

## Does Gender Difference Exist on the Teaching Creativity Level of Male and Female Secondary School English Teachers in District Bannu?

\* Rahat Jehan, PhD Scholar

\*\* Dr. Gulap Shahzada, Associate Professor

\*\*\* Dr. Javed Mustafa, Assistant Professor

### Abstract



The main focus of the current study was to investigate the creativity level, teaching effectiveness level and gender difference in creativity level of secondary school teachers in district Bannu. The researcher used two instruments i.e. English Language Teachers' Creativity Scale (ELT-CS) and Teaching Effectiveness Questionnaires. Random sampling followed by proportion allocation was used to collect the data. Since the data regarding teachers' creativity and teaching effectiveness was collected from their students, so 363 students were randomly selected from 23 female and 40 male secondary schools. Mean, Standard Deviation and Independent Sample t-test were used analyzing the data. The results of the study concluded that female secondary school teachers were more creative than male secondary school teachers. Those teachers, whose creativity level was high, were more creative than those whose creativity level was low. It was suggested that teachers should be motivated to improve their creativity level in all aspects so that their teaching and their students learning could improve and educational objective could be met. For the first time, the researcher attempted to determine the level of creativity among secondary school teachers in district Bannu, and got empirical data to prove the importance of creativity for teaching effectiveness.

**Keywords:** Teachers, Creativity, Teaching Effectiveness, Gender differences, Secondary School

### Introduction

The role of creativity is unquestionable in today's modern world. A society cannot become prosperous and survive constantly, where creativity is neglected. In future, experts are needed to be responsive, fault-finding, and creative intellect, instead of patterned ones. In this regard, the role of education in developing creativity is obvious. In today's world, several students get an understanding to solve specific type of problems; yet are not able to think out of the box and face the unexpected conditions which reappear right away in the present evolving world (Runco, 2004).

To prepare students for solving daily life problems, the teachers should not be only launching subject knowledge but their thinking should be beyond traditional boundaries. For this purpose the role of the teachers should be shifted from a conservative subject-teacher to an encouraging promoter of learning (Forrester & Hui, 2007).

### Creativity

The literal meaning of creativity is to "generate", "formation", or "ability to come up with new concepts". It is quite a new notion and the notion of imagination is particularly linked with it (Namiet., al 2014). The ability to imagine things in a new way so that new solutions to the problems can be found is known as creativity (Saif, 2008). Life is constantly changing in all its aspects and it is creativity which gives us the ability not only to adapt to all these changes but motivates us to develop knowledge in different disciplines.

The definition of creativity is different for different scholars. According to Wallach and Kogan (1965) the capacity to create more associations and new objects is referred to as creativity. The definition of creativity according to Levin (1978) is the capability to see problems in a new way, to find out new solutions, create new ideas, innovations or art work. It is a new way of thinking, seeing and interacting the world in a way which is different from ordinary people. In the eyes of Wilson Guilford and Christenson (1974) the process of creation is that in which something new is discovered,

\* IER, University of Science and Technology Bannu

\*\* IER, University of Science and Technology Bannu

\*\*\* Department of Education & Research, Khushal Khan Khattak University, Karak

a plan or thing along with a new shape or design of previous things. These new discovered things must solve some problems.

A mix of genuineness and utility is defined as creativity. It is the ability of a person to form unpredicted links and produce different and relevant ideas. Creativity can be building up in everyone and considered as a transferrable ability. Two distinct forms of creativity exist. i.e. 'Big C' and 'little C'. 'Big C' and 'little C' creativity are quite different from each other (Craft, Jeffrey, & Leibling, 2001). Big c, as its name refers, is the creativity found in genius e.g. Mozart and Einstein; while 'little c' is the type of creativity which is required for solving daily life problems. It is the ability of general people which enable them to solve their routine problems in a unique way and look at entities from a new angle. The importance of little c is more than big c creativity in educational perspective and educationists should focus more on it and try to develop the covert creativity of their students (Runco, 2007).

In the light of the above discussion, it can be said that any learning which necessitate insight and new perception, which permit learners to surpass theoretical acquirements and concentrate on thinking skill is known as creative learning. It is the capability of a person to correlate those things which have no connections and to connect those things which are considered unconnected before. This process is the focal point of learning and learners can learn much from it. In this process learners understanding is developed and the habit of only memorization and content acquisition is discouraged. The process of creative learning is totally different from the process of reproduction.

