Effects of implementing Critical Thinking on Developing Students' Abilities for Independent Learning in 9 – year Elementary Schools in Gjakova Region

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Abstract

Preparing students for independent and effective learning is a school's challenge and a difficult task for teachers to achieve. In contemporary schools one of their objectives is to prepare students for active acquisition of knowledge and the development of learning habits throughout their lives. Critical thinking teaching as an alternative to reform teaching and general education practice of our schools is helping to mobilize students for active knowledge acquisition. The philosophical approach of this program requires students' individual and group engagement in solving of different tasks. These questions set as questions and learning problems develop students' various research and interests habits. Students during interactive learning learn from each others experience the path of recognition. Instigated by the teacher these experiences and paths of success share with each other, which they may then adopt as models of success. The above contributions of critical thinking teaching to preparing students for independent learning are addressed in this paper primarily from a theoretical perspective. Further to better argue our views and the results of schools that apply critical thinking in preparing students for productive and independent learning we have also received the opinions of students and their teachers from two school environments. Opinions of teachers and students from schools that implement Critical Thinking Strategies and Techniques and from other schools that still work on traditional teaching forms and approaches. We have processed this data through SPSS computer program and we present this paper as comparable findings through tabular and graphical percentages.

Keywords: contemporary teaching, interactive learning, independent learning, learning habits, learning outcomes.

Entry

In the past, teaching in our schools had not paid enough attention to learning of its students. It has simply provided information and facts and forced them to learn it without much focus on their analysis and critical scrutiny. In recent years the Kosovo education system has begun to reform and improve many aspects of this important educational process for society at large and for younger generations in particular. Many teaching programs and modalities are being tried in this path of effort. Among these programs, critical thinking is also being successfully applied as an opportunity for reform to suit our socio-economic conditions in which this program does not require disproportionate costs. But where it is successfully implemented, the results are also significantly higher than schools that are still working on traditional teaching forms and strategies. The teachers trained in the critical thinking program have changed the concept of pedagogical practice, for the student and his role in learning. Through interactive learning techniques, they have mobilized the students for active learning by helping them to master the methods for successful acquisition of knowledge and learning experiences. In this paper we have dealt from a progressive, and constructive approach that sees students as active and contributing to their education in forming their personality. From this point of view, the teacher becomes a partner and instructor in the course of teaching while acquiring knowledge. He examines the teaching material from different aspects by encouraging students to discuss concrete data that they supplement with personal knowledge and experience.

Purpose and objectives of the research

The main purpose of this paper is to investigate the effects of applying critical thinking on training the students for independent learning in elementary schools in the Gjakova region.

- Explore the role of applying instructional techniques and strategies with a constructive and progressive approach to preparing students for learning throughout their lives.
- Emphasize the importance of contemporary teaching in preparing students for effective learning in order to improve their learning outcomes.

Research question and research methodology

The research questions of this research are:

- Do Critical thinking teaching strategies and techniques as a new philosophical approach in our schools adequately prepare students for independent learning?
- What are some of the positive impacts of this teaching on improving the quality and learning of students and their learning outcomes?

The contemporary approach of critical thinking as a professional novelty of teachers in the function of preparing students for independent learning, in this paper we have initially dealt in theoretical aspect. From this point of view we have emphasized the didactic-methodical advantages of this strategy for enhancing the quality of many aspects of teaching that enable even better preparation of students for learning throughout their lives. In this paper we have emphasized the importance of this teaching approach for mobilizing students in the active and critical acquisition of teaching content. For a more complete treatment and illumination of this topic we have also conducted research in schools. Through standardized tests we obtained the opinions of students and teachers from school environments that apply the philosophy of contemporary teaching. For preparing students for independent learning we have also received the opinions of the teachers' and students from school environments that still work mainly according to traditional approaches and strategies. In the paper we present these opinions as comparative findings through various charts and graphs.

