European Journal of Education Studies
ISSN: 2501 - 1111
ISSN-L: 2501 - 1111
Available online at: www.oapub.org/edu

DOI: 10.46827/ejes.v12i4.5878 Volume 12 | Issue 4 | 2025

CREATIVITY DEVELOPMENT IN SCHOOL CONTEXT: TEACHERS' VIEWS

Eleni Nikolaou[1i],
Yota Xanthacou[2],
Vasileios Papavasileiou[3],
Nikos Andreadakis[4],
Dimitrios Matzanos[5],
Maria Kaila[6]
[1]Associate Professor,
Department of Sciences of Preschool Education and Educational Design,
University of the Aegean,
Greece
[2]Emeritus Professor,
Department of Sciences of Preschool Education and Educational Design,
University of the Aegean,
Greece
[3]Professor,
Department of Sciences of Preschool Education and Educational Design,
University of the Aegean,
Greece
[4]Professor,
Department of Sciences of Preschool Education and Educational Design,
University of the Aegean,
Greece
[5]Postdoctoral Fellow,
Department of Sciences of Preschool Education and Educational Design,
University of the Aegean,
Greece
[6]Emeritus Professor,
Department of Sciences of Preschool Education and Educational Design,
University of the Aegean,
Greece

[i] Correspondence: email enikolaou@aegean.gr

Abstract:
Creativity and innovation are key competences in the contemporary school context. Individuals are now called upon to solve problems in any domain and in any phase of their lives. Creativity development is associated with pedagogical practices, such as active learning, exploration and problem-solving. This research study aims to explore teachers' views about creativity and creativity development. The sample of the research consisted of 381 primary school teachers from Greece. The majority of teachers are positive about the cultivation of different talents, interests and personal involvement in learning processes as well as cooperation between different ages. It was also found that teachers tend to avoid risk and risk-taking. In conclusion, the educational system should support and develop creative teaching-learning, preparing their students to acquire not only knowledge but also competences, abilities and skills.

Keywords: creativity, creative-teaching learning, pedagogical, educational innovation, creative problem solving

1. Introduction

According to Piaget (1962), development is always creative since the child's thinking is constantly changing by transforming preexisting mental schemata into new ones in order to deal with the problems raised by his environment. It is understood that the child, when exposed to this external environment, begins to assimilate cultural artifacts, material or immaterial, and over time is better equipped to create new ones. Creativity is not the exception. It is the rule of development (Tan, Perleth, 2015: 17). The emergence and cultivation of creative expression and shaping its lifelong course is the work of education.

Today, Robinson and Aronica (2019) argue that in general, quality assurance processes in education can be compared to two models: The fast-food model with a defined menu, ingredients, serving and decoration in all stores and the Michelen model, where the guidelines define some criteria of excellence that are flexible and adaptable to customer needs. Michelen schools invest in their teachers, harness the talents of their students, and keep the school community vibrant and productive in a spirit of communication and collaboration, including parents and the wider community.

It is obvious that teachers cannot develop their students' creative skills if their own skills are suppressed (NACCE, 1999: 90), mainly from the guidelines and requirements of a standardized syllabus. Even worse, the teachers who wish to teach their students creatively, although they themselves feel ignorant (Piirto, 2011: 10).

Called the competences of the 21st century, creativity and innovation are key competences in the global village in our post-modern societies. Creativity is defined as "*the exploring, imagining and creative thinking processes which occur based on one's knowledge, motivation, emotion and experience that lead to creating new, useful and valuable products-ideas, solutions or specific things*" (Csikszentmihalyi, 1996; Runko & Jaeger, 2012; Mroz & Ocetkiewicz, 2021: 3).

Creativity development is complex and multifaceted (Cotter, Ivcevic, Moeller, 2020; Paek, Runko, 2018; Xanthacou & Kaila 2012; Xanthacou, Kaila & Papavasileiou, 2018) and is the result of cognitive and environmental factors that are interdependent and interacting with developmental changes (Sternberg & Lubart, 1995). Important factors in creativity development are those related to pedagogical practices (Dere 2019 in Maker *et al.* 2023; Bullard & Bahar, 2023).

In Turkey, for example, with programs in preschool education, Dere found that creativity of children increases when it is associated with methods such as learning centers with blocks, materials for dramatic play, art, picture books, music instruments, sand and water. Other practices are emphasizing divergent thinking, using knowledge in diverse ways, active learning, exploration, problem-finding and problem-solving.

According to Margaref and Arenas (2006 in Troncoso *et al.*, 2022), innovation in pedagogical and educational level is characterized as an idea which is accepted as new and implies a change that improves the educational practice in a qualitative way. It comes with new learning, goals and activities, and its success depends on the teachers' commitment to collaborate and adapt their practices. It also involves learning for those, not only students but particularly teachers who actively participate in this process, through appropriate training. It is important to point out that educational innovation refers to changes in objectives, contents or methods in general, whereas pedagogical innovation refers to the teachers' methods (UNESCO, 2019).