A set of elements is highlighted in a literature review which was completed by means of IPTS (Ferrari, et al., 2009). These elements are considered very important for supporting creativity in education. The name 'enablers' was given to these elements. These 'enablers' are the catalysts or aid mechanism with the help of which creativity can flourish more effectively. Enablers are linked with these areas i.e. evaluation, traditions, curriculum, person talent, teaching learning process etc. In these areas, these enablers have the ability to develop or restrict creativity. But creativity is a complex subject. In the presence of all these elements it cannot be concluded that creativity and innovative process is going on. Because instructors and pupils will still ought to involve in the process of creation and innovation. It can be said that there is a probability that creativity can be flourished in these circumstances. On the other hand, if these enablers are not present, it cannot be said that creativity and innovative process is stopped. Creativity has the ability to blossom in the absence of these enablers. But the situation for teachers and students will become more challenging to participate in creative teaching and learning. So it can be said that enablers are a type of environment with the help of which creativity can be developed.

The idea of creativity is not only well known to professionals but to ordinary persons also (Dornyei, 2005). It seems that it is a simple idea, so used in everyday conversations but the idea is not as simple as it seems. There's a complex records of considering it (Glaveanu, 2011). In science there are numerous concepts which have undivided and clear definitions but creativity is such a mysterious concept which has no undivided and clear definition.

A common clarification of the concept of creativity was stated by Almeida, Prieto, Ferrando, Oliveira and Ferrandiz (2008); according to them it is the ability of a person to develop ideas and consequences that are (a) quite unusual and untraditional; (b) exceptional; and (c) fit for the assigned work and applicable. Generally speaking novelty, disclosure, divergent thinking and solving the problems are linked with creativity (Dornyei, 2005).

Teaching creatively and teaching for creativity are quite different from one another.

When we say 'teaching creatively' we mean to utilize our imaginative skills and strategies for making learning more effective and interesting. While teaching for creativity means to develop and acknowledge the creative skills of the students. In other words, in teaching for creativity the focal point of teaching learning process is the student. But in teaching creatively the focal point of teaching learning process is the teacher. Although, these two concepts have different focuses but these concepts are considered as connected and integral. When we teach creatively, it usually stimulates and lay the first stone in the way of teaching for creativity (Jeffrey & Craft, 2004).

When someone teaches for creativity, his first duty will be to aggravate the belief of students in their creative capabilities and give them courage to attempt. At the same time, a great quantity of traits must be provoked e.g. adventurousness, individualistic wisdom, innate stimulation, and interest.

As we know that a comprehensive shift has been occurred in pedagogy; Craft and Jeffrey (2004) asserted, that learners should get the control back.

Different outlooks exist to understand creativity. To comprehend creativity psychometric outlook is adopted by Torrance. But Sternberg, Kaufman, & Pretz (2002) and Sternberg & Lubart (1995, 1996) utilized correlated approach and started their work on creativity.

According to Sternberg's investment theory of creativity; those persons are called creative who have the courage to "buy low and sell high" in the realm of ideas. Buying low means following those ideas that look untold or avoided but have possibility to flourish. Generally, objections may be raised on these type of ideas. The creative people persistently face these objections and as a result sell high, continue to the coming new and rejected ideas.

As reported by investment theory, creativity necessitates a gathering of 6 different but correlated resources: intellectual skills, knowledge, thinking style personality, motivation and environment. All these resources are related to individual differences of a person, but the judgment to utilize a particular resource is additionally a crucial source of individual differences.

**Intellectual skills:** Especially important intellectual skills are three (Sternberg, 1985): (a) the synthetic skill to perceive issues differently and think beyond traditional boundaries.(b) the analytic skill to differentiate which ideas deserve to be continued and which are not, and (c) the practical-contextual skill to realize how to convince others to take interest in, and of the importance of one's ideas.

**Knowledge:** Knowledge is of great importance because one cannot move forward in a field if he does not know enough about it. In contrast if someone has faced problems in the way moving forward in a field, it results in a closed and entrenched perspective. So knowledge can assist or block creativity.

**Thinking styles:** Approved methods of utilizing a person's skills are known as thinking styles. In a nut shell they are the decisions about how to use those skills which are within the grasp of a person. For creativity the legislative thinking style is more important, i.e. desire to think and a conclusion to think differently (Sternberg, 1988, 1997).

