Faculty of Education
Journal of Education

Sohag Universit

Exploring the Creativity of Religious Middle School Teachers' Responses on Creativity Scale: Saudi Arabia

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Receipt date: 10 October 2024 - Date of acceptance: 27 October 2024

Abstract

This research has two main objectives: first, to identify the mean score of creativity self-reported by Religious middle school teachers; and second, to examine group differences in creativity scale responses based on teachers' years of teaching experience and gender (male and female). A sample of 237 Religious middle school teachers in Riyadh City volunteered to participate in this research. The result of this research showed that the majority percentage of religious middle school teachers perceived themselves to have a high inclination toward creativity. There were no statistically significant differences on the scale of Creativity based on the years of teaching experience and gender, both male and female of Religious middle school teachers ($p > .05$). Descriptive statistical methods were used to calculate the mean score for each participant on the scale used in this research. One-way ANOVA was used to determine if there are differences in the scores of the Creativity Scale based on the years of teaching experience of Religious middle school teachers. An independent-sample t-test was run to determine whether there were differences in the scores on the Creativity Scale based on the gender of both male and female Religious middle school teachers. all analyses were performed using a level of statistical significance of $p < .05$.

استكشاف إبداع معلمي التربية الدينية في المرحلة المتوسطة في المملكة العربية السعودية من خلال استجاباتهم على مقياس الإبداع

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مستخلص الدراسة

هدفت هذه الدراسة إلى تحقيق هدفين: تقييم مستويات الإبداع المبلغ عنها ذاتيًا من قبل معلمي المرحلة المتوسطة لمادة الدين في مدينة الرياض، وفحص الفروق في الإبداع بناءً على سنوات الخبرة التدريسية والجنس. شارك في الدراسة ٢٣٧ معلمًا بشكل تطوعي. أشارت النتائج إلى أن غالبية المعلمين اعتبروا أنفسهم ذوي ميول قوية نحو الإبداع. ومع ذلك، لم تُظهر النتائج فروقًا ذات دلالة إحصائية في الإبداع بناءً على سنوات الخبرة التدريسية أو الجنس ($p > .05$). تم استخدام الإحصائيات الوصفية لحساب متوسط درجات الإبداع لكل مشارك، كما تم استخدام تحليل التباين الأحادي (ANOVA) لاختبار الفروق بناءً على سنوات الخبرة التدريسية. وأُجري اختبار "تي" للعينة المستقلة لاستكشاف الفروق المحتملة بين الذكور والإناث في درجات الإبداع. أجريت جميع التحليلات بمستوى دلالة إحصائية أقل من ٠.٠٥.

1. Introduction

Creativity and education are crucial in allowing teachers and students to reshape the power dynamics that influence the learning process and ultimately improve student living conditions (Robinson & Aronica, 2016; Sholan, 2019; Starko, 2018). Creativity in the 21st century has been identified as an essential skill (Ahmadi et al., 2019; Cho et al., 2017; Guo & Woulfin, 2016; Mishra & Mehta, 2017). Glăveanu (2011) and the NACCCE (1999) emphasized that everyone is active and creative in their own way, and they may build creative connections via interactions with others. Plucker et al. (2004) explained creativity as "the interaction among aptitude, process, and the environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context" (p.90). According to Cremin (2009), the education system should pay more attention to creativity needed for growth. According to Gralewski and Karwowski (2018) and Starko (2018), creativity can support to enabling people to become better problem solvers at work, view things from a different perspective, and deal with situations more effectively.