Active and interactive learning in the Critical Thinking training program

At school, learning is an intellectual process and a learning activity for students. In order to be quality and effective, this intellectual activity and process students must learn from the teacher and be supported at the same time by the family and the school community. So it is the human, pedagogical, and legal duty of teachers to teach their students an effective learning strategy that develops their critical and creative thinking. "If your goal is to help students think better, then you must continually and systematically teach them effective ways of thinking." (Orlich-Harder et al. 1995: 272). In schools with teachers trained in Critical Thinking the aim is to achieve a high quality of active, and interactive learning. In this context, increasing the quality of learning and increasing school productivity are goals of school reform to follow technological developments and other labor market demands. "The main idea of these reforms was that school learning should resemble - far more than is usually realized - the actual processes by which human beings come to understand their environment, culture and their social background." (Richard F. Elmore 2011 : 24). In the schools where the Critical Thinking program is implemented, students engage in learning material according to their intellectual abilities and interests. Here students are not burdened with excessive learning data and facts that need to be learned and memorized. Through this program they apply theoretical knowledge and deepen their understanding, analysis and evaluation of teaching material. Even teaching assignments, in principle, are creative and require the engagement of students' thinking. They mobilize the learner to achieve and actively gain knowledge and learning experiences. If we consider the teaching objectives by Benjamin Bloom's taxonomy, then we must say that students of Critical Thinking schools are not satisfied with just

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knowing and understanding the teaching content. As well as knowing and understanding these contents, they need to go even further in acquiring this teaching material. "Learning is more than just getting and processing the information teachers and books convey to students. Students must actively participate in broadening their own knowledge "(Anita Woolfolk 2011: 342). Through the learning activities they should acquire knowledge in the level of implementation, analysis, discussion and evaluation of views and topics that are dealt in the classes. To achieve this standard of learning, students need to get knowledge from different sources, to compare them with each other and with their experience and foreknowledge. In this way of knowing students are required to be data seekers, analysts and evaluators of contents and critical and argumentative in creative discussions and writing. These are learning activities that students develop in team work with the members of the working groups. From these active and highly mobilizing activities students derive their opinions and learning outcomes, which they present and defend through classroom discussion. They often analyze texts and write evaluative reports and various argumentative essays to complete their assignments and teaching tasks.

These activities also require a high degree of mobilization of students' attention, analysis and creative abilities. To do this, students need through active reading to analyze, derive the text message and the course of events from the view point of a cause-consequence perspective. This learning strategy and progress is also active learning that develops intellectual skills for permanent and independent learning and other skills needed to noseand solve problems. Writing compositions and essays is also a common teaching practice whereby students argue their thoughts and opinions on specific topics. The above mentioned learning activities are active and interactive between students and their teachers. They are coordinated and directed by the teachers of the various subjects. Interactive learning and group discussion illuminates and highlights different aspects of the learning unit. Through questions, personal experiences and thought-provoking sifting problems, useful conclusions can be drawn for education and training of future generations. Interactive learning in group work achieves shared successes, but also develops individual skills and responsibilities. "Although they work together and help each other, the truth is that group members must demonstrate learning independently; they are considered individually responsible for the level of learning, often through individual testing or other assessments "(Brooke Noel Moore and Richard Parker 2004: 326). Through the strategy of the Critical Thinking training program, students with different levels of skills and different learning styles and methods benefit. Learning in the Critical Thinking program activates the various ways of cognition. Students according to the techniques and strategies of this program must read and listen actively and critically, go out into the field to observe changes, to find and collect learning materials and facts. They also measure length, weight, and volume for evidence and experiments, design projects, and solve learning problems closely related to everyday life. In a nutshell, students actively reading

and working in school environments provided valuable knowledge and learning experiences for their future academic life and workplace.

"It is well known that in order to promote brain development, activities must include hands-on engagement, so that children can directly experience such intellectual processes as: information integrity, concepts of concentration, co-operation, creativity, language use and problem solving. "(Daniel Gartrell 2000: 71).

In conclusion, it is found that student learning in Critical Thinking schools is of a higher quality compared to schools that do not implement this program as an alternative and a possibility of reforming their pedagogical practices. This is because students at these schools acquire teaching knowledge through direct participation in research, teaching experiments and tests, and in debates on specific topics. These learning tasks and problems put the student in situations where they have to do some hard thinking to find solutions and alternatives. By thinking of solutions, the students develop intelligence, creativity, and discover efficient ways to succeed that they can use in other later situations. Therefore, we say that learning gained through active effort and participation becomes a productive property in students' lives. By engaging thinking in active learning and problem solving, students gain skills, positive experiences, and effective intellectual means to deal skillfully in similar academic and life situations. "Solving scientific problems, solving business problems and solving mathematical problems use the same critical methods and approaches, but they work in time and with different groups and datasets." (Katherine H. Pherson and Randolph H. Pherson 2013: 45). These learning outcomes are provided and achieved in productive school environments where the school is intended to be a learning organization. The quality and learning outcomes of these schools are visible and measurable. Whereas, building these school environments requires reforming the philosophical approach to education, quality teacher training and engaging and contributing to all educational factors.