**Personality:** It is clear from several research studies (summarized in Lubart, 1994, and Sternberg & Lubart 1991, 1995) that some important personality traits are required to think and perform creatively. Traits like readiness to beat hurdles, take reasonable chances, abide doubtfulness and self-efficacy is included in these traits. But creative personality is not limited to these traits.

**Motivation:** Creativity also requires intrinsic and work-concentrated motivation. This type of motivation is very important. Its importance has cleared in the study of Amabile (1983) and others. They suggested that creative work can only happen when people have the opportunity to do what they love and are not tempted by any reward.

**Environment:** Last but not least, the environment is equally crucial in encouraging and rewarding creative thinking. Despite having all intellectual capabilities required to give creative reflection, if a person does not get environmental support i.e. a proper platform for presenting creative ideas, the creativity of the person cannot be shown properly.

Modern and popular methods of teaching language e.g. communicative approach and task-based language teaching are student centered and involve interaction between students and teachers using open ended questions (Dornyei, 2005). In these methods the imaginative skills of both teachers and students is required. On the other hand old rote-learning teaching strategies make the students dull and led to the lack of creativity. In a nut shell, it is clear from review of the literature that creativity has a great impact on education and educational psychology (Plucker, Beghetto, & Dow 2004). So, by using their creativity, teachers of language can prove themselves to be more successful in their classrooms.

Following are the three advantages for those teachers who are teaching language that can help them to boost creativity in their students.

- i. Firstly, the nature of language is creative intrinsically. One idea can be communicated or expressed differently in language teaching. Reactions provoked by that particular communicated idea, are also very different. Many phrases and words can be created in a unique way when saying or writing a sentence. These words and phrases can be re-created, re-formulated, paraphrased or changed conforming to the aims of the orator or author.

- ii. There are no limitations for a language teacher to restrict to any particular subject. So these teachers can include different topics in their lessons related to different disciplines like sports, management, law or philosophy and in spite of that can concentrate on language.
- iii. Lastly, in language classes students can engage in different creative deals. Creative deals mean any situation which is very close to reality and in these situations students respond very differently. To solve such deals students are needed not to use common and practiced steps. They have to generate different answers to some interrelated problems. The steps to solve the problems are unknown. It is also unknown that the problem has one solution, many solutions or insoluble. Solutions are unclear and tentative. Certain type of interpretation can be needed. Since language is a form of communication, and communication can be used in probably all situations so, situations closer to reality can be created easily in language classes as compare to chemistry or history classes.

Creativity is very important for effective teaching. Creativity of teachers and teaching effectiveness are two variables which are indispensable to each other. They both have an impact on the performance of students (Arifani et al., 2019). Achievement is a familiar link between creativity and effectiveness. It is crystal clear that there is a positive correlation between creativity and effectiveness and it has an impact on learning achievement (Kubitskey, Fishman, & Marx, 2003; Lovett, Meyer, & Thille, 2008; Vescio, Ross, & Adams, 2008; Vogt, 2019). A teacher is considered to possess creativity when he “makes a link between students’ current knowledge and their previous knowledge in a unique way to increase and develop their intellectual abilities and tries to get improvement in students’ performance (Afida, Aini & Rosadah, 2013, p.9). In addition, creativity is very necessary for teachers because a only a creative teacher can encourage and manage communication, tries to teach, act and collaborates with his students. Yet, there may be gaps in creativity levels across people and groups, and understanding the origin of these differences requires additional information. Gender difference is one of the differences that may be recognized via creativity.

In spite of the fact that scholars have been taking interest in gender and creativity for last four decades, but this critical and complicated concept has not yet clear. Inconsistent findings of the studies on gender differences in creativity also created confusion. Credible results are obtained in empirical studies in which the performance of male and female are compared. In some studies, no differences in the performance male and female are found (Kaufman, Baer, & Gentile, 2004). On the other hand in some others the performance of females is better than male in creative ability (Reuter et al., 2005; Wolfradt&Pretz, 2001). There are also some studies in which the males beat female (Cox, 2002; Dollinger, Dollinger, & Centeno, 2005). Likewise, there were conflicting results when male and female were examined in term of their creativity. Although some studies like (Chavez-Eakle, Lara, & Cruz-Fuentes, 2006; Szobiova, 2006) discovered commonalities in people's personalities, other studies revealed personality differences (Labouvie-Vief, 1994). These gender-related variations in creativity between men and women might be the result of biological or sociocultural factors. According to Stephens, Karnes, and Whorton (2001), one of the factors that might affect how creatively individuals grow is the socio-cultural difference between males and girls. This is why it is important to study these disparities. There are currently insufficient research that examines the role of gender differences, despite the fact that many studies have been undertaken on creativity and its link to gender. Therefore, the purpose of this study was to examine whether there was any gender variation in the creativity of secondary school teachers in the Bannu area. The goal is to determine the degree of creativity among teachers at the secondary school level in the Bannu area. The main objectives of the study were as follows:

- i. To find out the level of teaching creativity of teachers at secondary school level in district Bannu.
- ii. To compare the creativity level of male and female secondary school teachers in district Bannu.