1.1 From a Conventional Pedagogy to a Creative Pedagogy

The change from a conventional-traditional pedagogic to a creative one is a multifactorial attempt and presupposes:

- The introduction of various creative techniques of generating ideas and active discovery of knowledge in daily lessons and daily teaching and practice. Techniques such as creative problem solving, brainstorming, humor-play, knowledge mapping and connection, cognitive conflict, dilemma situations, research-experimentation and evaluation. Techniques that develop an active system of information and view of the reality that makes the subject see the heart of a flower, the signs of bad weather, the spikes of a virus under a microscope...
- The formation of a social and cultural environment in the school community that will provide freedom of expression, psychological safety, interaction and cooperation even in different groups. An environment that accepts variety and diversity, strengthens personal relationships, and encourages and ensures the pursuit of common goals.
- Cultivating personality traits, such as openness to experience, intrinsic motivation and interest, formation of an internal "compass" of control (Alexander & Sandahl, 2017: 37), inquisitive and playful disposition, tolerance to frustration and failure, self-discipline, and a multifaceted view of reality.
- The cultivation of all forms of thinking, memory-mnemonic techniques, cognitive process-insightful perception, divergent-creative-lateral-integrative thinking, and

convergent-critical-vertical-linear-analytical-logical thinking. Emphasis on the ability to integrate, transform, and process. Mental fluency and flexibility.

- The emphasis on creative teaching-learning processes that will be less dependent on criteria of immediate reproduction, repetition and evaluation in order to allow time for students to reflect and assimilate the knowledge objects. During teaching, premature criticism and disapproval are avoided, and time is allowed for incubation and reflection.
- The production of learning products that can range from the simple reconstruction of a material, the transformation and new organization of knowledge, and the discovery and formulation of new ideas that go beyond the given information. For Rogers, a small child who discovers a game on his own has nothing to envy Einstein's discovery of relativity! (Xanthacou & Kaila, 2012).

Creativity has been a field of discussion and research in psychology for over 60 years, and the question that arises is: "*What can we learn from creative adults that will help us nurture more creative children?*" (Piirto, as cited above: 2).

The memorization of formulas and rules, the quantitative accumulation of facts, and the reproduction of a particular material—especially from "*banks*" of questions at the high school level—continue to be a favored approach of the educational system. The formation of a creative teacher is directly related to the high possession of a creative action, which will not constitute a "*memorized rhetoric of conclusions*", but the conclusion of a "*romance*" with its knowledge and methodology (Xanthacou & Kaila, as cited above). Lacking special training, teachers - children of the same school - often perceive as a "*good student*" the one who looks like him. However, there are some components of behavior, some views of the teacher that favor creative teaching-learning.

Components of teachers' behavior and views that favor creative teaching-learning:

- Teachers favor cooperation, interaction, exchange, movement from an experimenting "I" to an active "We" and vice versa, and cooperation even between different groups of the community (parents, agencies, specialists, etc).
- Teachers recognize, accept and utilize the diversity of children, the different perspectives of viewing reality, different expressions, talents, skills, and knowledge.
- Teachers tolerate the risk and the mistake. They perceive failure as a learning opportunity and innovation as a process of continuous small or great successes, as well as mistakes and failures.
- Teachers allow time for interaction, discussion, collaboration, incubation, discovery, evaluation of the cognitive contents and their connections with wider topics.
- Teachers have the experience of what Adair (2011: 29) calls "*a sensation of pleasure*" of fullness, the deep, that is, satisfaction after achieving a strenuous task. They attempt, by guiding, to help students to "*tune in*" (Rosa, 2021) to an activity and to feel pleasure and emotion derived from it.
- Teachers who will be able to initiate creative teaching-learning, communicate with their students, and know their interests in school discussions.

- Teachers know, from idea generation techniques, at least the structure of "*creative problem solving*". They know that creative problem solving requires a process for solving it, which is not completely familiar from previous experiences. The children's interest is mobilized by a scenario, a "*riddle*", in order to achieve the involvement of the student in the learning process. In contrast to the conventional, standardized problem, the creative solution problem presupposes a distance between what the student knows and what is asked (Xanthacou & Kaila, as cited above).
- Teachers know that thinking is not a trick or a routine exercise. Knowledge cannot be summoned by slogans - of the type "*I keep the beach clean*" - and the routines of the "*ceremonial*" school.
- Teachers avoid the uniformity of content, teaching methods, and evaluation criteria that aim exclusively at memorization and reproduction. They recognize that students have a variety of skills and encourage active participation through inquiry, experimentation, cognitive conflict, problem-solving, and personalized learning.

2. Research Methodology

2.1 Aim and Objectives of the Research

The aim of the study is to explore the attitudes, views and knowledge of primary education teachers regarding the components of creative teaching-learning. More specifically, it is investigated whether:

- Teachers recognize and utilize the diversity of the children without disapproving of their choices.
- Teachers favor cooperation, interactions and exchanges of children with classmates, the school unit and more widely, other groups of the community.
- Teachers tolerate the risk and do not criminalize mistakes and failures, as long as they perceive it as a learning opportunity.
- Teachers dedicate time for preparation, incubation, discovery, assimilation and evaluation of knowledge.
- Teachers attempt, by guiding, to help the students to "tune in" to an activity and to derive pleasure and emotion from it.
- Teachers know the interests, talents, and inner motivation of the children.
- Teachers know the characteristics of creative problem-solving.