The development of creativity and creative activities and consequently the abilities required to produce new knowledge is greatly aided by education. Nowadays, education is almost widely acknowledged as the cornerstone of any society's growth. Beloyianni and Zbainos (2021) emphasized that creativity is a fundamental life skill that ought to be nurtured via education to equip future adults to thrive in a challenging and uncertain world. Education and the practices of teachers in the classroom should support students' encouragement "to ask questions, to look for alternative and unusual answers, and to exercise their powers of creativity and imagination," (Robinson & Aronica, 2016, pp. 51-52) in order to create a student-centered environment that enhances their thinking skills. One of the foundations of the teaching and learning process is the role of teachers. Therefore, teachers are responsible for cultivating pedagogical skills that increase students' accomplishments. Alqarni (2016) stated there is a relationship between successful creative teachers and student achievement, and this leads policymakers to require teachers to recognize the necessity of routinely updating their knowledge and skills. Examining creativity and how it may be encouraged in classrooms can help teachers become more equipped to help students become ready for their future ambitions (Cho et al., 2017; Ambrose & Sternberg, 2016).

2. Theoretical framework in this research

The theoretical framework of this research is formed by the creativity theory of Lev Vygotsky. According to Vygotsky, an individual's mental growth is not solely because of social interaction, but it is also based on the specific procedures and structures possessed by individuals during their interactions (Fleer, 2011). In a broader sense, Vygotsky focused on various social factors that play a critical role within a child's mental developmental process, which can help them to explore and learn about something (Fleer, 2011). Social factors affect each student differently because of their different social settings, and thus, each student has different levels and nature of learning (Starko, 2018). Vygotsky viewed creativity as “interaction, tension, transformation and synthesis over the parallel timescales of the creative act, the creative life and historical cultural development” (Moran & John-Steuber as cited in Sawyer et al., 2003, p. 62) According to Simonton (2011), creative performance necessitates the integration of expertise with individual differences in cognitive capacities, as well as genetic and environmental variables, all of which contribute to the development of individual variances. The concept of the "knowledgeable other," as well as attentive "planning and supervising children's activities," might be considered as essential in encouraging creativity. Cremin et al. (2013) indicate that creative people frequently have good attributes like curiosity, dedication, independence in their ideas and acts, self-actualization, and risk-taking, according to studies on personality motivation and sociocultural backdrop to creativity.

3. Teacher Creativity

Teacher creativity means both a teacher's personal creativity and their level of creativity in the classroom (Aljashaam, 2017; Lima Soriano de Alencar & Freire de Oliveira, 2016). Teachers’ creativity can be their own creativity in their everyday lives, or it can be related to extracurricular activities that teachers perform. Lee and Kemple (2014) conducted a study to see how teachers’ personality traits and creative activities affect their ability to foster students’ creativity. The study participants were 302 early childhood and elementary school preservice teachers in the United States. Lee and Kemple used the Ten-Item Personality Inventory, which evaluates emotional stability, openness, agreeableness, conscientiousness, and extraversion. The preservice teachers were then surveyed using a shorter version of the Creative Behavior Inventory to determine their engagement in creative activities. Finally, the Creativity-Fostering Teacher Behavior Index was completed

by the participants to assess creativity-fostering behaviors. Lee and Kemple (2014) discovered that the more creatively engaged preservice teachers were, the more likely they were to promote creativity-fostering behaviors. According to Holzer (2009), teachers must comprehend imagination and creativity in order to promote them.

According to Lima Soriano de Alencar and Freire de Oliveira (2016), teachers should not only have a fundamental awareness of their own creative potential, but they need also to learn how to employ their creativity in their classes. Lima Soriano de Alencar and Freire de Oliveira (2016) collected data from 20 undergraduate teachers through interviews in order to study their concept of creativity and how to encourage creativity. The data was examined by categorizing the interview material into themes; however, the researchers omitted to describe their analytic methodologies, casting doubt on the study's validity. According to Lima Soriano de Alencar and Freire de Oliveira (2016), participants believed in the value of creativity and some undergraduate teachers may overlook their own creativity. As a result, they believed it was critical for everyone to begin participating in creativity from an early age and to continue to develop the skill as they age.

