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Effects of Implementing Critical Thinking on Developing Students' Abilities for Independent Learning in Primary Schools

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Abstract

Preparing students for independent learning and creating lifelong learning habits are the main objectives of the contemporary school. In this research, we present the opinions of the students and their teachers about how the primary school prepares them for independent learning and for higher levels of education. Initially, the topic of this paper is treated in the theoretical aspect, where scientific arguments are given for the importance of independent work of students in their intellectual formation and psycho-social development. The implementation of critical thinking as an alternative for reforming our schools is based on progressive theory, which organizes the lesson with the student at the center. From this viewpoint, we want to present our findings on the effects of implementing contemporary learning strategies of critical thinking in preparing students for independent learning. The opinions of students and teachers, which we compare and analyze in this paper, were obtained from two school environments. From schools that have reformed their pedagogical practice through contemporary teaching methodology and from school environments that still work mainly according to traditional and conservative methodology.

Keywords: interactive learning, student-centered, independent work, learning tasks, learning habits.

1. Introduction

In the past, teaching in Kosovo's schools has not given importance to students' learning and their intellectual development. In the last twenty years, our educational system has begun to reform many aspects of this educational process. In this journey of efforts, the program of critical thinking is being successfully applied as an alternative reform that suits our socio-economic conditions. Trained teachers in the critical thinking program have changed the concept of the student and his role in learning. In reformed schools according to the philosophy of critical thinking, students are engaged in task solution, data analysis, educational discussions debates,

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and other research projects. The social-constructivist learning theory underlying the discovery learning model considers learning as a constructive and collaborative process (Hariyanto et al., 2022). Through this approach, students are much better prepared for independent learning and education at higher educational levels. Engaging students in problem-based learning tasks and other school activities develops their creative skills and life skills. The mindset of operating schools where the student is at the center of the class forms intellectual work habits and independent learning skills. Through active and interactive learning, students apply theoretical knowledge in practice, form positive attitudes, develop creative imagination, various interests, finding solutions to problems and culture and other environmental, hygienic and social habits. In this paper, we deal with the effects of the implementation of teaching strategies of critical thinking in increasing the quality and productivity of students' independent work. Through questionnaires, we obtained the opinions of students and teachers from schools in which contemporary teaching strategies are applied, and from schools that work according to traditional teaching methodology. Questions addressed to students and their teachers seek the opinions of these research subjects on preparing students for independent learning and lifelong learning. The idea of the research is to address this topic from the perspective of students and their teachers who are trained for critical thinking. The scientific terms that must be clarified in this paper are:

Critical thinking is a program initiated by American and Canadian educational theorists to reform the educational system of countries emerging from the socialist system. These educational systems inherited from the educational system of the former Soviet Union were full of deficiencies and elements of the Herbartian school. These schools had low learning outcomes, theoretical overloads in teaching, rote learning and frequent dropouts by students. In order to reform this outdated pedagogical practice, the critical thinking program was committed to a teaching that centered on the student and his interests. This international program for reforming their educational systems was borrowed by many countries. Kosovo joined this project in 2000 and also organized numerous trainings for the preparation of teachers for teaching according to contemporary teaching strategies. The critical thinking program has significantly improved many aspects of teaching and learning in our schools. Traditionally, critical thinking is conceptualised as skills and dispositions necessary for engagement in higher order thinking to generate knowledge for problem solving and decision making (An Le, Hockey, 2021). The critical thinking program has also improved the quality of students' learning. Trained teachers in critical thinking better prepare their students for research work by developing different interests and intellectual orientations. Learning takes place when learners actively construct meaning by building on existing knowledge and experience (Shroff et al., 2021). The students of these teachers in their academic journey are more experienced and more ready to learn from the book without the presence and obligation of the teachers and their parents.