The Effects of Implementing Critical Thinking on Students' Ability for Independent Learning in Elementary Schools in the Gjakova Region

Teaching students for independent and permanent learning is an important task and mission of the school. Critical Thinking Schools in this respect unlike traditional schools give students responsibility by engaging them in activities and other learning projects. Interactive group work also serves to prepare students for analysis and for active and critical acquisition of knowledge and learning experiences. These and other aspects of this nature teach students ways of knowing and create positive learning habits for them. Whereas traditional schools, which are considered by modern literature as remnants of formal theory, consider the amount of teaching material as an important factor in preparing for independent life and work. In reality, contemporary theory despite

these views, the active and interactive acquisition of knowledge and effective ways of teaching of knowing considers as important to prepare students for lifelong learning. For the preparation of students for independent and permanent learning we also received the opinions of students and teachers from both school environments we are comparing. We asked students from 20 schools in both school environments how much their active and effective learning methods learn from their teachers, and their opinions were as follows:

Table 1

At school we learn methods for active and efficient learning		School		Total
		Student of CT school	Student of traditional school	
Never	Number	14	22	36
	%	5.5%	8.4%	7.0%
Rarely	Number	56	54	110
	%	22.0%	20.6%	21.3%
Often	Number	135	94	229
	%	52.9%	35.9%	44.3%
Always	Number	44	91	135
	%	17.3%	34.7	26.1
No answer	Number	6	1	7
	%	2.4%	0.4%	1.4%
Total	Number	255	262	517
	%	100.0%	100.0%	100.0%

The percentages of students' opinions surveyed for both groups of schools are mixed and not very distinct. Compared with each other for the four options offered for declaration do not reflect significant differences. From the students' point of view, the teachers of both schools almost equally teach the students' efficient methods of learning. The above tabular findings are expressed as a percentage in the graph as follows :