Cheung and Leung (2014) conducted a study in Hong Kong investigating teacher creativity by fusing the concepts of personal creativity and creative teaching. The researchers used an updated version of the Creative Personality Questionnaire to identify the creative traits of the teacher participants, and then the participants rated their own creativity using a five-point Likert scale ranging from "very creative" to "not creative at all." A total of 564 preschool teachers completed the questionnaire. The study discovered that participants regarded imagination as one of the most significant aspects of creativity. This is consistent with Vygotsky's (2004) theory of creativity, in which he refers to the imagination as pure creativity and an important component of creativity. Nevertheless, the majority of participants stated they were neither creative nor non-creative, implying a gap between their opinions of their own creativity and their creative teaching (Cheung & Leung, 2014).

Selkrig and Keamy (2017) argued that teachers' own creativity was an important component of creative teaching and student learning in general. They studied K-9 teachers and their principals in suburban Australia; the teachers mostly taught arts courses or general studies, depending on the age group taught. They discovered that creativity was challenging and difficult to cultivate across all topics, including the arts in

many situations (Selkrig & Keamy, 2017). As a result, the researchers conducted their study to discover how teachers and administrators interpreted creativity in order to investigate the link between the three components of creative pedagogy: creative teaching, teaching for creativity, and creative learning. Selkrig and Keamy (2017) discovered that teachers and principals thought that creativity was purposefully included in their schools, and they concluded that teachers should be given the same safe environment to express their creativity as their students. This independence will enable teachers to teach outside of the fundamental, and often dull ways, and to develop further creativity in their personal life and teaching practice. According to Selkrig and Keamy (2017), teachers' levels of creativity and teaching with creativity collaborate to support teachers in facilitating and developing students' creativity.

According to Chan and Yuen (2014), creative teachers are more likely to detect creativity in their students. Chan and Yuen (2014) conducted a study in Hong Kong questioning 399 primary school teachers about their creativity beliefs, personal creativity, and their creativity-fostering behaviors for their study. The surveys were mailed to teachers in Hong Kong after it approved by the Human Research Ethics Committee at the University of Hong Kong. A regression analysis was used. The survey contained three instruments: *The Creativity Beliefs Scale, The Creative Personality Scale, and the Creativity Fostering Teachers Index.* They found a link between teacher creativity, teacher beliefs, and creativity nurturing. Their findings imply that teachers must be somewhat creative in order to identify and foster student creativity in their classrooms.

Bin Ibrahim (2015) studied a task-based teaching strategy to help female science teachers in Saudi Arabia enhance creative thinking teaching skills. The study followed some procedures, such as developing a questionnaire of creative thinking teaching skills for female science teachers in KSA and designing the instruments for measuring these skills, which were represented in developing a test for the cognitive aspect of creative thinking teaching skills, creating an observation card for the performative aspect of creative thinking teaching skills, and developing the program. The study participants were 30 female science teachers from Saudi Arabia. The findings suggested that the research program helped strengthen creative thinking teaching abilities for female science teachers in the Kingdom of Saudi Arabia. According to Bin Ibrahim (2015), some skills that can be taught creatively include realizing the relationships

between matters, categorizing things based on specific characteristics, differentiating between what is fixed and what is changing during thinking based on previous set proofs and logical proofs that support the students' viewpoints, and locating missing information or missing proofs.

Aljashaam (2017) conducted research on creative pedagogy and environment among Saudi preschool teachers. To examine the varying views held by a variety of female preschool teachers in Saudi Arabia, the researcher employed qualitative approaches, and data were obtained through semi-structured interviews and observations. Twenty early childhood practitioners were drawn from four distinct preschool settings, two private and two public. The Nvivo program was used to evaluate the narrative data sources, and all-important data components from interviews and observations were coded and integrated into themes. The researcher then followed up on the interview findings with observation findings in order to counteract and minimize any researcher influence on the participants and data. Teachers disclosed their own understandings of creative pedagogy by offering various approaches and pedagogical practices to be employed in the classroom to improve students' creativity, according to the findings. Because the curriculum is more academically motivated, teachers from private schools thought that the curriculum emphasizes knowledge rather than skills. The majority of public and private school teachers have expressed their belief in the beneficial effects of classroom structure on creativity. Most teachers stated that activity zones in the classroom provided the most conducive environment for creativity. Teachers at public schools, on the other hand, thought the national curriculum did the best job of encouraging students' creativity. According to Aljashaam (2017), the majority of participating teachers believe that the teacher's personal creativity is an essential aspect in encouraging creativity in the classroom. Teachers who took part in the study also mentioned how creativity might assist teachers in dealing with unexpected situations.