Contemporary schools are those schools that work according to active learning strategies where the student is at the center of attention during the organization of learning activities. Contemporary schools organize the learning of knowledge and learning experiences through interactive research projects and tasks that require the conscious activity of students. Similarly, collaborative classrooms promote peer learning and foster a better acquisition of knowledge (Simo-Gil et al., 2018). This educational philosophy connects the teaching theory with the practice and daily life of the students. Through discussions and debates in the classroom, students' progressive social attitudes and their critical and creative thinking are developed.

Traditional school: we consider schools that still carry out teaching through passive and conventional teaching methods. These schools do not take into account the experiences, prior knowledge and interests of the students. The students of these schools are not stimulated to discuss and give their opinions. Teachers are positioned to teach to the test, so that skill development is limited (Mc Guinness, Taysum, 2020). They are also not active and cooperative among themselves in acquiring knowledge and school experiences. This philosophical approach with elements of the old medieval school realizes formal and superficial learning which hardly prepares the students for independent learning and for higher educational levels.

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, 1995). 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 (Elmore, 2011). 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. Critical awareness of their own cognitional process will enable learners to manage their problem-solving more effectively because they have now affirmed the method by which they come to know: they have learned how they learn and proactively participated in the process (Connolly, Cosgrove, 2022). 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 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 (Woolfolk, 2011).

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. When children are more involved in joint problem-solving, they use their experiences in the subsequent child-alone problem-solving tasks (Stern, Hertel, 2022). 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 nose and solve problems. The community of inquiry is therefore not just a "learning environment" for students to develop their collaborative problem-solving skills, and acquire a know-how considered useful, or even indispensable, in the job market (Santi, 2019). 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, Parker, 2004). 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.

Planning and executing comprises processes about defining the goals and sub-goals for the problem solution and developing strategies to reach the goals (Dindar et al., 2022). In a nutshell, students actively reading and working in school environments provided valuable knowledge and learning experiences for their future academic life and workplace. The student should be made aware of the subject of education and made to understand his place and role in the profession and the world environment (Dolgova et al., 2019). 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 (Gartrell, 2000).

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 (Pherson, Pherson, 2013). These learning outcomes are provided and achieved in productive school environments where the school is intended to be a learning organization. Quality is strongly associated with learning (Vargas, 2020). 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 purpose of this paper is to investigate the effects of the implementation of the critical thinking program in primary schools for preparing students for independent learning and for education at higher educational levels.

While the specific objectives of this research are: (a) to investigate the importance of contemporary teaching for the preparation of students for effective learning in function of the formation of intellectual habits, and (b) Address the role of active and interactive learning for the best possible preparation of students for independent learning throughout their lives.

While, the research questions of this article are:

What are the effects of the application of critical thinking in primary schools for the preparation of students for qualitative and independent learning?

Can critical thinking teaching strategies for preparing students for independent learning be applied in other schools?

Materials and Methods

For the data collection of this research, we used the quantitative method. Through the questionnaires, we obtained the opinions of teachers and students from school environments that realize active and interactive learning according to advanced practices of critical thinking. With the same questionnaire, we also received the opinions of students and teachers from schools that still work with outdated and traditional methodologies. For data collection, two standardized tests were used which we adapted for our research from the research association OUSD (Orange Unified School District) - Elementary School Student Survey. A test for teachers of contemporary and traditional schools and another test for students of these two school environments. We have processed the data collected during the research with the SPSS computer program and in the paper we present and comment on them as percentages through different tables.

For this research we surveyed a total of 851 subjects divided into two groups of subjects. The first group of respondents is made up of teachers, while the second group is made up of students. We conducted the survey with teachers in 21 primary schools, where through questionnaires we received the opinions of 232 teachers divided into two subgroups. In the first subgroup, through the questionnaire, we received the opinions of 121 teachers trained according to the contemporary methodology of critical thinking. While the second subgroup consisted of 113 surveyed teachers who still base their students' learning mainly on formal passive textual readings and

quantitative memorization. The second group of subjects of our research consisted of 517 students from urban and rural school environments divided into two subgroups. The first subgroup consisted of 255 students of primary schools where the methodology of critical thinking is applied and where the students' learning is active and interactive research. While in the second subgroup we surveyed 262 school students who have not yet reform practices for a qualitative learning in order to prepare students for independent learning even after completing their formal education.

