a school can learn simultaneously in one class, even if the minimum number of students in the school is not met, in accordance with the legislation in force. (Art. 2. paragraph 7, MECTS Order no. 3062/2012).

According to the same law, in both primary and secondary school, a class of students must not have less than 10 children.

Every child has the right to education and we must state that simultaneous teaching has helped students from remote areas of the country and the globe to have equal chances and access to education. In these classes, children are of different ages and work at different skill levels, and these students bring diversity to the classroom, school culture or institutional management.

In chapter II **Methodological peculiarities in the case of simultaneous teaching**, I have addressed at length the difficulties faced by teachers who teach in simultaneous classes, and some authors have also proposed some solutions in order to ease the work of the respective teachers. Also in this chapter, I have described particularities of didactic planning in simultaneous teaching, teaching and learning in simultaneous teaching, particularities of assessment in the case of simultaneous classes, perspectives on the relationships between teaching-learning-assessment-self-evaluation in simultaneous teaching.

Therefore, one of them is the development of the distributive attention of teachers who teach in simultaneous classes. And if they succeed in this, they will be able to quickly

switch their attention from the collective of the class with which they work directly to the students who have to solve independent activities or in groups.

Therefore, a teacher involved in simultaneous teaching should have the ability to adapt his cognitive capacities according to the contents he teaches in each of the classes that are part of a simultaneous one.

Also, teachers who teach simultaneous classes must have the ability to express themselves briefly and concisely when assigning them tasks that they must perform individually or in groups, so that the students understand from the beginning what they have to do and not to come back with additional questions while doing direct activities with the students of another class.

Teachers who teach simultaneous classes must know how to manage their time so that during the actual lessons they alternate the moments in which they carry out direct activities with the students of one of the classes with those in which the students of another class solve some tasks independently or divided into groups.

Likewise, teachers who teach simultaneous classes must manage each moment of the lesson in such a way as to allocate the necessary attention to each one, and it is also necessary to create a unity between the proposed didactic scenarios, so as to avoid sudden transitions from one moment to another.

Nor should the assessment and verification of the way in which the students completed the tasks they had to solve in the form of independent work be neglected, because otherwise a superficial attitude of the teachers leads to a decrease in the interest of the students and finally to their demotivation.

Regarding the assessment of students, modern pedagogy has also evolved in this regard, if in the traditional framework it was considered that this dimension of education has only two components, namely measurement and appreciation, and the last of these could be impregnated with the subjective side of the teacher, currently the assessment of school performance involves several components.

Thus, even the grading system for students has been modified so that grades are given in primary school, and marks in the secondary school.

In addition, the tools and methods for evaluating school performance in an objective way have been clearly established in modern pedagogy.

Currently, school performance is measured according to some docimological standards. Also, assessment must be argued through normative and formative justification. (Stan, 2023)

Considering that the present paper contributes to the field called "Educational Sciences" by proposing solutions aimed at optimizing the development of verbal skills in simultaneous classes in Romania with the help of ICT methods, I continued by presenting in chapter **III New technologies, vector of transformation of the learning space (interactive platforms)** and a synthesis of the current state of research in the specialized literature regarding specific information technology tools that can be applied in pre-university education.

At the same time, in order to expose this issue as close as possible to exhaustiveness, I also emphasized the fact that in the specialized literature an opposition was made between what was called the "generation of digital natives" and the people who were called "digital immigrants".

And this delimitation, far from being an artificial one, from the point of view of the author of the present paper, on the contrary, it is imperative to be specified because we would not be able to understand, in the opposite sense, the way to perceive the world, as well as what are the modified cognitive skills of the students, who are part of this generation today.

Consequently, any scientific approach should begin, in my view, by understanding as much as possible what is the intellectual capacity of the subjects to whom a research is addressed. Of course, all other dimensions of the human personality should be added to this intellectual capacity, such as affectivity, creative capacity, the way of perceiving the world and otherness, etc.