4. The Kingdom of Saudi Arabia (KSA)

The KSA has considered and still views the field of education as being essential to its growth (Alsadaawi, 2010). In KSA, public-school education's aims concentrate on helping students to be prepared for life and work in the modern world, "impart knowledge and skills to them, and prepare them to be useful members in the building of their society, loving their homeland, and taking pride in its history" (Basic Law of Saudi Arabia Article 13, cited in The Royal Embassy of Saudi Arabia). KSA's Ministry of Education is taking steps to increase creativity (Alnesyan,

2012; Al-Qahtani, 2016). KSA's Ministry of Education promotes creativity among its students by trying different practices and providing creativity-in-learning training for teachers accustomed to giving students lectures (Al-Qahtani, 2016). Teachers also received the attention of the 2030 Vision of Education by "training" them "to raise their awareness of the importance of communicating with parents, and to equip them with effective methods to do so successfully" (Government of Saudi Arabia, 2016, p. 33). The vision of 2030 lays forth long-term educational goals and expectations, including creating stronger home-school partnerships through fostering meaningful parental involvement in children's learning processes (Government of Saudi Arabia, 2016).

5. The Purpose of this research

Gajda et al. (2017) acknowledged the need to analyze and comprehend how teachers perceive creativity to enable creativity to find a meaningful place in the classroom. The role of teachers is essential to this study's purpose to evaluate the creativity that Religious teachers at middle schools in the Kingdom of Saudi Arabia foster in their classrooms. This research aims to understand teachers' self-reported perceptions on the creativity scale. This research also examined the difference among demographic variables (teachers' years of teaching experience and gender) of Religious education teachers at middle school teachers in Riyadh city of Saudi Arabia on variables of the Creativity Scale. The population of this research is a convenience sample of middle school teachers who teach Religious courses in Riyadh city of Saudi Arabia, and who volunteer to complete this research's survey. The research aimed to answer the following research questions:

RQ1. What is the mean score of creativity reported by Religious middle school teachers on the Creativity scale?

RQ2. Is there a difference in the scores on the Creativity Scale based on the years of teaching experience of Religious middle school teachers?

RQ3. Is there a difference in the scores on the Creativity Scale based on the gender of Religious middle school teachers?

6. Methods

6.1. Research instrumentation

The research survey questionnaire included two sections. In the first section, demographic questions were asked to determine the teachers' numbers of years of experience and gender. The second section includes the Creativity Scale that Tsai, Horng, Liu, and Hu created in 2015 to assess teachers' creativity. In this scale, participants responded to 13 self-reported items on their measure using a seven-point Likert scale, with one being "Strongly disagree" and seven being "Strongly agree." The score was then derived by averaging the 13 items, with a range of 1-7. Zhou and George developed the original Creativity Scale (2001), and then Tsai et al. (2015) amended it. The scale was initially created by Zhou and George (2001) to more clearly define the connection between employees' levels of creativity and job discontent. Instead of collecting supervisor responses, as was the situation in Zhou and George's (2001) original survey usage, Tsai et al. (2015) used self-report questions. Since this modification made it possible for the measure to be more accurate, the self-report survey was used similarly for this research. Both versions exhibit comparable, high dependability with a Cronbach's alpha of 0.96 for the original and 0.94 for the amended version. The Creativity Scale has construct validity in addition to reliability since it and other measures of creativity have been connected in several studies with various issues and characteristics (Tsai et al., 2015).

