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A Study of Teachers' Attitudes Toward Teaching for Creativity in Relation to Their Professional Development

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Abstract: The main aim of this research was to investigate the relationship between secondary teachers' attitudes toward teaching for creativity and their professional development via the correlational-descriptive method. The sample consisted of 49 Saudi secondary school teachers who were selected randomly from the Qatif's secondary schools of KSA. The instrument of this study was developed by Wadaani (2015), which consisted of 16 items on a five-point Likert scale. One hypothesis was established to examine the correlation of the research variables via the descriptive analysis and the multiple regression analysis The findings of this study show that there is a significant positive relationship between teachers attitudes toward teaching for creativity and their professional development, but this relationship is weak based on its effect size, which is just 16.03% since R (square) is at 0,1603, indicating that teachers' attitudes toward teaching for creativity are partially related to their professional development and it may be possible to predict it. This study recommended that teachers should focus on their development via the training programs and these training programs should be designed in a way that encourages them to participate and react by means of providing incentives during the training.

Keywords: Teaching for creativity, Professional development

دراسة علاقة اتجاهات المعلمين نحو التدريس من أجل الإبداع وتطورهم المهني

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الملخص: هدفت هذه الدراسة إلى التحقق من وجود علاقة بين اتجاهات المعلمين نحو التدريس من أجل الإبداع وتطورهم المهني عبر المنهج الوصفي الارتباطي. وقد تكونت عينة البحث من 49 معلماً تم اختيارهم بشكل عشوائي من مدارس القطيف الثانوية بالمملكة العربية السعودية حيث شاركوا في تقييم اتجاهاتهم نحو التدريس من أجل الإبداع وتطورهم المهني عبر استبانة مكونة من 16 فقرة على مقياس ليكرت خمس- نقطة، أعدت من قبل الباحث الودعاني (2015). واشتملت هذه الدراسة على فرضية تم اثباتها بالتحليل الوصفي والانحداري. وتشير النتائج إلى وجود علاقة ذات دلالة إحصائية موجبة بين اتجاهات المعلمين نحو التدريس من أجل الإبداع وتطورهم المهني، ولكن هذه العلاقة ضعيفة بناء على حجم التأثير الذي يبلغ 16.03٪ فقط حيث إن R(square) عند 0,16030، مما يعني أن اتجاهات المعلمين نحو التدريس من أجل الإبداع مرتبطة جزئيًا بتطورهم المهني وقد يكون من الممكن التنبؤ بها في المستقبل. وأوصت هذه الدراسة بضرورة تركيز المعلمين على التنمية المهنية عبر البرامج التدريبية والتي ينبغي أن تصمم بطريقة تشجعهم على المشاركة والتفاعل عبر توفير الحوافز أثناء التدريب.

الكلمات المفتاحية: التدريس من اجل الابداع، التطوير المهني.

Introduction

Teachers are primary elements in developing certain skills for students, such as critical thinking as well as creative thinking, to enable them to compete in the educational field effectively and efficiently. They act as catalysts that encourage students' attitudes toward the teaching methods that in turn need to be congruent with their styles of learning. It is necessary to consider the relationship between the teachers' attitudes and their strategies implemented in an attractive environment in order to determine the right decision making toward their professional development to meet their goals and outcomes that in turn develop students' functions in terms of three parameters, knowledge, skills, and behavior.

The role of a teacher in the good environment is to deliver the content in a way that enhances students' perceiving of knowledge via the active learning strategy (Nolan, 2010). It is necessary in the modern environment to transfer the teaching method based on the teacher instruction into the student self-directed learning strategy to meet the topic objectives based on the Bloom Taxonomy domains effectively and efficiently(Kudryashova, Gorbatova, Rybushkina, & Ivanova, 2015). Therefore, the main objective of any teacher is to provide a positive atmosphere for students to react positively in order to master the learning goals and demonstrate their abilities at any academic task.

Teaching for creativity is an important factor in developing creative skills as well as lifelong learning skills for students in order to be competent in solving problems and making the products that are original and useful. Therefore, teaching for creativity is a teacher's role nowadays. Craft (2005) revealed that the teaching methods are developed for enhancing students in order to be creative depending on two parameters, namely, their ethos and pedagogy.

The teacher attitude is a crucial factor that should be considered to meet the educational outcomes in terms of teaching for creativity. Duatepe and Oylum (2004) claimed that the teachers' attitudes are related positively or negatively to their performance based on the teaching methods used in the classroom. As a result, this relationship is significant. However, Khalifah and Mahmoud (1991) found that teachers' attitudes may be changed either positively or negatively according to some factors including opposing behavior, attraction, and reconciliation. Consequently, the teacher attitude may be influenced by the context oriented and can be considered as the function of the concerned behavior. In this study, the teachers' attitudes toward teaching for creativity in relation to their professional development would be investigated through the correlational - descriptive method.