The environment in which these subjects live, as well as the external factors that can influence them, must always be taken into account when a scientific approach is initiated.

Regarding the conquests of science and technology, in the present paper, it is the factor whose approach occupies the most space because its theme refers to this very aspect, namely how it is possible that through digitalization, which thanks to science and technology has made possible to produce this huge leap of humanity that has changed all fields of activity, making them much more efficient.

Returning to the previously mentioned opposition between digital natives and digital immigrants, if the first category includes the majority of students currently studying in schools in Romania, and by that we also mean those in the primary school, to which preschoolers are added, the second category includes people who were born before the

introduction of information technologies on a large scale, therefore, they had to learn to use computers, and some of them at a rather advanced age.

At the same time, the category of digital immigrants also includes a large part of the teachers currently teaching in schools, and not only in our country. And this seems to be one of the reasons why they are reluctant to use ICT when teaching and assessing students.

Considering that the present paper contributes to the development of the field addressed by proposing an interactive platform that optimizes the development of verbal skills in simultaneous classes, a synthesis of the specialized literature was also presented in the continuation of the paper and regarding this tool used within education in parallel classes.

In parallel with the mentioned approach, it was also used to expose some modern methods specific to the dimensions of education, namely those that can be used during the teaching of new knowledge, then those presented in terms of the learners, i.e. learning, continuing with those that can be applied for the purpose of evaluating school progress, respectively self-evaluation.

Regarding the actual contribution of the author of the present paper to the field addressed and the novelty of the paper, it consists in the fact that an interactive platform was designed to optimize the development and consolidation of verbal skills in simultaneous teaching.

For this reason, the practical part of the paper, **Chapter IV Methodology of the Research**, resorted to the experimental method. Thus, in order to test the effectiveness of the proposed platform, a control group and an experimental one were used.

At the same time, the subjects of both groups were subjected to the testing of the verbal skills they had acquired up to the date of the start of the experiment due to some previous lessons they had attended. This approach was also initiated in order to later reveal the levels of verbal skills found after the end of the experiment and to be able to make comparisons between the two groups to establish which of the two applied means proved to be more effective.

Therefore, in the mentioned experiment, the control group benefited from classical means in the teaching-learning process during the same period as the students who were part of the experimental group and, in addition, it is about the same learning content.

And for testing the subjects, both in the stage before the actual experiment and in the post-experimental stage, test batteries were used, developed by COGNITROM Cluj-Napoca, an organization made up of psychologists who, in addition to psychological counselling services, they are also involved in research and innovation in this field.

Following some research carried out in the psychology of education, COGNITROM Cluj-Napoca has managed to propose a battery of tests which, in conjunction, analyze the level of verbal skills of subjects undergoing studies.

And these consist of testing vocabulary skills, syntactic skills, as well as comprehension skills of some texts. Therefore, I also resorted to them in testing the students who were part of both the control and experimental groups.

Also, the items we applied in the present research, both in the pre-experimental and post-experimental stage, were those established by COGNITROM Cluj-Napoca.

In the practical part of the present paper, I only used subjects who live and study in the rural area, so that the present experiment includes students who carry out their activity in similar conditions, so that then, the comparisons I made to express as much as possible true to reality and in this way the research carried out is valid.

The purpose of the research

It consists of the identification, proposal and assessment of new methods capable of improving and streamlining the processes of training, development and consolidation of verbal skills in the case of students from the 5th and 7th secondary school grades who learn in simultaneous classes.

Therefore, starting from the general and specific skills corresponding to the 5th and 7th grades, which are specified in the national curriculum and valid for the discipline of Romanian language and literature, it will be observed that the verbal skills of the students who are part of simultaneous classes formed of schoolchildren in the years of study intended to be stimulated by the use of modern means, namely ICT technology.

An interactive educational platform was designed, which allows the teachers who will use it to use several types of ICT tools that are combined within the said platform.