6.2. Operational Definitions of Variables

This section provides an overview of the variables investigated in this research. It will cover the demographic variables, namely teachers' years of teaching experience and gender. It also discussed the variables related to the Creativity Scale.

Teachers' years of experience. Teachers' years of teaching experience may play an important role in examining its potential influence on creativity.

Gender. The inclusion of gender as an operational variable allows the researcher to examine potential gender-based differences within this research based on the mean scores of creativity.

Creativity Scale. The mean scores of creativity will be quantified using a scoring system derived from the Creativity Scale developed by Tsai et al. (2015). This scoring system is based on 13 self-reported items, and each item is answered using a seven-point Likert scale. The Likert scale ranges from 1, indicating "Strongly Disagree," to 7, representing "Strongly Agree." The responses for all 13 items are averaged to obtain a

creativity score, resulting in a value between 1 and 7, with 1 being the lowest and 7 being the highest.

6.3. The Population and sample

The population for this research was middle school religious teachers who teach in Riyadh city of Saudi Arabia. A convenience sample of male and female middle school teachers in Saudi Arabia, Riyadh City, served as the research's target group. Participants were middle school teachers who consented and volunteered to participate in the survey. It was intended for these teachers to have a range of experiences, including the number of years of experience and gender, both male and female.

6.4. Data collection procedure

The questionnaire was conducted through the Qualtrics website. Potential participants were solicited via email and WhatsApp app and provided a link to the survey. The participants' emails and phone numbers were provided by the Ministry of Education of Saudi Arabia. The informed consent form was provided on the survey's introduction page, and participants were asked to consent before proceeding and informing them that their responses and information would be treated confidentially. Because some of the participants may likely be teachers who do not speak/read English, the survey was provided in both Arabic and English. The survey was accessible for participants from March 24, 2023, to April 10, 2023. The researcher initiated an initial request to the participants and subsequently followed up with two additional requests within the specified timeframe.

6.5. Data analysis

Depending on the inquiry type, different statistical approaches were employed to examine the data. To assess demographic data, descriptive statistics were produced. Descriptive statistical methods were used to answer question one to calculate the mean score for each participant on the Creativity Scale used in this research. For question one, each participant's scores for each variable were calculated based on the operational definitions provided above. Question two was answered using a one-way ANOVA (Analysis of Variance) to determine if there are differences in the scores of the Creativity Scale based on the years of teaching experience of Religious middle school teachers. For question three, an independent-sample t-test was run to determine whether there are differences in the scores on the Creativity Scale based on the gender of both male and female Religious middle school teachers. In this research, all analyses were performed using a level of statistical

significance of $p < .05$. The data were analyzed using the Statistical Package for Social Science (SPSS) software, Version 28.

6.6. Translation of the survey questionnaire

As previously indicated, among the participants were teachers who may not speak English as their first or second language; consequently, they may not fully comprehend the survey. The researcher converted the survey into Arabic. To confirm the survey validity, three experts in both languages (English/Arabic) reviewed the survey to confirm survey validity, and both were revised. Doctoral students in linguistics and TESOL were among those experts. To ensure the instrument's accuracy, forward and reverse translation methods were used. The researcher compared the two versions to verify no significant differences.

7. Result

7.1. Reliability

The research survey questionnaire was employed to measure self-reported responses related to teachers' creativity. The Creativity Scale used in this research involved using the Creativity Scale developed by Tsai, Horng, Liu, and Hu in 2015 to evaluate teachers' creativity. The scale consists of 13 items rated by participants on a seven-point Likert scale, ranging from "Strongly disagree" (1) to "Strongly agree" (7). The original version of the Creativity Scale was created by Zhou and George in 2001 to investigate the relationship between job dissatisfaction and employees' creativity, with supervisor responses used to rate creativity levels. Tsai et al. (2015) revised the scale using self-report questions, resulting in a more accurate measure. The current research used the self-report survey to determine a mean score for each. The original and revised versions of the Creativity Scale demonstrate high reliability, with Cronbach's alpha of 0.96 and 0.94, respectively. In this research, the Creativity Scale had a high level of internal consistency, as determined by Cronbach's alpha of 0.915.