### **Teaching Effectiveness**

As stated by Day and Qing (2009), “the outcome of planning and ongoing facilitation of both head (intelligence) and heart (sentiment) (p.17) is known as teaching effectiveness”. Doyle (2008) states it quite differently. In his opinion teaching effectiveness is “the extent to which a student learns (p.2).

The effectiveness of a teacher usually referred to in respect of focusing on students, their conduct, attitude of instructors, proceedings and environment of classroom that are executed for the

sake of betterment in the performance of the students. Apart from the performance of the students, there are many areas which are included in teacher effectiveness; effective teachers have unambiguous educational objectives, well informed about the subject matter of the curriculum and teaching methodologies, have excellent communicative skills, using suitable teaching strategies for making learning interesting and effective, good relations with students, well aware of individual differences, clear their confusions about subject matter, have mastery over his subject, effectively evaluate students performance and also give his opinion, executing integrated teaching, and have the courage to accept the responsibility of students performance (Ko, Summons & Bakkum, 2013).

Additionally, his personal attributes, confidence, self-assurance, self-respect, connections with his colleagues, and students motivation changed him into a brilliant teacher (Leaman, 2008). But this is not an easy task. It is a continuing process which is endless (Nelson et al., 2005).

#### **Characteristics of Effective Teachers**

A teacher who claims to be an effective teacher has some the following attributes (Goe, Bell & Little, 2008).

1. An effectful teacher believes that his students will perform very well. He tries his best to learn his students. This learning can be measured by different methods e.g. value added method or test based growth measure.
2. These teachers try their best to develop their students' positive educational, behavioral and social aspects e.g. routine presence in school, their upgrading, timely admission competence and coordinated conduct.
3. For making learning more successful, effective teacher uses the available resources in different ways; tries to make plan and organize opportunities to enhance learning, keeps an eye on the progress of the students, makes changes in his instructional program as per the requirements of the students and assesses the performance of his students with different methods available.
4. The focus of effective teachers is not only on the learning development of the students but they try to improve the civic sense of their students also. For this purpose they improve the environment of the classroom. There is no social hierarchy, racial, sexual, religious, or national inequality in their classroom.

The social intelligence of an effective teacher is also very high. They can communicate and collaborate with other teachers, parents and school administrators to make it sure that their students are learning well. When a teacher successfully deals with those students who are differently able or have a risk to fail, then they must be included in effective teachers (Goe, Bell & Little, 2008).

**Ways to Investigate Teacher Effectiveness** In an educational set up following 12 strategies can be utilized to measure a teachers' effectiveness (Berk, 2005).

1. Student Appraisal
2. Colleague Appraisal
3. Self-Reports
4. Videotapes
5. Conversation with Student
6. Ex-students Grading
7. Entrepreneur Grading
8. Managing Director Grading
9. Teaching Learnedness
10. Teaching Rewards
11. Learning Outcome Calculate
12. Teaching profile and Document

**Barriers to Teacher Effectiveness** A teacher's teaching effectiveness can be hindered also. There have been some factors which can play the role of barriers in the way of teaching effectiveness (Bryd & Rasberry, 2011). These are as follow;

1. Lack of cooperation- Due to the distance between teacher and head of the department and rigidness in schedule, there have been lack of planning and cooperation. So the internal resources of the school cannot be used properly.
2. Poor actions for accountability- Uncompromising trials that does not match with national educational program and unrealistic sole judgment and hopes.

3. Lack of able administration –shortage of semi-permanent, compatible and facilitative leadership, particularly in needy schools, few chances for teachers to act as leaders because of their tough schedule.
4. Appraisal and terms- lack in taking disciplinary actions against incompetent teachers, terms given to ineffective teachers, lack of taking disciplinary actions against incompetent teachers.