The analysis of the statistical data was done through the chi square test, presenting for each table the statistical values of chi-square, p value and the level of significance for each table.

2. Results

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. Engaged students invest their cognitive potential to learn new knowledge and skills (Loukomies et al., 2022). 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. In Table 1 are presented perceptions of 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. Students learn methods for active and efficient learning

Categories		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 chi-square statistic is 28.9997. The p-value is < 0.00001 . The result is significant at $p < .05$.

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. 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 follow in Table 2.

Table 2. The school prepares students for independent learning

Categories		School		Total
		Student of CT School	Student of Traditional School	
Never	Number	10	16	26
	%	3.9 %	6.1 %	5.0 %
Rarely	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
	%	100.0 %	100.0 %	100.0 %

The chi-square statistic is 7.1621. The p-value is .127568. The result is not significant at $p < .05$.

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, that means 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 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. High-achieving students may already have a broader repertoire of learning strategies, whereas low-achieving students may need more step-by-step guidance from a teacher or peer (De Vries et al., 2022). 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 in [Table 3](#).

Table 3. Teacher organize students in small working groups

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

The chi-square statistic is 6.7318. The p-value is .150759. The result is not significant at $p < .05$.

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. 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. The results of the research show that cooperative learning in pairs and groups contributes more positively to students' motivation for school achievement than traditional teaching (Štemberger, 2013). 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 in Table 4.

Table 4. Despite hard work, it's impossible to enable all my students to learning

Categories		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 %

The chi-square statistic is 1.1816. The p-value is .757427. The result is not significant at $p < .05$.

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 psychopedagogical circumstances of the concrete schools. The above percentages give 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.

3. Discussion

Today, in the modern world, preparing students for independent learning throughout their lives is a societal imperative and the primary mission of schools as educational institutions. For the achievement of these social objectives, mobilization and institutional professionalism and commitment and strong national support are required. In this paper, we dealt with the effects of the implementation of the critical thinking program in the preparation of students for qualitative and independent learning. Through schools, in educational policy-making centers, as well as in scientific publications, this issue has become a topic of professional discussion. The importance of preparing students for independent learning has been greatly increased by the concern about the departure of students from the book and their excessive connection with technology and social networks.

In the schools, among the teachers, the topic of discussion in the first place is the concept of quality learning and independent learning of students. The critical thinking program has brought freshness and new qualities to the students' learning. During training for Critically Thinking, teachers receive concrete scientific explanations for this educational aspect. According to the psycho-didactic literature and the guidelines of this reform program, the quality of learning is the direct involvement of students in the acquisition of knowledge through the analysis, comparison and evaluation of arguments and teaching situations. Cognitive activation aims to foster students' higher-order thinking, for e.g., using complex problem-solving tasks (Thommen et al., 2021).

Teaching strategies and techniques present problematic tasks to students which the teacher presents as requests that require creative solutions. During the efforts to find solutions and achieve results, students exchange experiences and develop initiatives, interests, findings and critical thinking and creative skills. Learning through theoretical analysis, teaching debates and practical, research work in school laboratories and workplaces is quality learning in function of the development of productive generations in society. Participants of action learning are encouraged to solve their work problems by reflecting on their past practice and observing their professional peers in action (Alimuddin et al., 2021). As a result of these educational commitments, cultured behavior in society and nature, articulate speech, clear and progressive thoughts, qualitative discussions and interests and desire to study are cultivated. Students' independent work is

developed in textbooks and workbooks through solving tasks and performing various experiments. Teachers discuss the use of the most appropriate teaching strategies for specific subjects in order to make students independent for active and research-based learning.