Graph 1

At school we learn methods for active and eficient learning
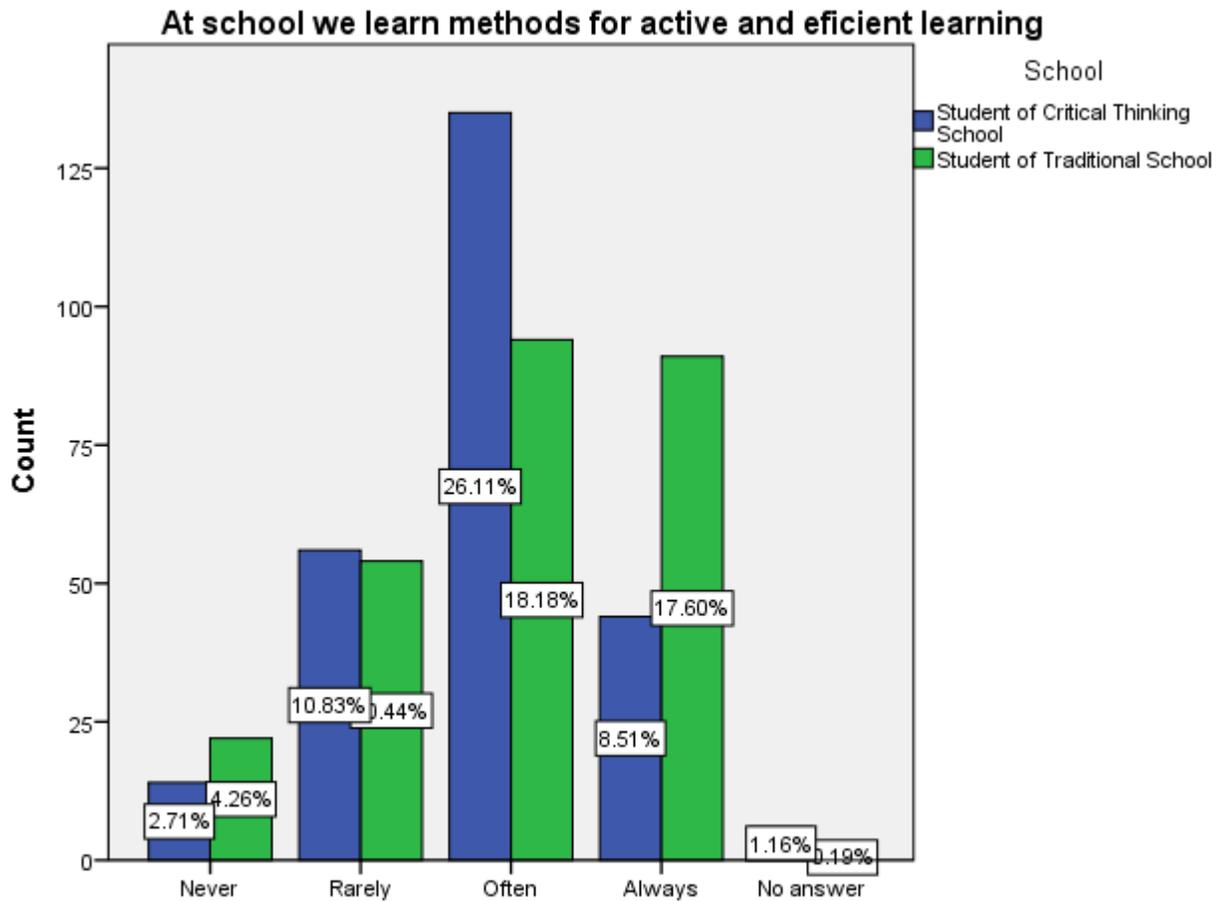
For this straightforward question the percentages of differences in student statements do not give us the facts to say that this or that school environment teaches students more logical and efficient learning methods. Whereas, in the other statements provided in the survey that shows aspects of students' preparation and independence in the process of active and logical learning, the differences between the opinions of the students from the schools of these school environments are more emphasized and significant from the research of our point of view. The survey we asked students to state how much the school is preparing them for independent learning and for high school. These statements, expressed in tables and percentages, are as follows :

Table 2

The school prepares me for independent learning for high school		School		Total
		Student of CT School	Student of Traditional School	
Never	Number	10	16	26
	%	3.9%	6.1%	5.0%
Rarel	Number	23	38	61
	%	9.%	14.5%	11.8%
Often	Number	82	89	171
	%	32.2%	34.0%	33.1%
Always	Number	138	118	256
	%	54.1%	45.0%	49.5%
No answer	Number	2	1	3
	%	0.8%	0.4%	0.6%
Total	Number	255	262	517
	%	100.o%	100.0%	100.0%

For this assertion presented in the survey, differences in the percentages of students' opinions are most distinct among the schools we are comparing. For the first two negative variants (never and rarely) the percentages of students declaring from traditional schools are higher. Therefore, students in these schools in higher percentages declare that their schools do not prepare them for independent and permanent learning. Despite these students, their peers from the Critical Thinking schools for these first two options have lower compliance rates, thatmeans they have less agreement with the view that their schools never or rarely prepare them for independent and permanent learning. The most striking differences are in the fourth version of this assertion. Critical school students here state in higher percentages that their schools always prepare them for independent learning. These percentages of students' opinions through the graph look as follows:

Graph 2
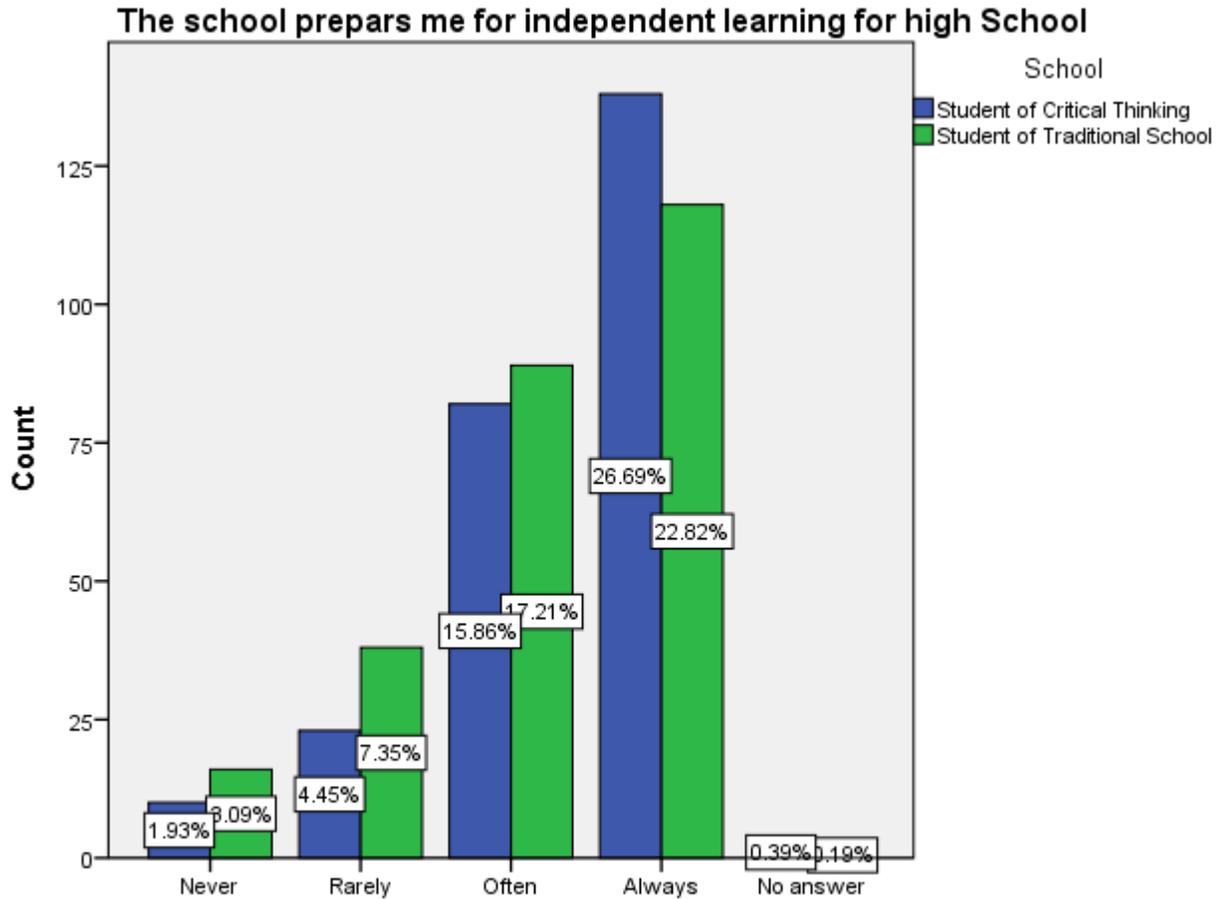
This graph viewed with the tabular data is more distinctive than the previous graph. These findings, taken as a whole, show the superiority of Critical Thinking schools. From the students' point of view, they are more contributing to their preparation for independent and permanent learning. These findings somehow contradict the percentages in the students' opinions given for the preliminary survey assertion that at school we also learn methods for active and effective learning. Although the assertions offered in the students' statement survey were of similar meanings, their opinions from these two school environments did not appear as distinct as in the other cases. However, even these findings sometimes confused and unexpected are interesting and

significant. They present aspects of our educational reality that prove that there is still confusion and lack of clarity in our schools about both the philosophical approach and the practical application of new concrete teaching techniques and strategies. Especially influential on these findings are the schools of both school environments that we are comparing. There are schools in Critical Thinking Schools that are still in an unconsolidated phase in implementing this program approach. As with the schools we are considering as more traditional, there are schools which have information on the philosophy of the Critical Thinking training program, but for the circumstances we have dealt with in the theoretical chapter they have not started with their implementation yet. These schools in both school environments need all-round professional support to follow the path of success and reform.