And in order to be able to evaluate the school progress of the students who benefited from the teaching during the Romanian language and literature lessons from this platform, the experimental method was used. Therefore, in order to be able to compare the effectiveness of the mentioned platform with the traditional didactic means, a control group was used

consisting of students who were taught the same contents, but by classical means, and an experimental group that benefited from the ICT means brought together and available on the described platform.

Objectives of the research:

Analyzing the current state of research from both a theoretical and empirical point of view, as well as the existing limits, the following research objectives were formulated:

- O1. Identifying the levels of development of the verbal skills of all participating students in the initial phase of the experiment.
- O2. Identifying the levels of training, development and consolidation of verbal skills in the case of students who were part of the control group in the post-experimental phase.
- O3. Identifying the levels of training, development and consolidation of verbal skills in the case of students who were part of the experimental group in the post-intervention phase.
- O4. Assessing and comparing the progress made by the two groups.

Hypotheses of the research

General hypothesis: the use of an interactive platform is more effective in training, developing and strengthening students' verbal skills compared to the application of traditional teaching means.

The specific hypothesis:

Hypothesis 1: The use of the "Smart Verb" platform will increase the level of vocabulary use skills of students in the experimental group compared to those in the control group.

Hypothesis 2: The scholastic progress of students who are part of the experimental group will be higher than those of the control group in terms of the development and consolidation of syntactic skills.

Hypothesis 3: It is assumed that the use of the proposed platform will influence the results of the experimental group which will be better than those of the control group.

Variables of the research

Independent variable: use of an interactive platform;

Dependent variables:

1. developing of verbal skills;

2. strengthening of verbal skills;
3. developing of vocabulary use skills;
4. strengthening of vocabulary use skills;
5. developing the skills of understanding written texts;
6. strengthening the skills of understanding written texts;

The sample of participants

It consists of students of two classes who study simultaneously. Since it is recommended that in the case of the secondary school the students of the 5th grade learn together with those of the 7th grade, when it comes to combining only two classes in simultaneous education, it was decided to apply the present experiment to two secondary schools in which this recommendation is followed.

Therefore, the total number of subjects participating in the present research is 60. And from these, 30 study at the Dumitra Secondary School, Târpiu Structure, and the others also at the Dumitra Secondary School, but within the Cepari Structure.

Methods, procedures, means and tools of the research

Critical analysis of specialized literature and identification of the current state of research regarding the studied issue. Therefore, this analysis of the documents constituted the research of a theoretical nature.

The empirical methods consisted of the observation method, along with the development of a platform that would bring together several means specific to information technology (ICT) with the help of which students would be trained in the Romanian language and literature discipline.

Statistical methods – qualitative, quantitative and comparative analysis of the data obtained in the pre-test and post-test respectively. Also, the quantitative analysis was applied in the case of revealing the characteristics of the two work groups: control or witness and experimental.

Description of the procedure

In a first stage, I administered the vocabulary test, the syntactic test, as well as the test of understanding written texts both to the subjects who were part of the control group, and to those who were part of the experimental group in order to identify for each of the students

the level reached in terms of acquiring the skills to use vocabulary, to syntactically adapt words when forming sentences with them, as well as to form sentences correctly and to understand written texts.

The three types of tests were developed by COGNITROM (<https://www.cognitrom.ro>)

The testing was done within an hour during the Romanian language and literature class.

Brief characterization of the "Smart Verb" platform

The proposed project consists of an interactive platform that can be used both by teachers and by students either in primary or secondary school, and its purpose is to allow the conquest of digitization in recent years to contribute to the modernization of Romanian education.

Therefore, the project under discussion aims to propose some computer-assisted teaching-learning methods of the Romanian language and literature in order to increase both the efficiency of the teachers during some lessons in the mentioned discipline, as well as of the students who are attracted by the new technologies and then become more motivated to complete the tasks they have to fulfil, and which they can solve faster thanks to the computer.