2.2 Means of Data Collection and Survey Sample

The teachers were asked to answer a questionnaire, submitting their views by answering a total of ten "open-ended" questions in the form of scenarios. These scenarios were largely adopted from the international literature (real events, stories – narratives, myths). The axes of the questionnaire are the following: cooperation, diversity, risk-taking/compliance, feeling of fulfillment from the achievement of a project, knowledge

of children's interests and talents, knowledge of creative problem solving, cultivation of reflection, variety of approaches, teaching and assessment methods.

The research sample consisted of a total of 381 primary education teachers (teachers), approximately equally distributed among the six classes of the primary school. Teachers of specialties (Physical Education, Informatics, etc.) did not participate in the sample. The selection of teachers in the sample was based on the ease of access the research team had to various schools from a wide number of regions of the country.

2.3 Statistical Analysis Method

In this paper, only descriptive and statistical data are presented. Percentage frequency distribution tables are given, both for the case of the categorical variables and for the case of the qualitative variables of the last (10th) question, which were all on a four-point grading scale. In the case of qualitative variables, when describing the results, apart from percentages, in order to form a concise and simultaneously easy-to-use presentation picture, the mean (M) is shown as a measure of central tendency of the responses of the teachers of the sample.

For easier reading of the results, we consider it appropriate to note here that the coding of the data for the extraction of the mean values was done in the following way: Very=4, Quite=3, A Little=2, Not at all=1. Thus, the Mean. 3.60 means that the teachers of the sample - on average - are placed in the "Very" category. Accordingly, the Mean of 2.21 means that teachers are placed on average in the "A Little" category.

3. Findings and Discussion

The first question refers to an educational program that was implemented in the Oklahoma region (Robinson and Aronica, as cited above: 267-270) called "book buddies" and includes cooperative procedures between kindergarten children and elderly people from a nursing home. A program that "breaks" conventional perspectives of exchanges with successful results for both children and the elderly.

Table 1: Distribution of the teachers' responses of the sample regarding the cooperation and interaction of children with different groups of the community

Children's Interaction with Various Community Groups	**%**
Positive view	89,8
Negative view	7,9
Other	2,3
Total	**100,0**

The first question (Table 1), which aims to explore teachers' views about the cooperation and interaction of children with different community groups, shows that the vast majority of teachers (89.8%) are positive about the cooperation of different ages.

The teachers claim that the elderly by helping young children to read, contribute to "*reducing the generation gap and improving communication*", it is "*a benefit for the elderly and for the children" and also "it is an attempt that cultivates relationships of respect...".*

Few teachers (7.9%) express a negative opinion, claiming that "*the educational process must be implemented by teachers"*, pointing out the "*absence of pedagogical competence*" and believing that "*elderly people cannot pass on knowledge and get in touch with the children due to age difference*". Finally, almost zero (2.3%) is the percentage of teachers who gave other alternative answers.

In the second scenario, the teachers have taken five-year-old children from a kindergarten in Bern for a walk to an aqueduct, explaining to them the genius of the construction. Then, the children were asked to draw the aqueduct. Observing the drawings, they saw the drawing of a child who had put shoes on all the pillars. How do the teachers evaluate this painting?

Table 2: Distribution of the answers of the teachers of the sample regarding issues of recognizing the diversity and special talents of the students by avoiding precocious criticism and evaluation of their productions

Issues for Identifying the Diversity and Special Talents of Students	**%**
He probably has a problem of perception and understanding	27,5
Maybe he doesn't like painting, he's bored of painting	11,8
Other: creativity	33,1
Other: animism, discussion with the child	27,6
Total	**100,0**

The second question aims to explore teachers' views about issues of recognizing the diversity and special talents of students by avoiding premature criticism and evaluation of their productions. It is based on Steiner and Adler's (2022: 96) description of a childhood production by the painter Paul Klee.

As shown in Table 2, the majority of teachers in the sample focus on the option "Other" (60.7% in total). The statements included in this category vary as follows:

- Views that attribute the "*to the child's creative painting to the creative way of thinking"*, *"to his developed imagination*", to the fact that "*it presents another perspective as in The Little Prince where the narrator drew a boa ... and the others saw a hat*" (33.1%).
- Within the same category, some teachers argue that the child "*personified the aqueduct*", with his imagination; that is, "*the child has combined the concepts of pillar and foot*", "*it is a kind of animism*" (27.6%).

Some teachers are cautious. They try to interpret the painting as a sign of some problem: "*the child is concerned about something and thus finds a way to express it*". Some people still state that "*perhaps the child should be assessed in another drawing as well to draw a conclusion*", while others conclude that the child probably "*wanted to express some inner thought or concern*" (27,6%).

A smaller percentage of the teachers of the sample directly states that the child "*probably has a problem of perception and understanding*" (27.5%), specifying that "*if the child always portrays what he sees in an objectively unexpected way, then possibly this child presents problems of perception or even understanding and requires further investigation and follow-up*". Obviously, some educators associate the expression via paintings with a logical–photographic production based on sensory experience.

They overlook the fact that the little child and great artists paint not exactly as they see but as they experience it. They are productions created by the human mind, by passing, transforming and combining its conceptions and ideas resulting to a personal creation (Xanthacou, 2011).

Finally, very few teachers (11.8%) attribute the child's production of the scenario to a possible indifference to painting or to the given subject.

The third question-scenario comes from a cross-cultural research by Torrance (1961), with the assumption that the practices of the curricular programs in the school pass on to the consciousness of the children a range of social sanctions against deviance. The scenario, slightly modified from the original, aims to explore teachers' views towards diversity, risks to manifest it, ending up showing compliance (Xanthacou & Kaila, 2012).