7.2. Participants and demographic description

After collecting all the data, it was imported into SPSS to conduct further analysis. The first step was to examine incomplete surveys or any missing information in the dataset. There were 365 total surveys submitted. Of these surveys, 128 contained incomplete or missing data and were removed from the data set. A sample of 237 participants who submitted completed surveys were used for analysis. The 237 participants all met the participation conditions, agreed to the survey constraints, and completed all items on the survey. In this research, participants were required to provide their demographic information, which included their

gender and years of teaching experience. Of the 237 respondents, 67.5% (n = 160) were male, and 32.5% (n = 77) were female. The teachers' years of experience ranged from one to 35 years, with a mean of 15.24 years (SD = 7.61).

7.3. The results of research questions

Question one: What is the mean score of creativity reported by Religious middle school teachers on the Creativity scale?

Descriptive statistics were used to determine the mean score of creativity that religious middle school teachers reported, as shown in Table 1. The Creativity Scale score's mean and the standard deviation were 5.77 (SD = 0.84), which fell into the higher range, indicating that, on average, Religious middle school teachers reported they were slightly creatively inclined. A closer examination of the frequency of the average scores across the range of scores, as shown in Table 2, enhances the clarity of the scale measuring participants' self-reported mean scores of creativity, offering a more precise depiction.

Table 1:

Descriptive Statistics for Creativity

Descriptive Statistics for Creativity Scale

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Creativity Scale	237	1.69	7.00	5.7725	.83913	-1.095	.158	2.517	.315
Valid N (listwise)	237								

The majority of the average responses of Religious middle school teachers for the Creativity Scale scored within the range of 5.1 to 5.5 (15.6%) 5.6 to 6 (29.1%), and 6.1 to 6.5 (20.6%) and 6.6 to 7 (16.5%), only (2.9%) of participants fell into the lower range, as shown in Table 2. In other words, the Religious middle school teacher participants (97.1%) fell into the higher range of creativity means, as shown in Table 2

Table 2:
Distribution of the Mean Scores on the Creativity Scale
Distribution of the Mean Scores on the Creativity Scale

Range	n	%
1.1 – 1.5	0	0
1.6 – 2.0	1	0.4
2.1 – 2.5	0	0
2.6 – 3.0	2	0.8
3.1 – 3.5	0	0
3.6 - 4.0	4	1.7
4.1 – 4.5	10	4.2
4.6 – 5.0	26	11
5.1 – 5.5	37	15.6
5.6 – 6.0	69	29.1
6.1 – 6.5	49	20.7
6.6 – 7.0	39	16.5

Note. N = 237
Percent was calculated from the total number of participants.

Question two: Is there a difference in the scores on the Creativity Scale based on the years of teaching experience of Religious middle school teachers?

To determine if there are differences in the scores of the Creativity Scale based on the years of teaching experience of Religious middle school teachers, a one-way ANOVA was conducted for the Creativity scale to determine if creativity was any different among Religious middle school teachers with varying teaching experience. ANOVA would examine if there were significant differences in the mean scores on each scale based on the different levels of years of teaching experience. Religious middle school teacher participants were classified into five groups: one to five years of experience (n = 29), six to 10 years of experience (n = 42), 11 to 15 years of experience (n = 59), 16 to 20 years of experience (n = 43) and 21 years or greater experience (n = 64). The groups are evenly spaced apart and cover a wide range of years of teaching experience. The years of teaching experience is an independent variable, and the scores on each scale are dependent.