Literature Review

The literature review provides suitable knowledge to support the investigation of the relationship between the research topic's variables. It enriches the study with evidences that may be helpful in proving the research inductive hypothesis.

Nowadays, creativity is the main objective in the curriculum of many countries in which it provides support for students to think abstractly. It has many multi-meanings because of different views and approaches of researchers who studied this phenomenon. Plucker, Beghetto, and Dow (2005) defined creativity as the reaction among three elements, namely, aptitude, process, and environment that lead to forming new and useful products in relation to the social context. In this case, it is defined as the original productivity. This definition is the one mentioned mostly in this study. However, Treffinger, Young, Selby, and Shepardson (2002) expressed creativity as the function of human behavior and social experience. In this case, it was defined as a life style. Subsequently, teachers should provide instructional practices that promote students' creativity in solving problems, using creative skills, developing creative thinking, task commitment, transferring, and collaboration (Hong, Hartzell& Greene, 2009).

Creativity and education should be amalgamated together and cannot be seen as discrete identities. In Canada, one of the main learning objectives is the creative thinking. In the USA, creative thinking is one of the main learning goals that foster students developing novel ideas or inventing novel products. In addition, based on the National Curriculum of Korea, the educated person can be seen as a creative one. In Sweden, creative skills are bolstered based on its educational provision. In Germany, creative abilities of students are supported based on education curriculum (Shaheen, 2010). In Netherland, the creative development has become one of the main components of education (O'Donnell & Micklethwaite, 1999).

Creative teaching is not the same as teaching for creativity, they are different concepts. Jeffrey and Woods (1997) claimed that the concept of creative teaching is different from that of teaching for creativity even in practices. Creative teaching needs implementing effective approaches in the classroom to make learning more interesting and effective. Teaching for creativity involves determining the strengths of creative students and fostering them toward creativity (Cremin, 2009). Therefore, it is important to consider teachers attitudes toward creativity for developing creative students further.

Jeffrey and Craft (2004) found that teaching for creativity influences teachers' attitudes positively, fosters students to think creatively and modifies their behavior toward creativity. Jones and Jones (1981) revealed that teachers' work affects their attitudes, which in turn impact their behavior and enhance students to learn. Karolčík, Čipková and Kinchin (2016) asserted in their study that the professional development of biology teachers via using digital technologies in their activities influenced positively their attitudes. Katoch (2017) argued that there are no statistically significant differences among all schoolteachers' attitudes toward teaching for creativity. The investigation of teachers' attitudes toward teaching for creativity and their professional development is the focus of this study. Finding out this relationship would affect the future teacher professional development programs to meet the creativity's aim enhancement for all students.

The Study problem statement

Creative students need special teaching methods and activities to meet their needs and produce creative outcomes. Some teachers may impede creativity among students because they do not have positive attitudes toward teaching for creativity and do not care about their professional development in their fields. Therefore, most students remain constant in their educational settings because are not exposed to creative teaching strategies as well as curricular and extracurricular activities that foster their abilities to think creatively and meet the objectives of their study.

The Research Questions

Based on the research problem, the following questions was emerged on the surface of the study:

1- Are teachers' attitudes toward teaching for creativity related to their professional development in terms of the number of years of experience?
2- Are teachers' attitudes toward teaching for creativity related to their professional development in terms of the number of the training programs pertained to creativity?

The Research Hypothesis

The hypothesis of this study was evolved to investigate the relationship between teachers' attitudes toward teaching for creativity and their professional development in terms of the years of their experiences and the number of training programs related to creativity. It can be stated as the following:

The Null Hypothesis (H_0): The professional development of teachers has no influence on teachers' attitudes toward teaching for creativity.

The Alternative Hypothesis (H_1): The professional development of teachers has a positive influence on teachers' attitudes toward teaching for creativity.

The Significance of the Study

This research is concentrating on diffusing the strategy of teaching for creativity among secondary school teachers since creativity is an essential element in solving problems differently and logically and meeting the original outcomes that enhance students to think creatively when they face some barriers or problems that impede them from approaching their goals. It is paramount because it considers the teachers' attitudes toward teaching for creativity in relation to their professional development. The research outcomes will have a powerful influence on secondary school teachers to teach students creativity skills in order to master KSA curriculum objectives at the secondary level effectively and efficiently.