The scenario refers to a monkey in the African jungle, Pepper, who ate peppers and not bananas. At some point, Pepper was flying out of the jungle to go into town. Pepper was flying when people saw him there; some started laughing, and others screaming. They tried to trap him and put him in a cage. Pepper escaped in the end and returned to the jungle. Fortunately! The teachers were asked what message they would pass on to the children after the story of the flying monkey.

Table 3: Distribution of the responses of the teachers of the sample regarding the message they would transmit to the children after telling the story of the flying monkey

The Message of the Story of the Flying Monkey	**%**
The environment in which Pepper was living was ideal in greenery and freedom	16,5
Curiosity burned Pepper. What business did a monkey have, a flying one in the big city	5,5
It was an experience for Pepper. Because he was flying, he wanted to get to know the big city…	57,5
Other	20,5
Total	**100,0**

In the third question (Table 3), most teachers of the sample (57.5%) claim that the mentioned project "*was an experience for Pepper. Also, because he was flying, he wanted to get to know the big city ...*". Additionally, they state that "*sometimes what counts is the experience of the trip. Moreover, we learn from our mistakes*".

Those teachers who chose the "*Other*" category (20.5%) recognize that Pepper "*had curiosity and he did well*", along with segments of reservation because "*the unknown also needs attention*", "*unfortunately, diversity is not easily accepted by the majority of people*".

As shown in Table 3, despite the positive-progressive views of the teachers in favor of the curious, the adventurous and the uncertain, the avoidance of risk and risk-taking are indirectly highlighted in the respondents' comments ("*from our mistakes we learn as well*") and they indicate a much deeper process intertwined with negative consequences and insecurity. Thus, the aversion of society (Greece has the highest score among seventy-six (76) countries that participated in the research regarding Uncertainty Avoidance) (Manolopoulos, 2014) for changes, reforms and innovations, the difficulty in accepting new ideas and avoidance of business risk with a dominant concern for security and control is understandable. The cost of failure is the reason why many people don't make

bold changes in their lives and careers. The research was based on the theory of cultural dimensions of Geert Hofstede.

The following scenario is taken from Albert Burla's book "*Moonshot*, *Pfizer's incredible race to create the vaccine"* (2022) and shows the feelings of the creators of the coronavirus vaccine immediately after its implementation. Do teachers recognize this experience?

Table 4: Distribution of the responses of the teachers of the sample regarding the experience of satisfaction and fulfillment experienced by the individual after completing a strenuous task

Satisfaction and Fulfillment After the Completion of Hard Work	**%**
They are in love, they leave for a long trip	33,9
They won the LOTTO, now they can travel comfortably	8,7
They achieved the patent in a difficult research project	50,4
Other	7,0
Total	**100,0**

The fourth question scenario focuses on investigating the experience of satisfaction and fulfillment experienced by the individual after completing a strenuous task (hedonic response, Adair, 2011: 29).

Table 4 shows that about half of the teachers (50.4%) recognize the experience of fulfillment and satisfaction when one completes a laborious production. However, a significant percentage of respondents' attribute satisfaction to causes such as: "*they are in love...*" (33.9%), "*they won the LOTTO*" (8.7%) or "*Other*" (7.0%), such as "*wanted to enjoy the sunrise*" and "*succeeded in University*".

The fifth question-scenario arises from the teenage experiences of Matt Groening, known throughout the world as the creator of The Simpsons (Robinson, Aronica, as cited above: 21-23). Through this, the artist's strong motivation, self-motivation and personal involvement in the learning processes of the field of his interests emerge. He himself as a teenager narrates: I found friends who had the same interests, we hung out and drew comics.

We took them to school and showed them to each other. As we got older, we got better. We started making movies. Instead of going to football games, we went to the local university and watched movies. They told us that we could do all this later, after we finished school. What advice do teachers give to these children?

Table 5: Distribution of the answers of the teachers of the sample according to the type of advice given to the children

Advice to Children	**%**
To keep cultivating their interests	63,0
To focus on their courses	7,1
Other	29,9
Total	**100,0**

According to the views of the teachers (table 5), it is found that the majority of the teachers (63.0%) state that the children of the scenario "*should continue to cultivate their interests but after school, in their free time*". As can be seen, the academic route takes precedence.

This view is also reinforced by the teachers' statements in the "*Other*" category (29.9%). There, they boldly state that they must "*balance their good performance at school with the parallel cultivation of their interests*", "*combine lessons with other interests ... and not at the expense of school obligations*", "*... not at the expense of education*".

The sixth question aims to explore whether teachers can distinguish between a conventional, standardized, clearly defined problem and a creative solution problem. The question-scenario was asking 5-year-old children the following: Margarita had 6 balloons, 2 broke. How many balloons does she have now? Use the papers and colors you have and paint the remaining balloons. The teachers were asked if the above activity is a creative problem.

Table 6: Distribution of the answers of the teachers of the sample according to whether they know what creative problem solving is

Creative Solution Problem	**%**
Yes, it is a creative problem.	55,1
No, it is not a creative problem.	37,8
Other	7,1
Total	**100,0**

As shown in table 6, many of the teachers of the sample (55.1%) do not distinguish a creative problem from a standardized closed-type exercise. They believe that when an activity has "*materials, colors and balloons*", then it "*sparks children's imagination*" and "*gives children the opportunity to express themselves freely and creatively*".