The reason why I chose this approach is due to my desire to involve students from an early age in activities that require the active and effective use of the computer, thus dynamizing the lessons taught.

In other words, the purpose of this platform is to stimulate the desire to learn in young students and, indirectly, to integrate into their lives the technical component that is so useful nowadays.

Structure of the proposed platform

The project is organized in **2 different sections**, one specific to the platform administrator (who in this case identifies with the teacher, teaching staff) and a section specific to the student, where we find his work environment.

After the completion of the intervention program, in the last stage, we re-applied all three tests to each group in order to identify the progress achieved by each of the students, as well as by the control and experimental groups as a whole.

Therefore, both the general hypothesis of the research was confirmed following the retesting of both working groups, as well as the specific hypotheses.

Thus, the students who were part of the experimental group, and who benefited from digital means during the teaching-learning and assessment process, recorded greater progress in terms of the development of verbal skills compared to the subjects who were part of the control group and who only benefited from classical means while completing the same learning units as the experimental group.

And if we detail the general hypothesis and present it through the specific ones, we can say that both the skills of using vocabulary, syntactic skills, as well as those of understanding written texts were substantially improved in the case of the experimental group, compared to the control group, subjects who, in turn, developed all the skills listed, but to a lesser extent than the first mentioned.

In **Chapter V, Analysis and interpretation of the results**, the results related to each stage of the research are presented.

The pre-experimental stage

At this stage, I tested the students of the two classes who learn simultaneously in order to identify the levels of each of the participants in the present study in terms of vocabulary, syntactic and comprehension skills of some written texts.

The results of the students in the vocabulary test in the pre-intervention stage in the control group:

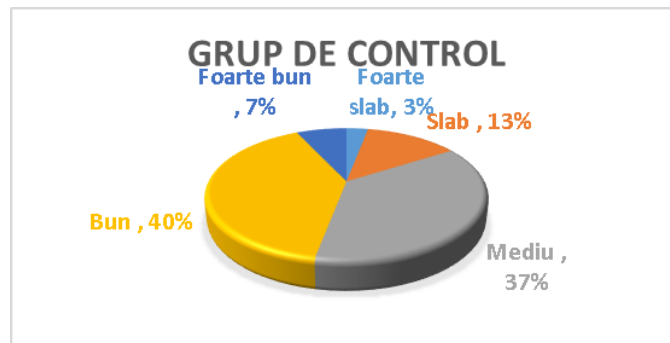


Figure 4.36. Students' results in the vocabulary test in the pre-intervention stage in the control group

Control group:
3% - Very weak

13% - Weak

37% - Average

40% - Good

7% - Very good

The results of the students in the vocabulary test in the pre-intervention stage in the experimental group:



Figure 4.37. The results of the students in the vocabulary test in the pre-intervention stage in the experimental group

Level of the vocabulary skills in the initial stage in the case of the experimental group

7% - Very weak

13% - Weak

27% - Average

43% - Good

10% - Very good

Results of initial testing of syntactic skills in the control group

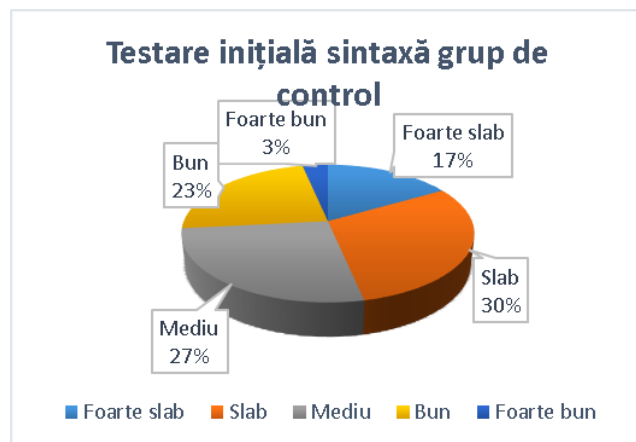


Figure 4.39 . Results of the initial test of syntactic skills in the control group