The Study Design

The Method of the Study

The correlational-descriptive method was used to determine whether teachers' attitudes toward teaching for creativity would depend on their professional development in terms of the years of their experiences and the number of training programs related to creativity. The research design is illustrated in the following flowchart:

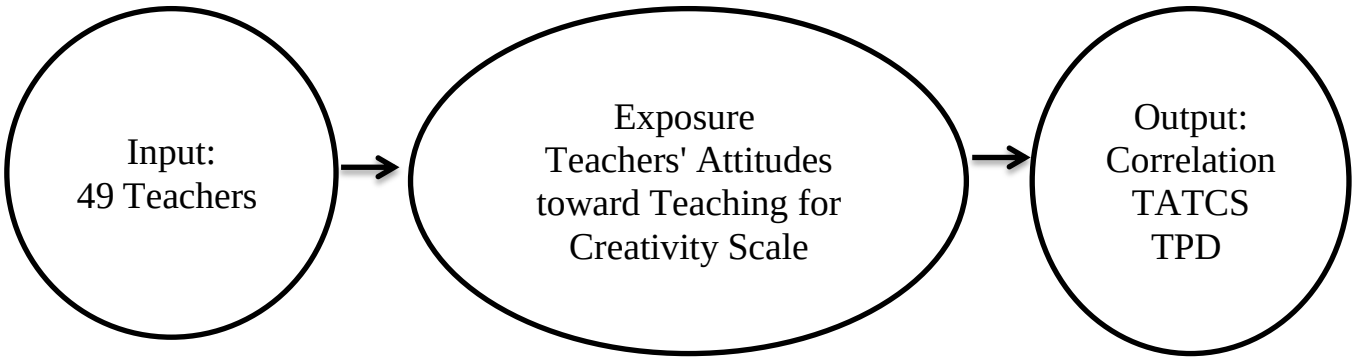


Figure (1) The Research Design Flowchart

In the figure 1, TATCS denotes teachers' attitudes toward teaching for creativity scale while TPD denotes teachers' professional development. This flowchart shows that 49 teachers as the input of the research design process would be exposed to teachers' attitudes toward teaching for creativity scale in order to investigate the correlation between their attitudes toward teaching for creativity and their professional development as the output of this process.

The Sample of the Study

The sample of this study was selected randomly from the secondary schools of the Qatif city, which were located in the Eastern Province of KSA. It consisted of 49 teachers who taught subjects, including science, mathematics, Arabic language, physical education, English language, social science, library, and special education. These teachers were chosen based on three factors, namely, the years of experience, the performance appraisal, and the effective curricular and extracurricular activities. This study had been conducted during the second semester of 2019 and its period was limited for one week.

Variables

The study consists of one dependent variable called secondary school teachers' attitudes toward teaching for creativity, and one independent variable called teachers professional development as a function of years' experience and the number of training programs related to creativity as well as possibly three moderator variables, including the environment, socioeconomic status and parental involvement.

The Research Tool

One tool was used in this study, which was a questionnaire that was designed to include two scales, namely, secondary school teachers' attitudes toward teaching for creativity scale (TATCS) and professional development scale (PDS) in terms of years' experience and the number of the training programs related to creativity. These scales were developed by Wadaani (2015). Teachers' attitudes toward creativity scale was consisted of 16 items on a five-point Likert scale (strongly disagree, disagree, undecided, agree, strongly agree) while the teachers' professional development scale was a function of years' experience and the number of creativity training programs. It consisted of one item as an open-ended question and one item as a closed-ended question, which is simply Yes or NO in which teachers were asked to determine whether they had taken training programs toward creativity or not and it was assigned one point for Yes and zero point for NO.

Validity

The items of the questionnaire that were designed by Wadaani (2015) and related to secondary school teachers' attitudes toward teaching for creativity and their professional development, were strongly valid because they reflected what they supposed to measure based on the agreement of three professional educators who were expertise in the field of creativity and education toward these items. In addition, the questionnaire's items were subjected to a pilot study to insure that they were valid. The pilot study's results showed that they supported the study's objective and were suitable in determining secondary school teachers' attitudes toward teaching for creativity and their professional development.

Reliability

The reliability of the instrument was determined as a function of Cronbach's Alpha coefficient that was calculated by using SPSS program. Its value is at 0.771, which reflects the internal consistency, indicating that the instrument used in this study is reliable.

Statistical Methods Used

There are three statistical methods used in this study as the following:

1- Descriptive Statistics

The central tendency of measures and variability of measures are two types of descriptive statistics used in this study. The central tendency of measures includes mean, mode, median, frequency, and percentage while the variability of measures includes the standard deviation and the variance.