### **Methodology**

#### **Research Design**

In survey research design the researcher dispersed a questionnaire to a sample to find out the perception, attitude and behaviour for the purpose of generalization (Creswell, 2012). Basically the main focus of the current study was to investigate the gender differences in teachers' creativity level so the researcher dispersed questionnaires to collect the data. So the design fit for this research was the quantitative, descriptive survey research design.

#### **Population**

Since data about secondary school teachers' creativity and teaching effectiveness was gathered from students so all secondary school students of class 10<sup>th</sup> (male=3599 and female=1872, N=5471) of district Bannu comprised the population of this study.

#### **Sample**

In the current study stratified sampling is used because the population is divided into two sub groups i.e. male and female. Cluster sampling is also used because population is also divided into clusters i.e. schools. The next step in stratified sampling is to decide that whether the individuals should be selected from each stratum proportionately or disproportionately. Disproportionate sampling should be done when the numbers of individuals differ in each stratum, or strata have more variability suspects (Sekaran, 2003). But in this study variability suspect is less so proportionate stratified sampling technique looks suitable. Sample was taken using Raosoft online sample size calculator. Using the calculator and keeping significance level as 5% and confidence level as 95%, 363 students were selected randomly through stratified random sampling technique followed by proportion allocation technique from 40 male and 23 female schools as sample.

**Instruments** English Language Teachers Creativity Scale (ELT-CS) was adapted for determining teachers' creativity level. This is a standardized tool developed by Pishghadam, Baghaei, & Shayesteh, (2012). ELT-CS is multifaceted and incorporates 7 facets namely Originality and Elaboration, Fluency and Flexibility, Personality, (Environment), Motivation, Independent Learning (Autonomy) and Brainstorming (Imaginative thinking style). Two dimensions namely Intellectual skills and Knowledge were added. The scale contains 45 multiple choice items ranging from always to never. It takes 15 minutes to complete the questionnaire. The adapted ELT-CS was translated into Urdu with the help of language experts in order to help students to understand and respond correctly. For determining Teaching Effectiveness Level of teachers, students' rating was used. A self-developed questionnaire was applied. This questionnaire also used a five point Likert sort scale to rate the respondents and has seven dimensions. There were five items in each dimension. In order to help students to understand and respond correctly the teaching effectiveness questionnaire was also translated into Urdu with the help of language experts.

#### **Validity & Reliability**

ELT-CS is a standardized and validated tool. Its construct validity had been substantiated by using Rasch rating Scale Model (RSM) (Andrich, 1987). But in the present study, both the instruments i.e. adapted ELT-CS and Teaching Effectiveness Questionnaire were validated by index of Item Objective Congruence (IOC) method. All items scored more than .50 and retained in the rating scale.

In this study the researcher utilized Cronbach's Alpha ( $\alpha$ ) to assess the psychometric attributes of the tool. For finding reliability the questionnaire was distributed among forty public secondary students, as a pilot test. The Cronbach Alpha value found out for different dimensions of ELT-CS Originality and Elaboration Fluency and Flexibility Personality Environment Motivation Autonomy Imaginative Thinking Style Intellectual Skills Knowledge were .74, .79, .77, .71, .72, .71, .77, .71 and .79 respectively, the Cronbachs Alpha value for the whole was .75. The following options were assigned for the ELT-CS

Never	1
Seldom	2

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Sometimes	3
Often	4
Always	5

And the following options were assigned to the teaching effectiveness questionnaire

Strongly	1
Disagree	
Disagree	2
Undecided	3
Agree	4
Strongly	5

Agree

The following range was assigned to the ELT-CS and teaching effectiveness questionnaire.

Very low	1 to 1.80
Low	1.81 to 2.60
Average	2.61 to 3.40
High	3.41 to 4.20
Very High	4.21 to 5.00

**Characteristics of the Instruments**

Both the tools i.e. ELT-CS and Teaching Effectiveness Questionnaire have 2 sections. Student demographic data, such as name, class, gender, etc., is included in Part A. Seven dimensions of creativity such as Originality and Elaboration, Fluency and Flexibility, Person (Teacher), Press (Environment) and Materials, Motivation, Independent Learning (Autonomy) and Brainstorming. form the basis of Part B of the creativity skills questionnaire And part B of teaching effectiveness questionnaire is based on teaching effectiveness dimensions such as pedagogical expertise, content expertise, student teacher relationship, classroom management, supportive classroom environment, evaluation activities and balanced personality of the teachers. In ELT-CS three point Likert type scale will be used for rating the respondents. The responses category will range from always to never. Scoring of the instrument will be; always =3 sometimes=2 and never=1. In teaching effectiveness questionnaire five point Likert type scale will be used for rating the respondents. The responses category will range from strongly agree to strongly disagree. Scoring for the instrument will be; strongly agree=5 Agree =4 undecided =3 disagree=2 and strongly disagree=1. Reverse rating will be used for negative items. Negative items in ELT-CS are 21, 25, 29, 32, 39, 43 and 44, and in Teaching Effectiveness Questionnaire are 1, 3, 9, 10, 12, 14, 17, 19, 27, 29, 30, and 35.