Initial test of syntactic skills in the control group

17% - Very weak

30% - Weak

27% - Average

23% - Good

3% - Very good

The results of the initial test of the syntactic abilities in the experimental group

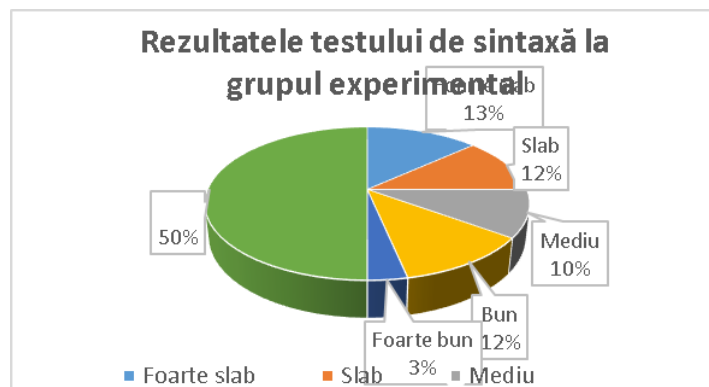


Figure 4.40. Results of the initial test of syntactic skills in the experimental group

Results of the syntactic test in the experimental group

13% - Very weak

12% - Weak

10% - Average

12% - Good

3% - Very good

The results of the initial test of the written texts comprehension skills in the control group

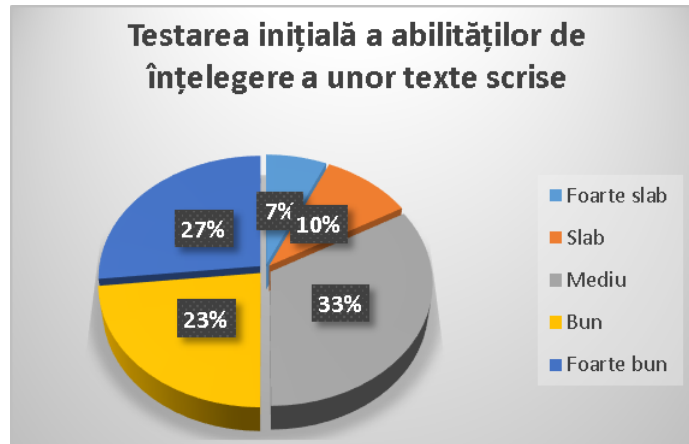


Figure 4.41. Results of the initial test of the written texts comprehension skills in the control group

Initial test of the written texts comprehension skills

7% - Very weak

10% - Weak

33% - Average

23% - Good

27% - Very good

The results of the initial test of the written texts comprehension skills in the experimental group

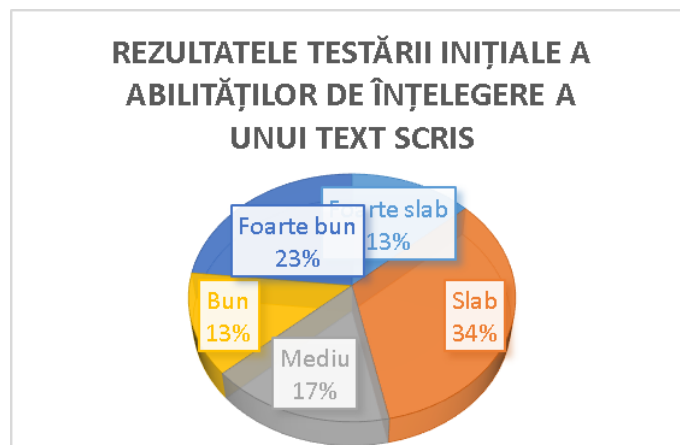


Figure 4.42. The results of the initial test of the written texts comprehension skills in the experimental group

Results of the initial test of the written text comprehension skills

13% - Very weak

34% - Weak

17% - Average

13% - Good

23% - Very good

Experimental stage

It consisted in the application to the students who were part of the experimental group of some means that are part of the ICT technology for the purpose of teaching-learning-assessment of some contents that are part of the national curriculum addressed to the 5th and 7th grades in the discipline of Romanian language and literature.