On the other hand, the teachers who state about the scenario that it is not a creative solution problem (37.8%), substantiate their position by claiming that: "*the problem should be more experiential*", "*it has strict instructions*", "*it would be good if it was done collaboratively*". Finally, the teachers who chose the category "*Other*" (7.1%) mainly claim that "*children at this age are not able to do mental calculations*" and that the mentioned problem would be creative if the child himself/herself "*he/she was completely making up the problem*".

The seventh question-scenario comes from a statement by Woody Allen, who, in a sarcastic style, criticizes emerging methods - mainly in the USA - which aim at high-speed reading and learning processes based on memorization. These are processes which inhibit creative learning, qualitative thinking, incubation and inspiration and turn teachers and students into 'information postmen'. According to Woody Allen: *"I took classes in high-speed reading and managed to read «War and Peace» in 40 minutes, reading about halfway down the page. Teachers were asked their opinion about this method and whether it could help their students"*.

Table 7: Distribution of the answers of the teachers of the sample regarding the high-speed reading method

High-Speed Reading Method	**%**
Positive view for high-speed reading method	34,6
Negative view of high-speed reading method	52,0
Other	13,4
Total	**100,0**

As Table 7 shows, it was found that approximately half of the teachers in the sample (52.0%) have a negative attitude towards the high-speed reading method. They claim that such a method "*shows superficiality because you miss the meaning*", "*a deeper approach is needed*", "*a work has multiple interpretations and a quick reading nullifies them*". In other words, they realize that what we gain in time, we lose in meaning, in understanding and processing ideas.

About 1/3 of teachers (34.6%) support exactly the opposite opinion. They believe that with this method, "*the eye learns to quickly tune in and perform*", they judge that "*it is a skill that can contribute to quick understanding and utilizing valuable time*". Some conclude that "*it is important for people to find creative ways and strategies to make their lives easier*", ignoring that such techniques put a brake on the generation of ideas and suppress creative thinking itself.

The eighth question-scenario aims to investigate how the school culture manages environmental issues, how it shapes "*the school class that cares*" about the environment, and if it knows the mechanisms of nature and is inspired by it.

In this scenario, reference is made to the framework of programs for the protection of marine ecosystems and coastal areas, where the teacher asks the students to make signs and place them on the beach. The texts on the signs are as follows: I keep the sea and the beach clean, and plastics kill the turtles. The teachers of the research sample were asked to express their opinion on the above activity with the reasoning that knowledge cannot be summoned with slogans and routines of the traditional school.

Table 8: Distribution of the responses of the teachers of the sample regarding the approval or not of the proposed slogan

Approval of Suggested Activity	**%**
I approve the activity	84,3
I reject the activity	11,0
Other	4,7
Total	**100,0**

As shown in Table 8, the vast majority of teachers (84.3%) approve of the mentioned activity because, as they say, "*their environmental awareness develops and they can pass it on to others*", "*it is something creative, the readers of the signs are likely to take into account the messages and contribute to the protection of marine ecosystems*". Apparently, they not only approve of the activity but also describe it as creative. Thus, the ignorance of teachers regarding creative techniques and procedures is revealed.

A small percentage of the respondents (11.0%) reject the learning activity in question, clearly emphasizing that "*signs do not change the way people think and behave*" and even that "*it is a simplified activity without deepening the issue of the protection of marine ecosystems*". As can be seen, the small percentage of teachers who reject the activity described in the question tend to believe that in addition to anthropogenic pollution, the health of ecosystems should not be studied "*individually and unconnected*" but "*synecological*" (Karydis, 2020: 326).

The ninth question-scenario comes from a narrative-personal experience of Sternberg, slightly modified. Sternberg says that as an elementary school student, he had experienced major failures on the assessment criteria and had anxiety every time he had to answer the questions. And while he was busy with the first or second subject, the other students quickly finished, resulting in failure.

This question highlights some students' anxiety about the possibility of negative criticism. It also becomes clear that the repetitive questions, the uniformity of assessment content, and the emphasis on memorization do not suit all students and different skills. The teachers were asked what this child's greatest problem.

Table 9: Distribution of the responses of the teachers of the sample regarding the child's greatest problem in the assessment tests

Child Problems in Assessment Tests	**%**
He didn't know the material, so he couldn't answer	5,5
He did not know how to read and memorize the material	7,1
He did not have a positive self-image and self-confidence	57,5
He had undiagnosed learning problems...	19,7
Other	10,2
Total	**100,0**

As can be seen in Table 9, teachers mainly speculate that the problem of the child in question arises from the fact that "*he did not have a positive self-image and self-confidence*" (57.5%). They focus on the psychological dimension of the problem, as this is additionally revealed by their statements in the "*Other*" category (10.2%): "*the child has stress management issues*", "*the stress was oppressive*", "*he had excessive anxiety and fear of failure*".

Fewer educators (19,7%) attribute the narrator's failure to cognitive and learning issues, such as: "*he had undiagnosed learning problems. Also, he had to get special help*", "*he didn't know how to read and memorize the material*".

