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Survey the Influence of the Creativity Teaching Model on Teachers' Knowledge, Attitude, and Teaching Skills

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Abstract

Teachers, as one of the most important training and education elements, have a key role in nourishing creativity. The teachers attitude toward creativity, their level of understanding of it, and also their type of attitude and teaching method have direct relationship on enriching the class environment for students' growth of creativity. Therefore it is necessary to help the teachers gain the attitude and skills for the growth of the students' capacity of creativity. In order to assess how creativity is taught in elementary school period, 120 instructors were participating (60 instructors in a test group and 60 instructors in a control group). The test group became involved in "teaching of creativity" program so that the impact of the program and training model on instructors' knowledge, attitude, and skill would be assessed. The results were examined through T test and showed that there is significant difference between the two groups, the "test group" and the "control group". The results stated the positive impact of the training period. A set of suggestions have been made for the growth of students' creativity based on the finding this research.

Keywords: creativity teaching, knowledge, attitude, teaching skills.

Encuesta de la Influencia del Modelo Pedagógico Creativo en el Conocimiento, la Actitud y las Habilidades Docentes

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Resumen

Los maestros, como uno de los elementos de formación y educación más importantes, tienen un papel clave en nutrir la creatividad. La actitud de los profesores hacia la creatividad, su nivel de comprensión de la misma, así como su tipo de actitud y método de enseñanza tiene relación directa en el ambiente de la clase para el crecimiento de la creatividad de los estudiantes. Por lo tanto, es necesario ayudar a los maestros a obtener la actitud y las habilidades para el crecimiento de la capacidad creativa de los estudiantes. Con el fin de evaluar la forma en que se enseña la creatividad en el período de la escuela primaria, han participado 120 instructores (60 instructores en un grupo de prueba y 60 instructores en un grupo de control). El grupo de prueba se involucró en "la enseñanza de la creatividad", programa para evaluar el impacto y el modelo de formación en el conocimiento, la actitud y la habilidad de los instructores. Los resultados se analizaron mediante la prueba T y mostraron que no hay diferencias significativas entre los dos grupos. Los resultados indicaron el impacto positivo del periodo de formación. Se realizaron un conjunto de propuestas para el crecimiento de la creatividad en los estudiantes basadas en los hallazgos de esta investigación

Palabras clave: creatividad docente, conocimiento, actitud, habilidades docentes

Creativity is a fashionable notion of contemporary discourses that is frequently used in educational contents and contexts (Karwowski et al., 2007). Nevertheless, based on many researchers, creativity is a vague term and we have some difficulties when required to put its meaning into words (Sawyer, 2006). The term creativity as used in everyday life and in academic fields refers to the process, person, product, or context, and has many definitions. However, creativity researchers agree that creativity is a process that leads to an outcome that is novel, original, and unconventional and is accepted as appropriate, valuable, and useful. (Kampylis and et. al., 2009)

It is clear that many of human achievements and advancements are due to his/her ability to think creatively. Therefore it is obvious that to pay attention to these subjects and to create the grounds for its development and nurturing is very important. School one place has a fundamental role in the development and expansion of creativity and in contrast damaging and destroying it in the society. The curriculum, the educational content, and the creativity in such programs and educations are influenced by the teachers, principals, other employees, as well as the educational atmosphere and facilities. Through this, the teacher's role however is a multifaceted direct influence in this area.

Researches show that teachers are generally not successful in a variety of fields related to creativity, inability to identify the creative students (Torrance 1968; Renzulli, 1993), lesser attention, encouragement, and approval of creative students (Gatzeles & Jackson, 1962; Gallagher, 1985), not showing proper attitude toward creativity (Hosseini, 1999), and not taking advantage of creative teaching methods (Cropley, 2000). These points make the necessity for conducting educational programs for teachers obvious. The program would work for creating the proper awareness, skill, and attitude.

Research Background

The Limitations of Creativity in Education

Based on Craft (2003), there are four limits to creativity in education:

- The limitation of terminology. There are considerable distinction

between creative teaching and teaching for creativity.