The post-experimental stage

After the effective intervention period, the stage of reapplying the tests to the sample of participants followed, and the results obtained in the post-experimental stage can be seen in the chart below in the case of the control group and the experimental group, for the vocabulary test:

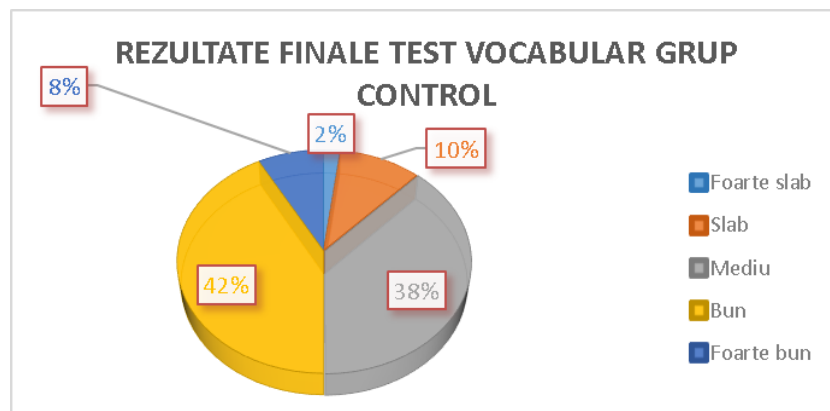


Figure 4.44 . Final results of the test of vocabulary skills in the control group

2% - Very weak

10% - Weak

38% - Average

42% - Good

8% - Very good

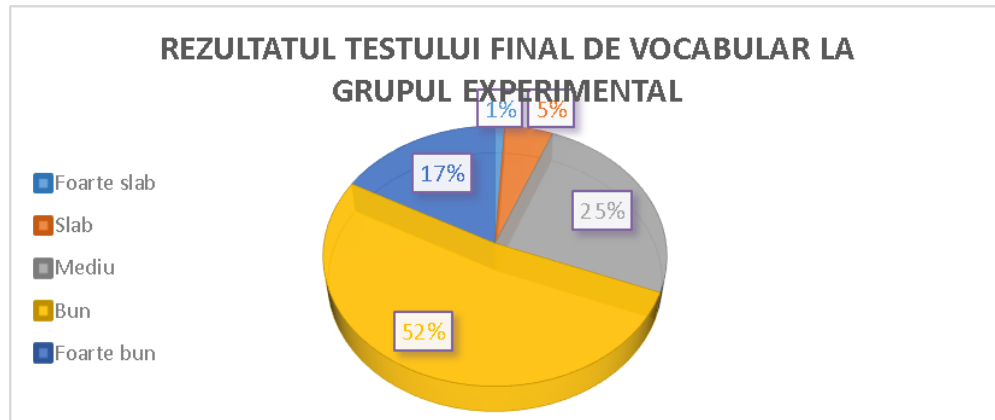


Figure 4.45 . Results of the final test of vocabulary skills in the experimental group