The tenth question-scenario is derived from a fable from Bettelheim's (1995) work "*The Charm of Fairy Tales*" and aims to investigate teachers' views on the role of parents, the school and ineffective teaching methods with a lack of motivation, verbal attacks and failure to recognize the child's needs.

This question concerns qualitative variables that were all on a four-point grading scale, such as: recognition of child's needs, authoritarian father figure, investment in cognitive domain, interpersonal relationships, obsession with predetermined apprenticeship, providing motivation, environment suspicious of the new, etc. The coding of the data to extract the mean was done as follows: "*Much*", "*Moderately*",

"*Slightly*", "*Not at all*". Teachers were asked to what extent the following qualitative variables were associated with the myth child.

The child of the fairy tale does not conform - like Pepper - to the expectations of his environment; he does not "*fit*" into the prefabricated suit of his family. The teachers in the sample associate this case with an "*authoritarian father figure*" (Mean: 3.57) who "*does not recognize the child's needs*" at all (Mean: 1.59). "*He sticks to a predetermined - tested and ineffective apprenticeship*" (he sent him to a teacher) (Mean: 3.60) "*investing exclusively in the cognitive domain*" (Mean: 3.40). They also diagnose "*poor interpersonal relationships*" (Mean: 1.71) and an "*environment suspicious of the new*" (Mean: 3.15) which "*does not provide the necessary motivation for the child*" (Mean: 1.77) to discover his talents and interests.

Table 10: Distribution of teachers' answers for each justification that concerns the case of the child in question

Justifications	Much	Moderately	Slightly	None	Indexes
	%	%	%	%	M
Recognition of the needs of the child	5,5	9,5	23,6	61,4	1,59
Authoritarian father figure	66,9	26,7	3,2	3,2	3,57
Stubbornness and obsession of the child	11,8	26,0	33,9	28,3	2,21
Exclusive investment in the cognitive sector	58,3	27,6	10,2	3,9	3,40
Rich interpersonal relationships	3,9	12,6	33,9	49,6	1,71
Acquisition by the child of useless knowledge	2,4	22,0	30,7	44,9	1,82
Motivating the child	6,3	13,4	31,5	48,8	1,77
Self-fulfilling prophecy	22,8	43,3	18,1	15,8	2,73
Environment suspicious in new	37,8	44,1	13,4	4,7	3,15
Obsessing over a predetermined apprenticeship	66,9	26,8	5,5	0,8	3,60

4. Conclusion and Further Research

In the global knowledge society, where the only certain thing is change and where individuals are now called upon to solve problems in any domain and in any phase of their lives, problems yet unknown, creativity is the undeniable challenge for today and in the future. Thus, the school and the teachers at all levels must support and develop creative teaching-learning, preparing their students to acquire not only knowledge but also competencies, abilities, and skills.

The present research aims to detect teachers' knowledge, views and attitudes about the components of creative teaching-learning. The teachers submitted their opinions and knowledge in a questionnaire with open-ended questions in the form of scenarios. The axes of the questionnaire are cooperation, diversity, risk-taking-compliance, feeling of pleasure from achieving a project, knowledge of the interests of students, knowledge of creative problem-solving, and a variety of approaches-teaching methods.

The sample of the research was a total of 381 teachers equally distributed in the six classes of the primary school, from a wide number of regions of the country. The sample selection method has its limitations. The results of the study cannot be generalized to the

entire population of Greek teachers because the sample was recruited by convenience sampling.

What do the Greek teachers say about the above topics?

1) Regarding cooperation, interaction and student exchanges with different community groups, the vast majority of teachers are positive.
2) Regarding the recognition of the diversity and special talents of the students by avoiding premature criticism and evaluation of their productions, 1/3 of the teachers seem to recognize the different, special talent and creative perspective of the productions of the child in the scenario-question. With the rest of the teachers, either attributing problems of perception and understanding to the child (approximately 1/3 of the teachers) or interpreting the production as an indication of some problem that concerns the child and expresses it through his/her drawing (less than 1/3 of teachers), or even a minority of teachers attribute to the child indifference towards painting. We must not forget that in the present scenario, the production of a child who later excelled in painting is featured. That is Paul Knee.
3) Regarding the inquisitive, adventurous, risky and uncertain nature of the person-hero of the scenario, the teachers (half of the entire sample) are generally positive. However, they have reservations, with comments such as "we also learn from our mistakes, "*the unknown needs attention*".
4) Regarding the experience of satisfaction-fulfillment after completing a strenuous project, the teachers (about half) are positive, recognizing this feeling.
5) Regarding teachers' views on the cultivation of different talents, interests and personal involvement in learning processes outside of school regarding students, the majority of teachers (63%) agree with the comment, however, *"... after school, in their free time*", without burdening their academic performance and route.
6) Regarding the teachers' knowledge of the "*creative problem solving*" technique, it seems that they do not distinguish a creative problem from a standardized closed-type exercise. At the same time, they think that materials, colors, etc., are enough for children to express themselves creatively!
7) Regarding teachers' views on high-speed reading, teachers (half of them) are negatively positioned towards this method, with 1/3, however, considering it important that people find creative ways to make their lives easier and save time!
8) With reference to activities that refer to slogans and "routines" of the traditional school in relation to environmental issues, the teachers in the great majority (84%) approve them spectacularly and even describe them as creative. Thus, the ignorance of teachers is highlighted - as in the case of creative problem solving regarding creative techniques and methodologies.
9) Regarding assessment criteria, the uniformity of assessment contents, which do not suit all students with different skills, and the feeling of failure and stress experienced by some students, teachers attribute the problem to the student himself/herself (lack of positive self-image and self-confidence, more than half of the teachers, 57.5% or learning problems 19.7% or not yet able to read and memorize). In other words, they do not wonder about their role and possible

responsibility, nor about the outdated educational system with repetitive questions in the evaluation system and the emphasis on memorization. Elements, moreover, that are found in earlier research in an international level (Kaila, Xanthacou, & Andreadakis, 1992, 1993).