In this research, the groups are classified based on teaching experience, and the variable of interest is creativity. The result indicated that there was no significant difference between the means of the groups for creativity. This means that the observed differences in means between the groups are likely due to chance rather than a true difference. The

researcher found that creativity scores generally decreased with experience, but these differences were not statistically significant ($p > .05$), as shown in Table 3 and Table 4. This suggests that the observed differences in means were not large enough to be considered statistically significant. As a result, there were no significant differences in the scores on the scale of Creativity based on the years of teaching experience of Religious middle school teachers ($p > .05$)

Table 3:

Descriptive Statistics for Creativity Scores by Experience

Descriptive Statistics for Creativity Scores by Experience

	Years of Experience	N	M	SD	SE	95% Confidence Interval for Mean		Min	Max
						LL	UL		
Creativity Scale	1-5	29	5.9867	0.80101	0.14874	5.6820	6.2914	4.08	7.00
	6-10	42	5.9029	0.62263	0.09607	5.7089	6.0970	4.77	7.00
	11-15	59	5.6389	0.90469	0.11778	5.4031	5.8746	1.69	7.00
	16-20	43	5.9267	0.83136	0.12678	5.6708	6.1825	3.00	7.00
	21 +	64	5.6094	0.89080	0.11135	5.3869	5.8319	2.62	7.00

Table 4:

ANOVA Statistics for Creativity Scores by Experience

ANOVA Statistics for Creativity Scores by Experience

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Creativity Scale	Between Groups	5.824	4	1.456	2.107	.081
	Within Groups	160.351	232	.691		
	Total	166.175	236			

Question three: Is there a difference in the scores on the Creativity Scale based on the gender of Religious middle school teachers?

Table 5:
Descriptive Statistics for Creativity Scores by Gender

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
						Significance				95% Confidence Interval of the Difference
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Creativity Scale	Equal variances assumed	.289	.592	1.161	235	.123	.247	.13503	.11630	-.09409	.36415
	Equal variances not assumed			1.100	131.415	.137	.273	.13503	.12272	-.10774	.37780

Descriptive Statistics for Creativity Scores by Gender

To determine whether there are differences in the scores on the Creativity Scale based on the gender, both male and female of Religious middle school teachers, an independent-sample t-test was run to determine if there were differences in creativity in males versus females. The results of the research revealed no statistically significant differences in the scores on the Creativity Scale based on the gender of Religious middle school teachers ($p > .05$). This indicates that there were no notable variations between male and female teachers in terms of their creativity. Therefore, the gender of Religious middle school teachers did not appear to significantly impact these factors as measured by the scales used in the research, as shown in Table 5 and Table 6.

Table 6:
T-test Statistics for Creativity Scores by Gender

Group Statistics

	What is your gender?	N	Mean	Std. Deviation	Std. Error Mean
Creativity Scale	Male	160	5.8163	.79352	.06273
	Female	77	5.6813	.92558	.10548

T-test Statistics for Creativity Scores by Gender

8. Discussion

The result indicated that 97.1% of the Religious middle school teachers fell into the higher ranges of creativity mean scores signifying their inclination toward creativity. In other words, this finding indicated that most Religious middle school teachers considered themselves to possess a certain degree of creativity. Conversely, only a small percentage, specifically 2.9% of the respondents, fell into the lower ranges of creativity mean scores. This suggests that a minority of teachers did not perceive themselves as creatively inclined. While this interpretation is based on the teachers' self-perception and self-reporting, it provides valuable insights into their subjective understanding of their own creativity. Religious middle school teachers demonstrate a strong inclination towards creativity by valuing creativity; these teachers can improve their own performance and inspire their students to think creatively and develop problem-solving skills that can benefit them in all areas of their lives (Al-Qahtani, 2016).

The research findings indicated that most Religious middle school teachers reported themselves as creativity inclined, which was consistent with the findings of Lima Soriano de Alencar & Freire de Oliveira (2016), Aljashaam (2017), Cheung and Leung (2014), and Lee and Kemple (2014). Creatively inclined teachers, for example, are more likely to inspire creative thinking in their students (Aljashaam, 2017; Cheung & Leung, 2014; Lee & Kemple, 2014; Lima Soriano de Alencar & Freire de Oliveira, 2016; Massie et al., 2022).