- 1% - Very weak
- 5% - Weak
- 25% - Average
- 52% - Good
- 17% - Very good

Comparison of the final results of the groups on the test of syntactic skills

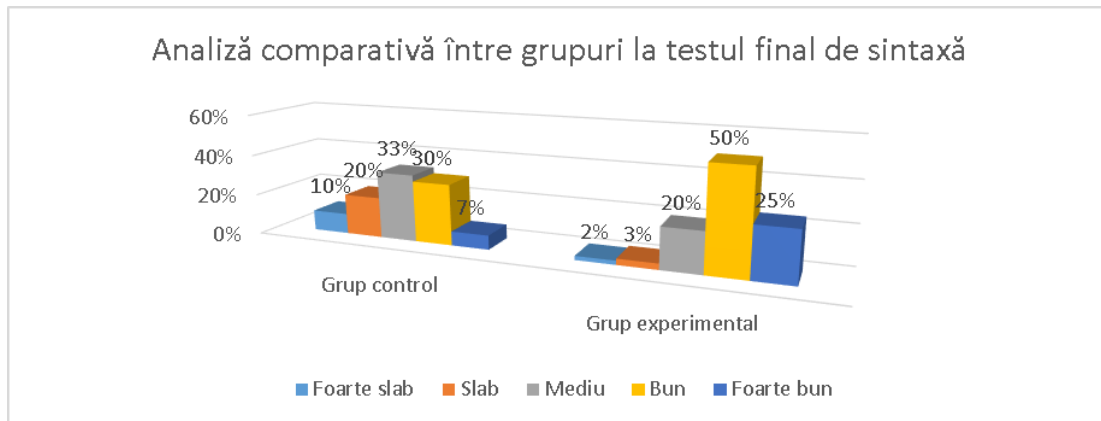


Figure 4.49 . Comparison of the final results of the groups on the test of syntactic skills

Comparative analysis between the groups at the final syntactic test

- | | |
|-----------------|--------------------|
| Control group | 30% - Good |
| 10% - Very weak | 7% - Very good |
| 20% - Weak | |
| 33% - Average | Experimental group |

2% - Very weak

50% - Good

3% - Weak

25% - Very good

20% - Average

Comparison between the control group and the experimental group regarding the results of the written texts comprehension test in the post-experimental stage

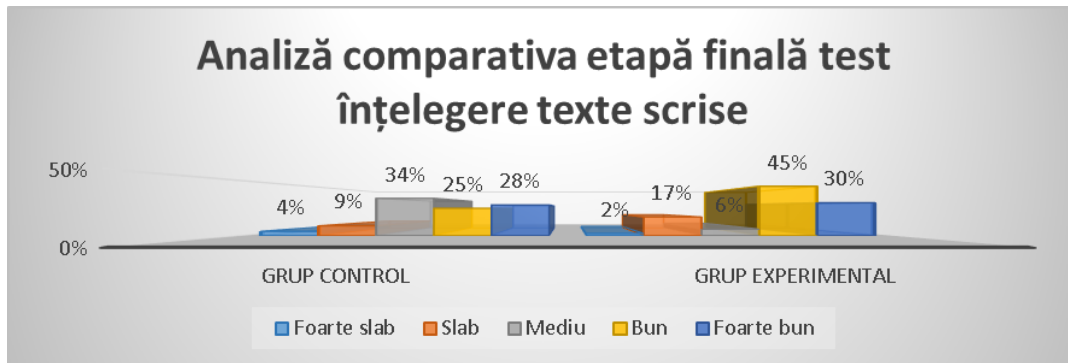


Figure 4.52. Comparison between the control group and the experimental group regarding the results of the written texts comprehension test in the post-experimental stage

Comparative analysis final stage written texts comprehension test

Control group

Experimental group

4% - Very weak

2% - Very weak

9% - Weak

17% - Weak

34% - Average

6% - Average

25% - Good

45% - Good

28% - Very good

30% - Very good

The Chi-square test was applied to compare the differences between the results obtained by the control group and the experimental group in the pre-test stage of the vocabulary skills test. Chi-square (χ^2) (in English)

Variable/No. of answers	Control group Pre-test results	Experimental group Pre-test results
Vocabulary skills		
Very good level	7%	10%
Good level	40%	43%
Average level	37%	27%
Weak level	13%	13%
Very weak level	3%	7%
Total answers	100%	100%