10) Regarding the hero of the fairy tale, who does not conform to the expectations of his environment, the teachers recognize the authoritarian father figure, the investment exclusively in the cognitive domain, the poor interpersonal relationships, the non-recognition of the child's needs, and the obsession with ineffective learning.

In conclusion, the Greek teachers agree to cooperation topics, they accept curiosity and risk on the part of the students with some reservations, the cultivation of different talents outside of school on the part of the students with some reservations, they recognize the feeling of satisfaction from the completion of a strenuous task- undertaking, while they are negatively positioned towards high-speed reading. They recognize, in addition, the obsession with ineffective learning and the failure to recognize the needs of the hero in the fairy-tale scenario.

On the other hand, however, regarding the issue of "*recognition of the different*", most teachers place the responsibility on the child himself/herself as a problem of perception or indifference towards the specific activity. In the same spirit, teachers have similar views regarding evaluation criteria, with uniformity of contents for all without exception, placing the responsibility on the individual, not the school system or themselves.

Finally, the teachers at the pedagogical level find ignorance regarding creative techniques, procedures and methodologies, as seen in the creative problem solving and the "*slogans*" that they perceive as creative in relation to environmental problems.

How will teachers launch new learning goals and creative activities, if they themselves do not have the appropriate education and modern training (UNESCO, 2019) on this subject and how will they teach their students creatively, if they themselves do not have the appropriate knowledge (Piirto, 2011) or do they themselves feel inadequate? This is the challenge for the school of the 21st century and the training of educational institutions!

The present research will be supplemented with an observation key in the areas under study and for a small sample of teachers to detect what teachers do and say in the actual field with students in the classroom.

Conflict of Interest Statement
All authors declare that they have no conflicts of interest. No funding was received for this research from any source.

About the Authors

Dr. Eleni N. Nikolaou is an Associate Professor at the Department of Sciences of Preschool Education and Educational Design, University of the Aegean, Greece. Her research interests include school counseling, developmental psychopathology, resilience

and wellbeing. Her published work is uploaded on Google Scholar: https://scholar.google.gr/citations?user=LYvhEv8AAAAJ&hl=ened

Dr. Yota Xanthacou is an Emeritus Professor in Creative Learning at the Department of Sciences of Preschool Education and Educational Design, University of the Aegean, Rhodes, Greece. Her research interests include Creativity, Innovation, Cultural Sustainability, Local Knowledge and Educational Design.

Dr. Vasileios Papavasileiou teaches in the Department of Sciences of Preschool Education and Educational Design as an Associate Professor at the School of Humanities of the University of the Aegean. His is the Director of the Master's Program "Environmental Education" as well as the Director of Laboratory of Applied Research for Environmental Education. His research interests include both Environmental Education in Education Sciences and Education for Sustainable Development.

Dr. Nikos Andreadakis teaches in the Department of Sciences of Preschool Education and Educational Design as a Professor at the School of Humanities of the University of the Aegean. His research interests focus on "Educational Research & Evaluation".

Dr. Dimitrios Matzanos is a Primary Education Consultant. He is a postdoctoral fellow at the University of the Aegean. His scientific articles have been published in reputable Greek and international scientific journals, in collective volumes, he has co-edited a collective volume and he has presented papers with his recommendations at Panhellenic, International and World Conferences with proceedings (Proceedings). His research interests include Environmental Education in Education Sciences, Education for Sustainable Development, Creativity, Cultural Sustainability and Educational Design.

Dr. Maria Kaila is an Emeritus Professor in Educational Psychology at the Department of Sciences of Preschool Education and Educational Design, University of the Aegean, Rhodes, Greece. Her research interests include Educational Psychology, Research Methods in Education, Pedagogical Psychology, Educational Design, Environmental Psychology, Sustainable Development, Creative Thinking and Learning.

References

Adair, J. (2011). *John Adair's 100 greatest ideas for amazing creativity*. Chichester, West Sussex: Capstone Publishing Ltd. Retrieved from https://www.wiley.com/en-ie/John+Adair's+100+Greatest+Ideas+for+Amazing+Creativity-p-9780857082275

Alexander, J.J. & Sandahl, I. D. (2017). *Why Danish people raise the happiest children in the world*. Athens: Dioptra. (in Greek)

Betelheim, M. (1995). *The charm of fairy tales*. Athens: Glaros. (in Greek)

Bourla, A. (2022). *Moonshot. The unbelievable race of Pfizer for creating a vaccine*. Athens: Psihoyos. (in Greek). Retrieved from https://www.barnesandnoble.com/w/moonshot-dr-albert-bourla/1139444187