The results also reveal that no statistically significant differences were found across groups in terms of years of teaching experience or gender, both male and female, with regard to measures of teacher Creativity Scale. The research's findings aligned with Aish's (2014) and

Hakami's (2017) findings in that no significant differences were observed in years of teaching experience. However, the results differed from those of Al-Nouh et al. (2014), whose research found that less experienced teachers tended to exhibit more positive attitudes toward creativity. Furthermore, Al-Nouh et al. (2014) found that older teachers were more inclined toward teacher-centered approaches and believed fostering creativity could lead to losing control in the classroom. While years of teaching experience might contribute to creativity in teaching and learning, it is essential to remember that creativity is not completely dependent on expertise. Factors such as open-mindedness, curiosity, risk-taking, and exposure to varied ideas all play important roles in promoting creativity in educational contexts (Starko, 2018).

This research's result also differs from Karwowski et al. (2015) research, which indicated significant differences between male and female creativity. Regardless of gender, creativity is a complex and diverse ability that different people may express and value in various ways (Starko, 2018). Some individuals' expectations of male and female creativity may contribute to gender discrepancies. These ideas need an accurate representation of the complete spectrum of creative skills in both genders and are based on preconceptions and stereotypes. It is important to approach such generalizations cautiously and acknowledge that creativity is a unique and individualized quality that cannot be precisely anticipated or identified based only on gender.

9. Recommendations for future research

As researchers delve deeper into the role of creativity in education, it is imperative to contemplate the next steps for future studies. Despite the significant findings on the benefits of nurturing creativity in the classroom, there is still ample room for exploring the most efficient methods. The following suggestions are made for future researchers to facilitate further progress in this critical field.

Future researchers may consider utilizing qualitative methodologies to explore teachers' creativity, constructivist beliefs, and creativity-fostering classroom behaviors. For instance, researchers can conduct individual and group interviews to gather data from teachers on their creativity and practices that enhance creativity in the classroom. An important aspect that future researchers should consider is the temporal dimension. For example, examining whether teachers' beliefs about creativity vary over time and across different educational settings is crucial. Therefore, it is recommended to conduct additional studies that examine the stability of creativity over time.

10. Conclusion

This research aimed to identify the mean scores of creativity among Religious middle school teachers. This research also examined group differences in creativity scale based on teachers' years of teaching experience and gender, both male and female. A sample of 237 Religious middle school teachers in Riyadh City volunteered to participate in this research. Promoting creativity in the classrooms tends to provide opportunities for student autonomy and choice, allowing them to explore and experiment with different ideas and approaches (Abdulla & Cramond, 2017; Ah-Nam & Osman, 2017; Franken, 2007; Jones & Risku, 2015; Sholan, 2019; Runco, 2016). Creating a more student-centered and personalized learning environment can enhance students' motivation, engagement, and ownership of the learning process (Aish, 2014; Henriksen, 2016). Fostering creativity tends to improve a classroom culture of risk-taking and experimentation, creating a safe and supportive space for students to try new ideas, take on challenges, and make mistakes without fear of judgment or failure (Desailly, 2015; Richards, 2013).

11. Research Limitations

This research has some limitations that may affect its results. Due to limited database access, the researcher could not find enough relevant studies on religious middle school teachers and creativity in Saudi Arabia. Therefore, the literature review may not reflect current knowledge on teachers' creativity, constructivist beliefs, and support of creativity-fostering learning environments. The sample of this research is composed of religious middle school teachers who participated voluntarily, which may introduce biases and limit the generalizability of the findings. Furthermore, all variables in the research were measured through self-report measures, which can be influenced by factors like response biases, subjective interpretations, and inaccuracies in participants' recall or perception of their own behaviors and experiences (Van Meter, 2020).

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