We also received teachers' opinions on the impact of the Critical Thinking training program on preparing students for independent learning. In our research survey we asked teachers to declare students organizing interactive small group work. The group form of teaching work in contemporary teaching and in the Critical Thinking training program is considered as a teaching modality with interactive features and effects of active learning. In small groups, students learn from each other knowledge, experience and effective ways of knowing, while also developing communication and critical thinking skills. Therefore, for this assertion the opinions of teachers surveyed from both school environments are given as a percentage:

Table 3

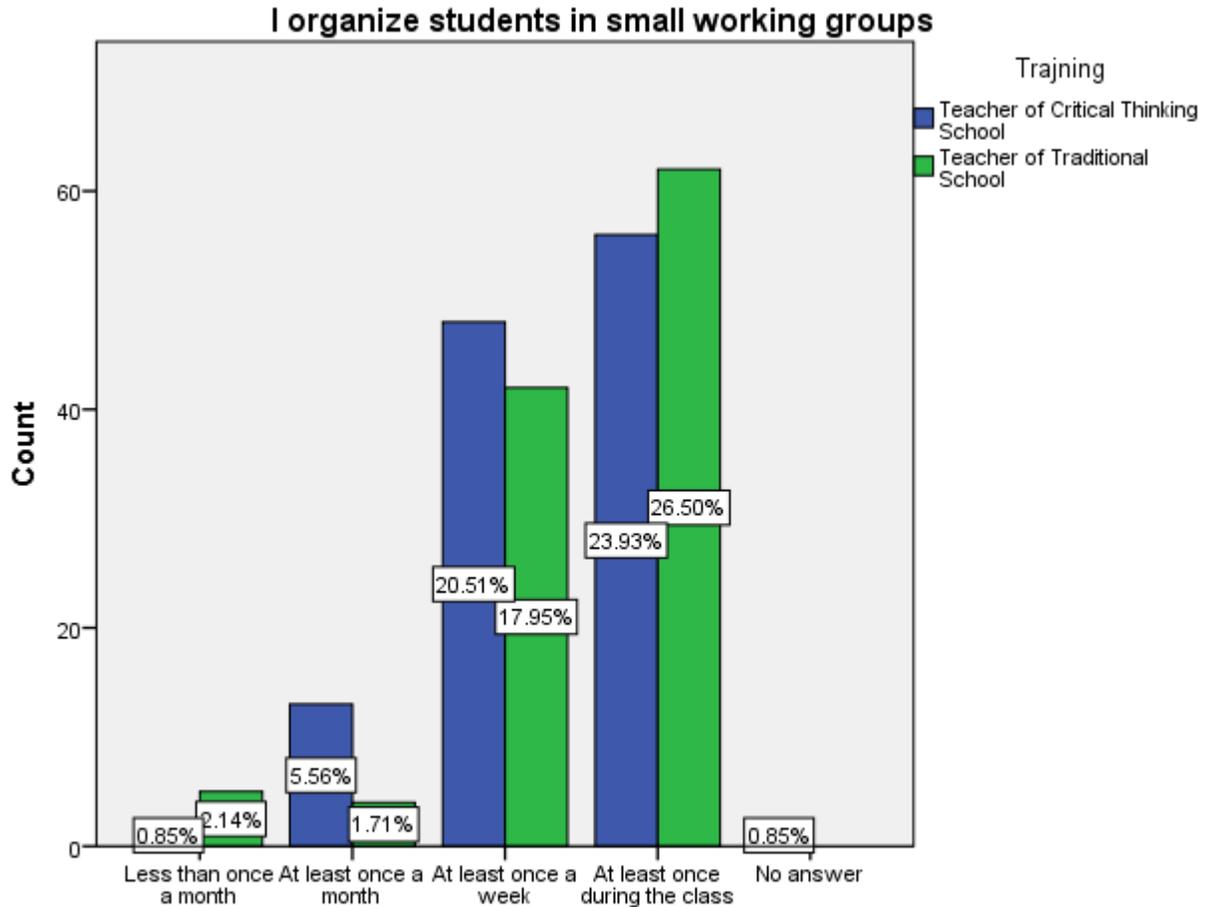| I organize students in small working groups		Training		Total
		Teacher of Critical Thinking School	Teacher of Traditional School	
Less than once a month	Number	2	5	7
	%	1.7%	4.4%	3.0%
At least once a month	Number	13	4	17
	%	10.7%	3.5%	7.3%
At least once a week	Number	48	42	90
	%	39.7%	37.2%	38.5%
At least once during the class	Number	56	62	118
	%	46.3%	54.9%	50.4%
No answer	Number	2	0	2