Table 4.18. Comparative data control group-experimental group, pre-test stage, regarding the "vocabulary skills" variable

As can be seen in the table above, no statistically significant differences were found between the control group and the experimental group from the perspective of the vocabulary skill variable ($\chi^2=11.212$, $p>0.05$) in the pre-test stage

Variable/No. of answers	Control group Pre-test results	Experimental group Pre-test results
Syntactic skills		
Very good level	3%	3%
Good level	2. 3%	12%
Average level	27%	10%
Weak level	30%	12%
Very weak level	17%	13%
Total answers	100%	100%

Table 4.19. Comparative data control group-experimental group, pre-test stage, regarding the "syntactic skill" variable

As can be seen in the table above, no statistically significant differences were found between the control group and the experimental group from the perspective of the syntactic skill variable ($\chi^2=11.720$, $p>0.05$) in the pre-test stage.

Variable/No. of answers	Control group Pre-test results	Experimental group Pre-test results
Text comprehension skills		
Very good level	3%	3%
Good level	2. 3%	12%
Average level	27%	10%
Weak level	30%	12%
Very weak level	17%	13%
Total answers	100%	100%

Table 4.20. Comparative data control group-experimental group, pre-test stage, regarding the "text comprehension skills" variable

As can be seen in the table above, no statistically significant differences were found between the control group and the experimental group from the perspective of the "text comprehension skills" variable ($\chi^2=11.212$, $p>0.05$) in the pre-test stage

Variable/No. of answers	Control group Post-test results	Experimental group Post-test results
Vocabulary skills		
Very good level	7%	17%
Good level	42%	52%
Average level	38%	25%

Weak level	10%	5%
Very weak level	2%	1%
Total answers	100%	100%

Table 4.21. Comparative data control group-experimental group, post-test stage, regarding the "vocabulary skills" variable

The analysis of the data from the previously presented table highlights the fact that in the post-test stage the experimental group recorded higher values than the control group from the perspective of the "vocabulary skills" variable, the difference being statistically significant ($\chi^2=20.141, p<0.05$).

Variable/No. of answers	Control group Post-test results	Experimental group Post-test results
Syntactic skills		
Very good level	7%	25%
Good level	30%	50%
Average level	33%	20%
Weak level	20%	3%
Very weak level	10%	2%
Total answers	100%	100%

Table 4.22. Comparative data control group-experimental group, post-test stage, regarding the "syntactic skills" variable

The analysis of the data from the previously presented table highlights the fact that in the post-test stage the experimental group recorded higher values than the control group from the perspective of the "syntactic skills" variable, the difference being statistically significant ($\chi^2=21.720, p<0.05$).

Variable/No. of answers	Control group Post-test results	Experimental group Post-test results
Text comprehension skills		
Very good level	28%	30%
Good level	25%	45%
Average level	34%	6%
Weak level	9%	17%
Very weak level	4%	2%
Total answers	100%	100%

Table 4.23. Comparative data control group-experimental group, post-test stage, regarding the "text comprehension skills" variable

The analysis of the data from the previously presented table highlights the fact that in the post-test stage the experimental group recorded higher values compared to the control group from the perspective of the "text comprehension skills" variable, the difference being statistically significant ($\chi^2=19.381$, $p < 0.05$).

V.4. The conclusions of the research

Due to the fact that both the general hypothesis of the carried out research and the specific ones derived from it have proven to be valid, we can say that even in the case of simultaneous teaching, resorting to some tools from the ICT sphere in order to train and develop some verbal skills are efficient.

The general hypothesis, following the experiment carried out in the current research and the interpretation of its results, proved to be valid. Also, the three specific hypotheses were validated following the proposed experiment.

Therefore, considering that the three specific hypotheses represent, in fact, the detailed presentation of the variables contained within the general hypothesis, it follows that the general hypothesis is valid.

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