Teachers trained for critical thinking in their pedagogical practice make an important contribution to the preparation of students for quality learning. Training students for efficient learning is a professional and human duty of teachers, and inevitably also discussion and exchange of experiences between them. According to the teachers and based on the literature, the students really need to be guided how to learn qualitatively. Teachers, as the individuals directly involved with learners, play a key role in achieving the goals of education and are critical in shaping educational activities (Danışma et al., 2018). Schools reformed according to the philosophy of critical thinking through active learning methodology realize independent learning at higher levels compared to traditional schools. This is because the educational requirements addressed to the students are higher with an analytical and evaluative character. While schools with traditional pedagogic practice in the teaching of students are satisfied only with knowledge and understanding of teaching materials which are the two lowest levels in Bloom's taxonomy. So the debate between teachers about the independent and efficient learning of students is understandable and productive. Positive experiences are discussed and exchanged for the art and mastery of teaching for the realization of a more efficient teaching of students in order to prepare them to travel successfully in their academic development.

4. Conclusion

From the theoretical treatment of the paper, we saw that the independent work of students is important and has multiple positive impacts on the formation of their personality. The contemporary literature of psycho-pedagogical scientific disciplines instructs that during education, students are active participants in the path of their intellectual and human development. From this viewpoint, we say that it is very important for students to prepare for independent and quality learning for a successful academic and professional journey. Knowledge and experience gained through participation in learning activities is more easily remembered and becomes the intellectual property of students for use in their post-school life. Authentic learning experiences, being transformative, will ensure that learners are better equipped to solve real-world sustainability problems even outside their classrooms (Taimur, Onuki, 2022). From the operation of the school with this approach, the students benefit from positive lifestyles and school experiences which are embedded in their daily routine. Independent and quality learning creates work habits interests and the desire to achieve educational results. Through the independent work carried out at school and at home, the student creates for himself a lesson schedule and other responsibilities towards school obligations, which in reality are particles of effort in the path of personal development.

In this paper, we wrote about the effects of the implementation of teaching strategies of critical thinking in the preparation of students for independent learning. For this topic, we took and compared the opinions of students and teachers from schools that work according to these strategies and from schools that still work according to traditional pedagogical practice.

The findings of this research show that reformed school environments give more importance to the independent and qualitative learning of students. The philosophical approach of these schools is what creates greater space and opportunities for students to develop intellectual work habits, different initiatives and research interests and culture. The teachers of these schools, in the role of student instructors, also give appropriate and concrete instructions for efficient learning. This modality of education is a constructive and progressive instruction of learning through work and activity. The student on the path of acquiring knowledge and positive school experiences is observed, guided and simultaneously evaluated for his learning efforts. Engagement refers to becoming absorbed in and focused on activities and tasks. Perseverance refers to keep striving towards one's goals, even in the face of obstacles. Optimism reflects hopefulness and confidence about the future (Holzer et al., 2022). Through interactive group learning, students feel more relaxed and optimistic at school and are better prepared for following levels of education.

Despite this advanced pedagogical practice, traditional schools have a more conservative approach to students and their learning. These schools develop teaching based mainly on verbal-textual methods. The teachers of these schools, aiming to implement the curriculum loaded with useless information, narrow the possibility of the students to develop their creative potential. As a

consequence of this outdated pedagogical approach, the acquisition of knowledge by the students of these schools is superficial and formal. This mindset of organizing schools for students does not plan group and interactive learning because the flow of the lesson dictates campaign learning work with the teacher at the center. Students here are in the role of passive receivers of information and then forced to mechanically learn theories and information that are not applicable in real life practice. In conclusion, the research findings prove that schools that work according to teaching strategies of critical thinking better prepare their students for lifelong independent learning. This good educational practice should serve as a success story for other schools that still have dilemmas in accepting and implementing proven professional innovations.

5. Declaration of Competing Interest

The authors of the manuscript declare that there is no interest in conflict, and all reference materials were dully acknowledged.

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