- Conflicts in policy and practice. Although creativity is encouraged in the classroom, the means by which creativity and other educational goals are achieved extremely limit teachers. Another limitation to creativity is the discontinuities in the curriculum.
- Limitations in curriculum organization. Creativity is dependant to the curriculum and is not subject-specific.
- Limitations stemming from centrally-controlled pedagogy. The fostering of creativity is extremely relevant to the pedagogical limitations.

Torrance (1965) showed that teachers are not usually familiar with creativity and even avoid it. Although the teachers generally value creativity, they have negative attitudes and cannot tolerate behaviors and attributes associated with creativity. Therefore, some teachers may follow “inhibiting practices” (Alencar, 2002) for the expression of students’ creativity. According to Alencar (2002), the term “inhibiting practices” incorporates the following:

- (i) emphasis on the correct response, reinforcing the fear of failure,
- (ii) exaggerated emphasis on reproduction of knowledge,
- (iii) low expectations about the students’ creative potential,
- (iv) emphasis on the students’ obedience and passivity, and
- (v) Little emphasis on fantasy and imagination.

Furthermore, teachers have a narrow and cliché view of creativity and stress the lack of attention to creativity in teachers’ education. (Kampylis et al. 2009)

Beghetto (2007) believes that unfortunately, in many classroom discussions, some teachers do not well receive novel ideas. Indeed, such ideas often are rejected by teachers, because novel ideas are unexpected ones.

He continues that creativity requires a combination of uniqueness and relevance, but too much emphasis on relevance can make some problem. For instance, students’ creativity might be neglected if too much emphasis is placed on whether novel ideas have relevance.

This claim does not mean that students should never be taught how to balance originality with relevance. Actually, providing students with informative feedback make them determine how and when to appropriately

express their ideas and it is a key aspect of creativity enhancement (Beghetto, 2007). However, if teachers place too much emphasis on relevance and avoiding mistakes, students may not release their novel ideas.

So, teachers must establish a classroom environment, in which students feel safe taking risks (Tighe, et al., 2003). This starts with accepting of unique students' responses, even if those responses are rarely relevant to the conversation. (Beghetto, 2007)

The research results also show that creative teachers nurture and develop more creative students. On top of this, teachers who have a warm, sincere, and accepting character increase the creativity possibility among the students. Gallagher (1985) asks a group of teachers to assume that creativity is a very valuable characteristic. He then asks the teachers how they would have destroyed it if they could. The teachers provided many suggestions, some of which were their own methods of teaching. From the point of view of most of the teachers the most important causes for destroying creativity include the following:

1. A compressed curriculum which is carried on in a limited time period;
2. The teacher's lack of skill in teaching the material he's been assigned;
3. When only one source is accepted as the valid one through the course;
4. When no opportunity is provided for the student to discuss and state his opinion.

If we pay attention to obstacles teachers refer to in Gallagher's research, and if we do a simple investigation about the school teacher's performance, we can see that often these issues are also found among Iranian teachers' teaching as well. During our research, the question of "What are the obstacles for creativity in the class?" was raised for the teachers. In response, the teachers stressed the following points: a- Large mass of school books; b- cliché; d- inflexible standards and rules; and e- considering creative students bothersome.

Fryer & Collins (1991) found in their research that 75 percent of teachers believe that students have small bit of creativity. Sternberg (2001) conducted a research about "the impact of teaching creativity on the students' performance" on 110 students and came to certain conclusions: he came to point that the amount of impact of teaching creativity is related to cognitive and personal characteristics of the students. James and Asmus (2001) also concluded from their research on 41 students that the shaping of creativity,

cognitive and personality characteristics has mutual impact.

Renzuli (1993) offered a comprehensive plan with the goal of expanding and circulating creativity in schools. Although the plan had broad objectives, it was able to reach successful results due to its simplicity in being conducted.

Sue Lyle (2008) showed: Drawing on recent developments in dialogic approaches to learning and teaching, he said; I examine the roots of dialogic meaning-making as a concept in classroom practices.