Bullard, A.J. & Bahar, A.K. (2023). Common barriers in teaching for creativity in K-12 classrooms: A literature review. *Journal of Creativity*, 33 (1) Article 100045. 10.1016/ j.yjoc. 2023.100045. Retrieved from

https://leadingforcreativethinking.org/sites/default/files/2024-04/Common-barriers-in-teaching-for-creativity-in-K-12-class_2023.pdf

Cotter, K.N., Ivcevic, Z. & Moeller, J. (2020). Person-oriented profiles of originality and fluency in divergent thinking responses. *Journal of Research in Personality*, 86, https://doi.org/10.1016/j.jrp.2020.103941

Csikszentmihalyi, M. (1996). *The creative personality. Creativity: Flow and the Psychology of Discovery and Invention*. New York: Harper Collins Publishers. Retrieved from https://inspiredbyislam.wordpress.com/wp-content/uploads/2022/08/creativity-flow-and-the-psychology-of-discovery-and-invention-mihaly-csikszentmihalyi-z-lib.org_.pdf

Kaila, M., Xanthacou, Y. & Andreadakis, N. (1992). L' échec scolaire: une question de circuits et de circulations dans les environments insulaires. Une recherche-action en Grèce dans le réseau du Dodécanèse. In *PRELUDE Reseaux. Mode-d'emploi Environment, Communication, Recherche*. Belgique Presses Universitaires de Namur, Belgique: p.379-387.

Kaila, M. Xanthacou, Y. & Andreadakis, N. (1993). Representations et attitudes des éléves à l' égard de l' evaluation-hierarchisation dans le mecanisme scolaire en Grèce, *Perspectives*, No 24-25, Nov, p.157-181.

Karydis, M. (2020). *Encyclopedia of marine sciences*. Athens: Disigma Publications. (in Greek)

Maker, C. J., Bahar A. K., Pease, R. & Alfaiz, F. S. (2023). Discovering and nurturing creative problem solving in young children: An exploratory study. *Journal of Creativity*, 33, Elsevier. https://doi.org/10.1016/j.yjoc.2023.100053

Manolopoulos, I. (2014). View: The avoidance of uncertainty. 12 October 2014. http://www.kathimerini.gr/787751/article/oikonomia/elliniki-oikonomia/apoyh-h-apofygy-ths-avevaiothtas. (in Greek)

Mróz, A., Ocetkiewicz, I. (2021). Creativity for sustainability: How do Polish teachers develop students' creativity competence? Analysis of research results. *Sustainability*, 13, 571. https://doi.org/10.3390/su13020571

NACCE (1999). *All our futures: creativity, culture and education*, London: DfEE. Retrieved from https://sirkenrobinson.com/pdf/allourfutures.pdf

Paek, S.H., Runco, M.A. (2018). A latent profile analysis of the criterion-related validity of a divergent thinking test. *Creativity Research Journal*, 30 (2), 212-223. https://doi.org/10.1080/10400419.2018.1446751

Piaget, J. (1962). *Play, dreams and imitation in childhood*. New York: Norton. https://doi.org/10.4324/9781315009698

Piirto, J. (2011). *Creativity for 21st-century skills. How to embed creativity into the curriculum.* Rotterdam/Boston/Tai-Pei: Sense Publishers. Retrieved from https://www.researchgate.net/publication/263374102_Creativity_for_21st_Century_Skills_How_to_Embed_Creativity_Into_the_Classroom

Rosa, H. (2021). *Acceleration and alienation, For a critical theory of temporality in late modernity.* Athens: Plethos Publications. (in Greek). Retrieved from

https://books.google.ro/books/about/Alienation_and_Acceleration.html?id=Se0pAQAAMAAJ&redir_esc=y

Runco, M.A. & Jaeger, G.S. (2012). The standard definition of creativity. *Creat. Res. J.*, 24, 92-96. http://dx.doi.org/10.1080/10400419.2012.650092

Steiner, G. & Adler, L. (2022). *A long Saturday, discussions*. Athens: Doma, books in Athens (in Greek)

Sternberg, R.J. & Lubart, T. I. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity*. Free Press. Retrieved from https://psycnet.apa.org/record/1995-97404-000

Tan, A-G. & Perleth, C. (eds.) (2015). *Creativity, Culture and Development. Singapore, Heidelberg*, New York, London: Springer. Retrieved from https://www.researchgate.net/publication/303728852_Creativity_culture_and_development

Troncoso, A., Aguayo, G., Acuña C.C. & Torres, L. (2022). Creativity, pedagogical, and educational innovation analysis of the perception of a group of Chilean teachers. *Educ. Pesqui*. Sao Paulo, 48, http://dx.doi.org/10.1590/s1678-4634202248238562eng

UNESCO Thesaurus (2019). *Vocabulary information*. Retrieved from https://vocabularies.unesco.org/browser/thesaurus/en/

Xanthacou, Y. (2011). *Painting an imaginary family*. Athens: Diadrassi. (in Greek)

Xanthacou, Y. & Kaila, M. (2012). *Creative problem solving.* New York: Nova Science Publishers Inc. Retrieved from https://www.researchgate.net/publication/288732420_Creative_problem_solving

Xanthacou, Y., Kaila, M. & Papavasileiou, V. (2018). *"Imagination dead imagine" because "You can trap birds with birdlime, but you cannot capture their song"*. New York: Nova Science Publishers Inc. Retrieved from https://novapublishers.com/writer/yota-p-xanthacou/