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	%	1.7%	0.0%	0.9%
Total	Number	121	113	234
	%	100.0%	100/%	100.0%

It is interesting and important in this case to see for which version of the statement the highest percentages are. Traditional school teachers have higher percentages of the first and the last version. They stated in higher percentages that they organize students in group work less than once a month and for the other polarity of this assertion at least once during class. Whereas, their colleagues from Critical Thinking schools have higher percentages of versions at least once a month and at least once a week. Looking at the modalities of the organization of teaching and the nature of the teaching units that are elaborated during the lesson, the opinions of the Critical Thinking teachers seem to us to be more constructive and realistic. The processing of each lesson does not fit into the small group of teaching work. In the teaching of Critical Thinking, as a contemporary teaching, modalities and other methodological procedures are also applied that effectively accomplish the lesson and fulfill the educational objectives and competencies. The tabular percentages in the graph below are as follows:

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Graph 3

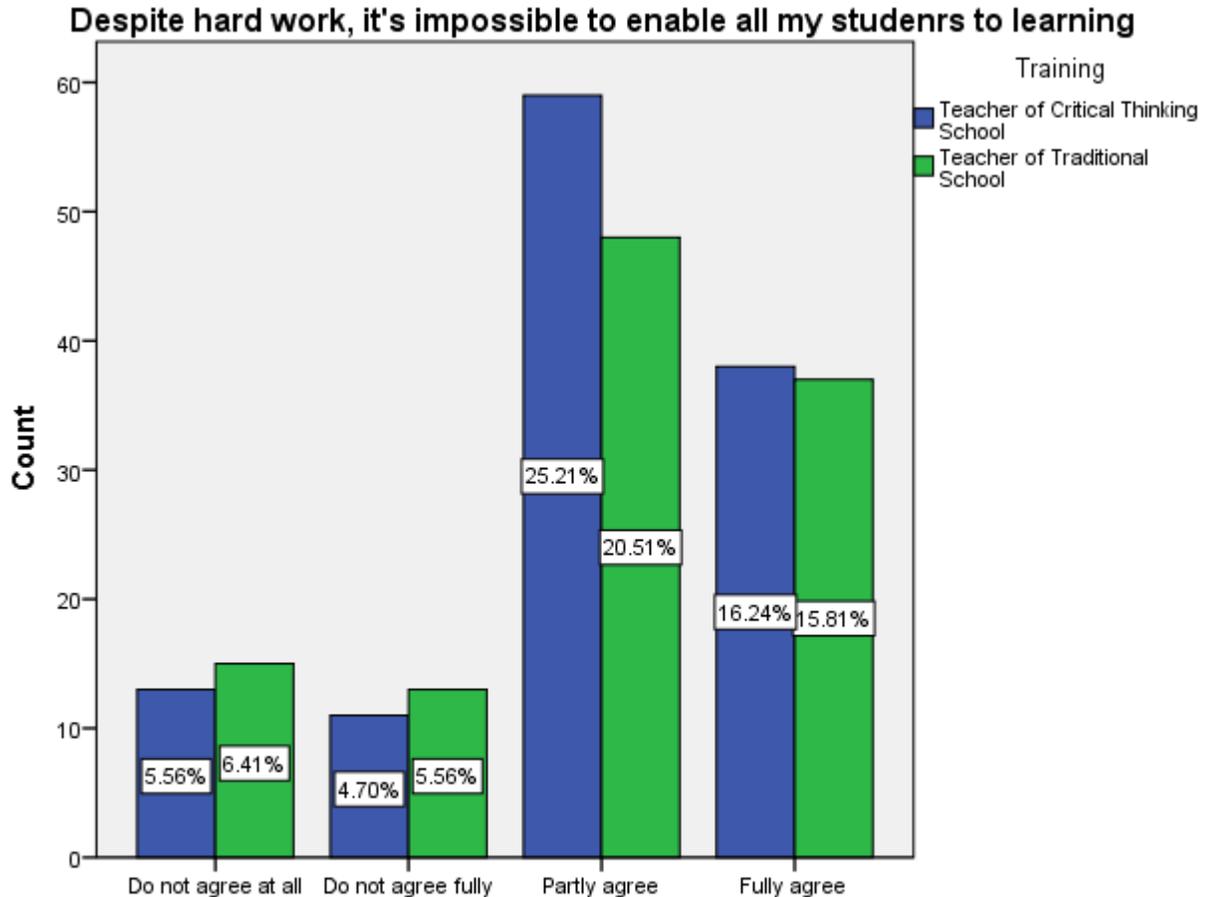**I organize students in small working groups**