2- Pearson Correlation Coefficient

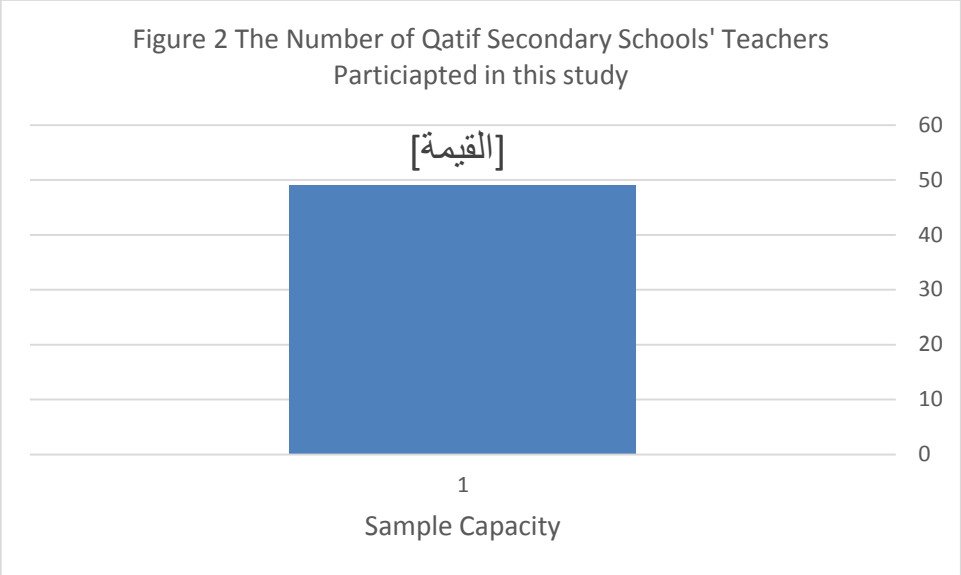
Pearson correlation coefficient analysis (r) is used to determine whether teachers' attitudes toward teaching for creativity would be depending on their professional development or not.

3- Multiple Regression Analysis

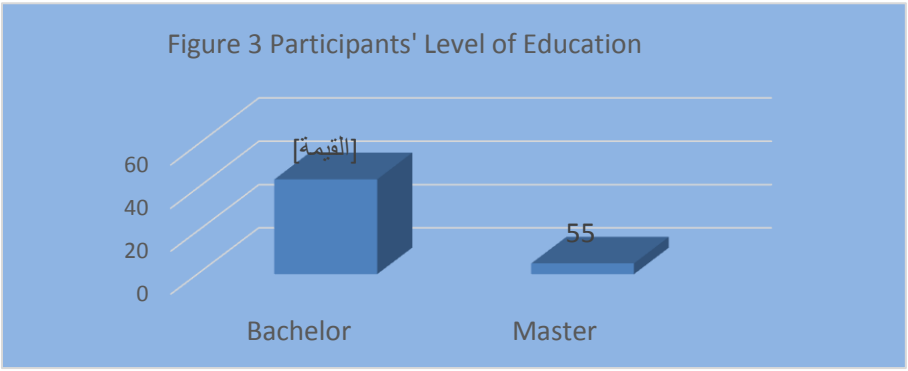
Multiple Regression analysis is a suitable tool in determining the influence of professional development of secondary school teachers on their attitude toward teaching for creativity.

Data Analysis

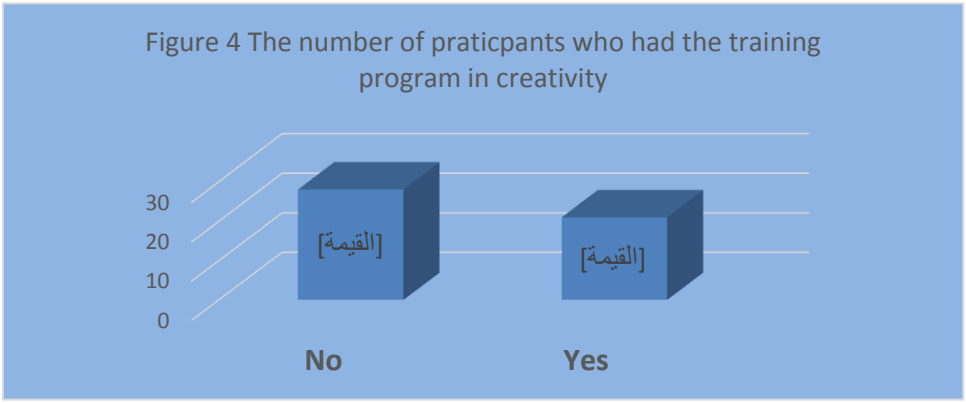
In this study, the participants were forty-nine Saudi secondary school teachers in which they can be considered as one group, derived randomly from the Qatif secondary schools and it is depicted in the following figure 2:



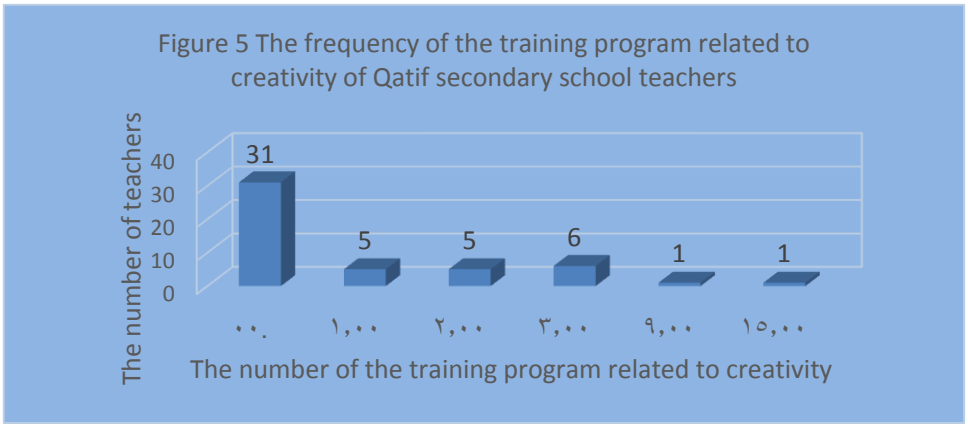
The general information of participants of this study includes the level of education, the years of experience, and the number of creativity training programs. The level of education of each secondary school teacher participated in this study is shown in the following figure 3:



The years of teaching experience of participants were ranged from zero to 32 with a mean of 21.18 years and a standard deviation of 5.75. Around 76% of the entire sample had more than 20 years of experience in teaching secondary school students. One the other hand, the number of participants who answered Yes or No question, responding to whether they had the training program related to creativity or not, is shown in the following figure 4:



The number of the training programs related to creativity gained by secondary school teachers were ranged from zero to 15 programs with a mean of 1.16 programs and a standard deviation of 2.25. 31 out of 49 teachers did not have training programs related to creativity as shown in the following figure 5:



The sample's characteristics had been determined by using descriptive statistics, including central tendency of measures and variability of measures. The mean, median, and mode of the rating responses' scores of the secondary school teachers toward teaching for creativity on the basis of the instrument scale of the entire sample as well as the mean's standard deviation of that rating responses are shown in the following table 1:

Table (1) Descriptive analysis of Saudi secondary school teachers' attitudes toward teaching for creativity

Population Sample (N)	Mean	Mode	Median	Mean's Standard Deviation
49	3.86	5	4	0.47

According to the table 1, the mean of the rating responses of Saudi secondary school teachers toward teaching for creativity is at 3.86 on a five point with a standard deviation of 0, 47 indicating that they have positive attitudes toward this phenomenon. Since the mean's standard deviation of 0.47 is slightly high among the rating responses of secondary school teachers, their rating responses move further away from the mean. Since the mean, mode, and median are not equal, almost negatively skewed distribution (skewedness = -1.26) exists instead of a normal distribution curve, indicating that the rating

responses scores move toward lower values since the value of skewness is negative at -1.26 and it is shown clearly in the following figure 6:

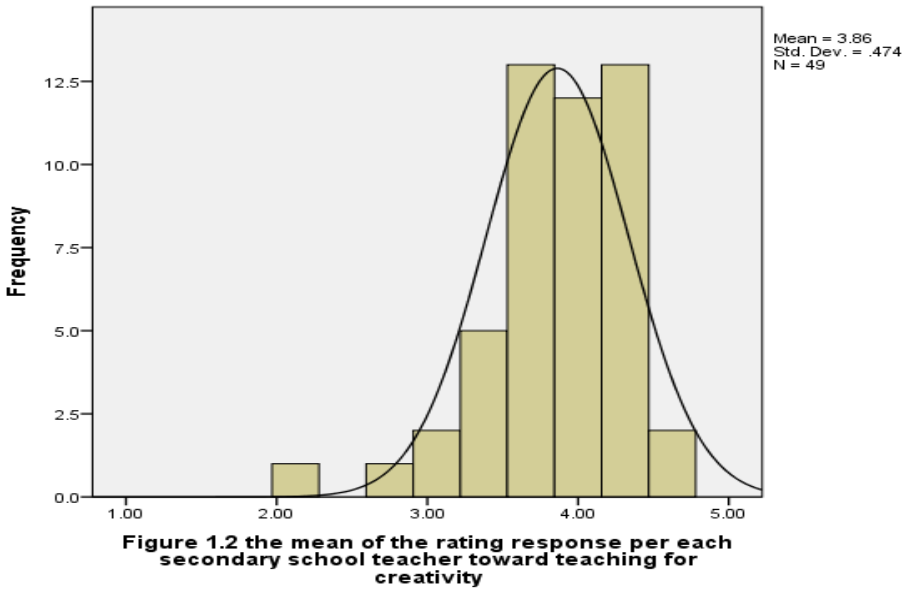


Figure 1.2 the mean of the rating response per each secondary school teacher toward teaching for creativity

Figure (6) Thenegatively skewed distribution of the mean of the rating responses per each secondary school teacher toward teaching for creativity

According to the table 2:

Table (2) The Responses of the entire sample toward teaching for creativity

#	Statement	Level of Agreement					
		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total
C1	Creativity is a key factor for personal and social progress.	1	1	6	11	30	49
C2	Creativity is limited to particular fields.	24	7	5	8	5	49
C3	Creativity is an innate ability that cannot be taught or developed.	21	12	11	4	1	49
C4	Creativity can be developed in general education classrooms.	1	2	6	19	21	49
C5	Teaching for creativity is necessary to enhance student academic achievement.	1	2	5	12	29	49
C6	Most students, if not all, have the potential to be creative individuals.	4	2	10	14	19	49
C7	Developing creativity for all students is an essential role of the	1	3	8	15	22	49