Developments in the field of dialogic pedagogy are reviewed and the case for dialogic engagement as an approach to classroom interaction is considered. The implications of dialogic classroom approaches are discussed in the context of educational research and classroom practice. Dialogic practice is contrasted with monologist practices as evidenced by the resilience of the IRF as the default discourse structure in classrooms. Recent evidence suggests the IRF is resistant to attempts to introduce interactive approaches to whole class teaching. Discussion of dialogic practice as a vehicle for increasing pupil engagement at a deep level and raising the quality of classroom interaction is illustrated through a consideration of Philosophy for Children, which is identified as a dialogic approach to classroom practice which has transformative potential for children's learning. Philosophy for Children offers an approach to pedagogy which enables teachers to value pupil voice and promote reflective learning. As such it has much to offer the current debate on dialogic teaching and learning. Research evidence suggests it will promote improved pupil outcomes on a range of Assessments.

Robin Simmons and Ron Thompson (2008): Examined the circumstances affecting creative teaching and learning within the specific context of English further education (FE)—a sector which has proved to be particularly fertile ground for perform activity. Beginning with an analysis of notions of creativity in education and a description of the peculiar history and policy context of FE,

Eun Ah Lee (2006) examined Korean elementary teachers' understanding of creativity, in particular those who teach the gifted students. Facilitating creativity was one of the major goals in gifted education in Korea, and teachers' role was considered to be crucial in achieving this goal. Forty-two elementary teachers were surveyed with an open-ended

questionnaire to identify their understanding of creativity. Their answers were analyzed based on cognitive, personal, and environmental components of creativity. Teachers who mentioned all three components were recognized to have a balanced view. However, one third of the teachers had a biased view, mentioning only 1 component. Many had an intermediate view, mentioning 2 components. Preference for the cognitive component, the disregard of the personal component, and the partial understanding of the environmental component were also discovered. To successfully facilitate creativity in gifted education, teachers' balanced view is essential. Thus the personal component and the environmental component should be emphasized to improve their understanding creativity may only serve to reproduce and exacerbate existing inequalities in education.

Considering all the above beliefs, there is a need to know what teachers really mean when they use the word creativity to achieve the creative schools (Kampylis et al., 2009). Teachers' conceptions of creativity may facilitate or inhibit students' creative behavior, because the ways in which teachers organize the classroom activities are influenced by teacher's belief and knowledge (Beghetto, 2007). Thus, teachers' conceptions should be taken into account in any educational program and curriculum. Moreover, teachers' conceptions show the type of knowledge that is gained from real classroom environment (Kampylis et al., 2009).

Research Objective and Hypotheses

The main objective of this research is the investigations and evaluation of the "program for teaching creativity to teachers" in order to clarify its impact on the positive attitude. In order to achieve the three main fundamental objectives of the research, the following hypotheses were put to testing:

1. The creativity teaching program results in increase in the teacher's teaching skill.
2. The creativity teaching program results in of positive attitude toward creativity.
3. The creativity teaching program increases the teachers' knowledge about creativity.

Statistical population and sample

The statistical population of this research is consisted of all teachers currently working in the elementary schools of the 19 education districts of the city of Tehran in the school-year 2001-2002. From this group, a study sample was randomly selected, including 60 persons for the experimental group for the experimental group, and 60 persons for the control group.

Data Collecting Instruments

Considering the three variables that are focused on in the research, i.e. knowledge, attitude, and teaching skill, a questionnaire with three parts was prepared in the format of a pre-test and post-test. The test was consisted of 10 questions in the knowledge section, 30 questions in the attitude section, and 35 questions in the skill sections.

Both research groups were asked to take a primary test. After that, a 70 hour training course was held for them during one month. The training was carried out as training workshop with both theory and practice and the training was done in three parts.

- 15 hours of instruction about the essence of creativity and the principle fundamentals in creativity,
- 25 hour for creativity teaching methods, and
- 30 hours for creativity research methods in school and class.

The Research Findings

Table 1

Means comparison between test and control groups regarding skill.