So, the above percentages also indicate the frequency of student organization in group work. Teaching of Critical Thinking in this respect is more time-balanced. The percentages of these schools indicate that these learning environments are more flexible in organizing different forms and modes of learning. Depending on the nature of the topics elaborated during the class, this teaching also organizes various interactive students' activities. In our survey, we asked teachers to state even one statement about the findings of the point we are addressing. The assertion stated by the surveyed teachers and the percentage of their opinions from both school environments are as follows:

Table 4

Despite hard work, it's impossible to enable all my students to learning		Training		Total
		Teacher of CT School	Teacher of Traditional School	
Do not agree at all	Number	13	15	28
	%	10.7%	!3.3%	12.0%
Do not agree fully	Number	11	13	24
	%	9.1%	11.5%	10.3%
Partly agree	Number	59	48	107
	%	48.8%	42.5%	45.7%
Fully agree	Number	38	37	75
	%	31.4%	32.7%	32.1%
Total	Number	121	113	234
	%	100.0%	100.0%	100.0%

In this table the views of the teachers given in percentage are not very distinct. However, traditional school teachers have a higher percentage of disagreement than those of Critical Thinking schools in claiming that, despite their hard work, they are failing in enabling all their students to learn. In spite of this, their peers from the most reformed schools applying Critical Thinking teaching techniques and strategies have shown a lower dose of compliance with the above statement. They seem to be more reserved about their success in enabling students to develop effective and logical learning. Fulfilling the function and development goals of the school to enable students to learn effectively is one of the most important and difficult tasks to accomplish. Therefore, given this fact, even these percentages of teachers' opinions from the two surveyed school environments should be analyzed and interpreted in relation to factors and other psycho-pedagogical circumstances of the concrete schools. These percentages in the graph are shown as follows:

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Graph 4

Despite hard work, it's impossible to enable all my studenrs to learning

Training: Teacher of Critical Thinking School, Teacher of Traditional School

Values shown on bars: Do not agree at all — 5.56%, 6.41%; Do not agree fully — 4.70%, 5.56%; Partly agree — 25.21%, 20.51%; Fully agree — 16.24%, 15.81%

This graph, as an overview of the preliminary table findings, gives the impression that teachers of Critical Thinking schools are more cautious in assessing the above assertion. In fact, even the assertion itself is complex and determinative in giving opinions. In our opinion it is more than a reality that with modern teaching methodology and with serious professional and human efforts it is almost impossible to prepare all students for independent learning and efficient learning methods. So, overall, in terms of didactic aspects influencing students' preparation for independent and effective learning from the point of view of students and teachers, we did not find significant differences between these two school environments. This is to a certain extent understandable, because despite the different philosophical approaches that follow these different school environments, nevertheless they work under the same teaching conditions and standards. As such,

long-term positive changes in the formation of intellectual learning habits are more difficult to observe.

Conclusions and recommendations

The conclusions of this research can be summarized as follows:

1. From the theoretical approach of this paper we conclude that schools applying the methodology of critical thinking teaching have mobilized students in the active acquisition of knowledge by discussing and analyzing information and perspectives from different aspects.
2. These schools encourage their students to contribute to the development of their personality as an individual with initiative, intellectual skills and creative abilities.
3. Teachers through this new philosophical approach have contributed more than their peers from traditional schools in preparing students for independent learning and education throughout their post-school life.

The following are the recommendations of this research:

1. Schools that work under the philosophy of critical thinking should continue to train teachers on the instructional strategies of this new educational approach with the aim of better preparing students for independent and productive learning.
2. Traditional schools should collaborate with contemporary schools and mobilize their teaching staff to improve many aspects of teaching that create positive learning habits.
3. The Municipal Directorates of Education and the relevant Ministry should provide support to schools in reforming pedagogical practices by providing quality training and equipping them with appropriate teaching aids and technologies.

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