#	Statement	Level of Agreement					
		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total
	general classroom teacher.						
C8	Schools should provide additional programs for developing student creativity that go beyond general education classrooms.	0	2	3	13	31	49
C9	Teachers should engage in professional learning that helps them teach for creativity.	0	2	11	15	21	49
C10	It is important that students be provided with different avenues to learn based upon their aptitudes and interests.	1	1	1	11	35	49
C11	There are several methods that teachers can use to successfully differentiate instruction in the general education classroom.	0	2	4	21	22	49
C12	Differentiation of instruction leads to chaos in the general education classroom.	11	15	13	8	2	49
C13	Students need a supportive environment to demonstrate their abilities.	0	1	0	14	34	49
C14	Students who have high abilities are always able to fully develop their abilities without support.	2	0	0	10	37	49
C15	Providing students who have high abilities with enrichment learning opportunities is an essential role of the general classroom teacher.	3	12	13	11	10	49
C16	Students who have high abilities in mathematics should be supported to work on self-selected projects.	2	2	5	19	21	49
Total		72	66	101	205	340	784
Percent		9.2	8,4	12.9	26.1	43.4	1--

17.6 % of the entire sample of Saudi secondary school teachers' responses were negative toward teaching for creativity, especially in the statements related to the limited of creativity fields, non-development of the innate ability of creativity, and the chaos of differentiation of instruction in the general

education classroom. On the other hand, 69.5 % of the total responses were positive, indicating that they behave positively toward teaching for creativity, especially in the statements related to the creativity as a key factor for personal and social progress, the development of creativity in the general education classroom, the teaching for creativity as the process for enhancing student academic achievement, the potential of creative individuals, the additional programs for developing student creativity, the professional learning of teachers in creativity, teaching methods, the environment, the enrichment learning opportunities, and support. However, 12.9 % of teachers' responses were classified as neither positive nor negative, particularly in the statement that is related to the self-development of students with high abilities without support.

The research data were analyzed to investigate the relationship between teachers' attitudes toward teaching for creativity and their professional development in terms of the years of their experiences and the number of creativity training programs. The following hypothesis was developed to examine this relationship and it can be stated as the following:

The Null Hypothesis (H_0): The professional development of teachers has no influence n teachers' attitudes toward teaching for creativity. **The Alternative Hypothesis (H_1):** The professional development of teachers has a positive influence on teachers' attitudes toward teaching for creativity.

This hypothesis was tested by using the Pearson correlation coefficient. This statistical method is useful in determining the relationship between teachers' attitudes toward teaching for creativity as the dependent variable and their professional development in terms of the years of their experiences and the number of creativity training programs as independent variable. According to the table3:

Table (3) The relationship between Saudi secondary school teachers' attitudes toward teaching for creativity and their professional development

Dependent Variable	Item	Independent variables	
		Years of experience	The number of creativity training programs
Saudi secondary school teachers' attitudes toward teaching for creativity	Person correlation coefficient	0.116	0.37
	N	49	49

It is clear that Saudi secondary school teachers' attitudes toward teaching for creativity is correlated weakly, but positively with the years of their experiences since the Pearson correlation coefficient is positive at 0.116. In addition, it is evident that Saudi secondary school teachers' attitudes toward teaching for creativity is correlated weakly, but positively with the number of creativity training program since the Pearson correlation coefficient is positive at 0.37, indicating that there is a significant positive relationship between teachers' attitudes toward teaching for creativity and their professional development since the Pearson correlation coefficient is not equal zero. This result reflects the influence of

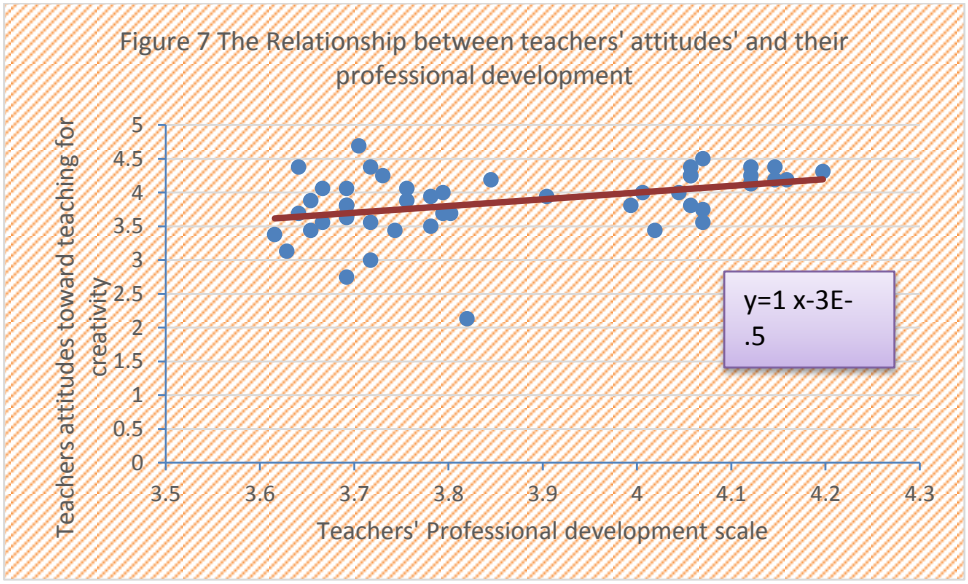
teachers' professional development on their attitudes toward teaching methods, learning styles of students, and the environment as well as teaching for creativity.