Test	Group	Mean	Sum	SD	T-value
Pre-test	Test	59.62	60	10.65	0.11
	Control	60	61	14.2	
Post-test	Test	68.64	60	10.57	2.53
	Control	60.62	61	14.1	

The results of the independent T-test for the test and control groups with respect to skill are provide in Table 3. The T-value obtained ($T=2.65$) is

greater than the value in the statistical table ($T=2.33$) at $d.f=119$ and $CI=99\%$, denoting a significant difference between the test and control groups. Moreover, the observed T-value before the course ($T=0.11$) is less than the value in the statistical table ($T=2.33$). So, the two groups were not significantly different on the pre-test. However, the observed T-value for the post-test ($T=2.53$) is greater than the value in the statistical table ($T=2.33$), indicating a significant difference.

Table 2
Means comparison between test and control groups in terms of attitude.

Test	Group	Mean	Sum	SD	T-value
Pre-test	Test	114.79	60	2.38	1.53
	Control	110	61	1.32	
Post-test	Test	121	60	1.51	4.5
	Control	109.1	61	1.6	

Table 2 contains the results of the independent T-test for the test and control groups regarding attitude. The T-value obtained ($T=2.57$) is greater than that in the statistical table ($T=2.33$) at $d.f=119$ and $CI=99\%$, indicating a significant difference between the two groups with regard to attitude. The observed T-value before the course ($T=1.53$) is less than that in the statistical table ($T=2.33$). Therefore, the two groups were not significantly different on the pre-test. This is while the observed T-value for the post-test ($T=4.5$) is greater than the value in the statistical table ($T=2.33$), showing a statistically significant difference between the two groups.

Table 3
Descriptive statistics of the post-test TTCT scores

Test	Group	Mean	Sum	SD	T-value
Pre-test	Test	11.58	60	1.5	0.07
	Control	11.54	61	2.4	
Post-test	Test	14.1	60	1.06	10.58
	Control	10.5	61	1.5	

Regarding the results in the above table, the T-value obtained ($T=3.44$) is greater than that in the statistical table ($T=2.33$) at $d.f=119$ and confidence

interval= 99%. Therefore, there is a significant difference between the test and control groups in terms of knowledge.

As can be observed, the T-value for the pre-test ($T=0.07$) is less than the T-value in the statistical table ($T= 2.32$). So, the test and control groups did not have a significant difference in the pre-test. However, the observed T-value ($T=10.58$) is greater than that of the statistical table ($T=2.33$), which indicates a significant difference.

Conclusion

The current research was conducted for the purpose of studying and investigating the impact of "creativity teaching course" on the teachers' knowledge, attitude, and teaching skills. The research sample consisted of primary school teachers of various educational districts in Tehran, which was divided into the experimental group and the control group. Pre-test and post-test were taken from both of the course on the experimental group. The results of the research are as follows:

- I. In the teaching skill factor, the T-test result showed that the difference between the two groups is significant, this confirms the first assumption.
- II. In the attitude factor, the T-test result showed that the difference between the two groups is significant, this confirms the second assumption.
- III. In the knowledge factor, the T-test results is based in the significant difference of the two groups. Therefore the 3th assumption of the research that states that the creativity research program increases the teachers' creativity is confirmed.

With regard to the results derived from the statistical analysis the training course period has had a positive impact on increasing the teachers' Knowledge, change of attitude, and teaching skill. On top of this, the teachers' open-ended responses about the course showed that over 90 percent of the teachers believed that this course not only had a positive impact on their knowledge, attitude, and skill, but also caused their attitude to change toward life and create fundamental changes in their life and career.

The deep impact of this program on teachers was also very obvious on their students. The teachers stated that from then on the students participated

with much more motivation in the class activities. The students even preferred to stay in class during their break times and to continue with their activities.

These results showed that if the teachers are provided with a suitable structure, they will again a positive attitude and will have a more appropriate educational activity by having more awareness about creativity. This on its own will guide the students to respond to educational issues with higher motive and activity.

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