The multiple regression analysis is a good statistical method in predicting the influence size of teachers' professional development on their attitudes toward teaching for creativity. According to the table 4:

Table (4) The Regression analysis of the relationship between Saudi secondary school teachers attitudes toward teaching for creativity and their professional development

Population Sample (N)	Beta	R Square	P	
49	0.400	0.1603	0.004	

There is evidence that Saudi secondary school teachers' attitudes toward teaching for creativity is significantly related to their professional development since the p-value at 0.004 is less than α *at* 0.05 and $\beta(0.400)$ is not equal zero. Therefore, the null hypothesis should be rejected, indicating that there is a significant positive effect of professional development of teachers on their attitudes toward teaching for creativity. Since β at 0.400 is being a positive value, there is an upward linear line of the relationship between teachers' attitudes toward teaching for creativity and their professional development, but this relationship is weak and the effect size of teachers' professional development on their attitudes toward teaching for creativity is just 16.03 % since R (square) is at 0,1603. Consequently, teachers' attitude toward teaching for creativity is partially related to their professional development and this relationship is illustrated in the following figure 7:



Based on the figure 7, a linear line equation of the relationship between the research variables can be written in the following form: Y = 1 X-3E-0.5 in which the Y variable represents teachers' attitudes toward teaching for creativity while the X variable represents the teachers professional development. As a

result, it is possible to predict the influence size of teachers' professional development and their attitudes toward teaching for creativity.

Findings

Based on the analysis of data, this study shows that the instrument of secondary school teachers' attitudes toward teaching for creativity and their professional development, that was designed by Wadaani (2015), had strong validity based on the views of professional educators who were expertise in the field of education and creativity, and it is reliable based on the Cronbach's Alpha coefficient that was at 0.77. Therefore, it reflects the internal consistency and what it was supposed to measure.

It revealed that Saudi secondary school teachers have positive attitudes toward teaching for creativity since the mean of their rating responses was at 3.86 on a five point with a standard deviation of 0,47. Kumar (2013) endorsed that teachers have positive attitudes toward creative teaching. In addition, Wadaani (2015) asserted statistically that secondary school teachers behave positively toward teaching for creativity. This result reflects teachers' excitement for refining their teaching strategies and fostering their students to meet their needs.

The main concern of this study is to investigate the relationship between Saudi secondary school teachers' attitudes toward creativity and their professional development in terms of years of experience and the number of the training programs related to creativity. One hypothesis was developed for this purpose and the findings showed that there is a significant positive relationship between the secondary school teachers' attitudes toward teaching for creativity and their professional development since both Pearson correlation coefficients of the relationships of the teachers' attitudes with respect to the years of experience and to the number of the training programs are positive values and they are at 0.116 and at 0.37 respectively. However, this relationship is weak since the values of Pearson correlation coefficients of this study are smaller than 0.4. However, the effect size of teachers' professional development on their attitudes toward teaching for creativity is 16.03 % since R (square) is at 0, 1603. As a result, teachers' attitudes toward teaching for creativity are partially related to their professional development. Cynthia and Benjamin (2013) reported that professional development of teachers might improve their attitudes toward teaching. In fact, the training programs and the years of experience are important factors in motivating teachers toward teaching for creativity, which in turn affect their professional development. Reimers (2003) found that the teachers' performance in the classroom is influenced by their professional development. In addition, Cynthia and Benjamin (2013) reported that professional development of teachers might improve their attitudes toward teaching.

Conclusion

Teachers' attitudes' toward teaching for creativity may be a function of their professional development. They may affect their decisions toward suitable teaching strategies, which in turn should be consistent with the learning styles of students in order to motivate them to meet their needs. They act as a new trend in enhancing students to think creatively and critically and encourage them to meet the outcomes of education.

Professional development is a key factor that may change teachers' attitudes toward teaching for creativity. It is affected by multi-factors, including the training programs and the experience' years. It may motivate teachers and encourage them to react positively with their students in the classroom. It is one of multi- factors that refines the teaching methods and improves the classroom environment that in turn accelerates the learning rate of students

Implications

The Professional development of teachers in the field of creativity may speed up the learning rate of students. It may affect teachers' behaviors in contacting a new style of teaching. It reflects the students' needs that should be considered via teachers through the systematic steps, including analysis, planning, implementation, and evaluation that guide them to perform well and meet students' requirements.

Teachers' attitudes toward teaching for creativity may influence cognitive processes of students, including attention, perceptions, and memorization. Gifted students require tricky tasks that enhance them to learn effectively and efficiently. At the same time, they need stimulators that encourage them to meet their goals. This context situation occurs when teachers are excited to change their traditional styles to creative ones that play important roles in activating students to move toward the creative thinking when they deal with their tasks.

Recommendations

Based on the findings of this study, there are some recommendations that should be considered to improve teachers' attitudes toward teaching for creativity further in relation to their professional development. They are stated as the following:

1- Firstly, since there is a significant positive relationship between secondary school teachers' attitudes toward teaching for creativity and their professional development based on this study, it is important for teachers to focus on their development via the training programs. The training programs should be designed in a way that encourage teachers to participate and react by means of providing incentives during the training. It is necessary at the end of each the training program to assess the teachers' learning, behaviors, and reaction to be sure that the training program meets its objective and outcomes.

2- Secondly, the Ministry of KSA Education should encourage teachers to implement creative teaching strategies in the classrooms in order to refine students' performance further. Thirdly, the relationship between teachers' attitudes toward teaching for creativity and their professional development should be investigated further to include teachers who work in elementary and intermediate schools to be sure that the teaching for creativity can be diffused at the different levels of education.

Limitations

The spatial boarders, sample size, time, the secondary level of education, and the instrument are the main limitations of this study. It was conducted during the second semester of 2019 for one week. Its sample was selected randomly from different secondary schools of the Qatif city, located in the Eastern Province of KSA, and consisted of 49 teachers, There was one tool used in this study, namely, teachers' attitudes toward teaching for creativity, which was concentrated on the strengths of creative students and on fostering them toward creativity.

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Appendix

The instrument of teachers' attitudes toward teaching for creativity developed by Wadaani (2015)

Teachers' attitudes toward teaching for creativity						
#	Statement	Level of Agreement				
		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Teachers' attitudes toward teaching for creativity						
C1	Creativity is a key factor for personal and social progress.					
C2	Creativity is limited to particular fields.					
C3	Creativity is an innate ability that cannot be taught or developed.					
C4	Creativity can be developed in general education classrooms.					
C5	Teaching for creativity is necessary to enhance student academic achievement.					
C6	Most students, if not all, have the potential to be creative individuals.					
C7	Developing creativity for all students is an essential role of the general classroom teacher.					
C8	Schools should provide additional programs for developing student creativity that go beyond general education classrooms.					
C9	Teachers should engage in professional learning that helps them teach for creativity.					
C10	It is important that students be provided with different avenues to learn based upon their aptitudes and interests.					
C11	There are several methods that teachers can use to successfully differentiate instruction in the general education classroom.					
C12	Differentiation of instruction leads to chaos in the general education classroom.					
C13	Students need a supportive environment to demonstrate their abilities.					
C14	Students who have high abilities are always able to fully develop their abilities without support.					
C15	Providing students who have high abilities with enrichment learning opportunities is an essential role of the general classroom teacher.					
C16	Students who have high abilities in mathematics should be supported to work on self-selected projects.					

Appendix

Raw data of teachers' responses of their attitudes toward teaching for creativity

Teachers' responses of their attitudes toward teaching for creativity							
#	Statement	Level of Agreement					Total
		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
C1	Creativity is a key factor for personal and social progress.	1	1	6	11	30	49
C2	Creativity is limited to particular fields.	24	7	5	8	5	49
C3	Creativity is an innate ability that cannot be taught or developed.	21	12	11	4	1	49
C4	Creativity can be developed in general education classrooms.	1	2	6	19	21	49
C5	Teaching for creativity is necessary to enhance student academic achievement.	1	2	5	12	29	49
C6	Most students, if not all, have the potential to be creative individuals.	4	2	10	14	19	49
C7	Developing creativity for all students is an essential role of the general classroom teacher.	1	3	8	15	22	49
C8	Schools should provide additional programs for developing student creativity that go beyond general education classrooms.	0	2	3	13	31	49
C9	Teachers should engage in professional learning that helps them teach for creativity.	0	2	11	15	21	49
C10	It is important that students be provided with different avenues to learn based upon their aptitudes and interests.	1	1	1	11	35	49
C11	There are several methods that teachers can use to successfully differentiate instruction in the general education classroom.	0	2	4	21	22	49

Teachers' responses of their attitudes toward teaching for creativity							
C12	Differentiation of instruction leads to chaos in the general education classroom.	11	15	13	8	2	49
C13	Students need a supportive environment to demonstrate their abilities.	0	1	0	14	34	49
C14	Students who have high abilities are always able to fully develop their abilities without support.	2	0	0	10	37	49
C15	Providing students who have high abilities with enrichment learning opportunities is an essential role of the general classroom teacher.	3	12	13	11	10	49
C16	Students who have high abilities in mathematics should be supported to work on self-selected projects.	2	2	5	19	21	49