The research tool was standardized and it was made sure that every respondent understood each item in the same way. The items were straightforward, succinct, and objective. Each item was presented in such a way that respondent clearly understand the statement and rate their teachers as per statements. Approximately 35 minutes were required for completing the questionnaires.

**Data Collection Process**

The data gathering procedure is one of the most crucial phases in social science research, particularly in survey research. In the current study, no one assisted the researcher in administering the research instrument in female secondary schools and the researcher personally visited public secondary schools, whereas a male secondary school teacher assisted the researcher in administering the research instrument in male secondary schools. The data collection process took two months commencing from January to February, 2022.

**Data Analysis and Results**

In this section data were analyzed and interpreted. Application of Independent sample t-test was made. Mean and SD scores of the female and male were used to measure Creativity level and Teaching Effectiveness level of teachers at secondary level. Independent sample t-test was used for determining the mean difference between Creativity level of male and female secondary school teachers according to the research questions. The researcher carefully calculated the statistical values. As statistical tests, Mean, Standard Deviation and independent sample t-test were utilized.

**Table 1**

**Showing Domain Wise Mean and Standard Deviation of Creativity Level (N=363)**

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S.No	Domains	Mean	Std
1	Originality and Elaboration	4.04	.40
2	Fluency and Flexibility	3.88	.47

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3	Personality	4.16	.40
4	Environment	3.66	.39
5	Motivation	4.00	.48
6	Autonomy	4.01	.46
7	Imaginative Skills	4.34	.34
8	Intellectual Skills	4.06	.42
9	Knowledge	4.20	.40
10	Overall	4.05	.17

The mean score for each of the creativity questionnaire's domains is shown in Table 1. Creativity has high mean intensity. For each domain, the respective mean values are given. Mean value of all the domains is above 4.00 except Fluency and Flexibility and Environment. Environment has the lowest mean value i.e. 3.66. The mean value of Originality and Elaboration and Intellectual Skills is almost equal i.e. 4.04 for Originality and Elaboration and 4.06 for Intellectual Skills. The overall mean value of all the domains is 4.05 which fall in high category (3.41 to 4.20) of mean. Overall, it can be said that secondary school teachers exhibit high levels of creativity in all aspects.

### Gender Wise Comparison

Men and women have significantly different levels of creativity, if the probability value (p-value) is equal to or less than 0.05 levels. If the occurrence of p-value is greater than 0.05, we deduce that there is no discernible difference in the level of creativity between male and female secondary school teachers.

**Table 3**

#### Gender wise comparison regarding total domain of Creativity Level

S.N	Gender	N	Mean	Std	t	Df	p-value
1	Male	240	4.0095	.17105	6.651	361	.000
2	Female	123	4.1322	.15680			

The table 3 explains the testing of significant differences between male and female secondary school students' views about their teachers' level of creativity. Given that the p-value is less than 0.05, there is a significant difference between the creative levels of secondary school educators who are male and female. Female secondary school teachers are more creative than their male counterparts, as evidenced by the fact that the mean score for female teachers (M=4.13) is greater than the mean score for men teachers (M=4.00).

**Table 4**

#### Gender wise comparison regarding "Originality and Elaboration" domain of Creativity

S.N	Gender	N	Mean	Std	T	Df	p-value
1	Male	240	4.0067	.43367	2.586	297.129	.010
2	Female	123	4.1154	.34831			

The testing of significant differences between male and female secondary school students' views about their teachers' on Originality and Elaboration domain of creativity is made clear in table 4. Since the p-value is less than 0.05, there is a significant difference between the Originality and Elaboration domains of male and female secondary school teachers. Female secondary school teachers perform better than their male counterparts in the originality and elaboration area, as evidenced by the fact that the mean score for female teachers (M=4.11) is higher than the mean score for men instructors (M=4.00).

**Table 5**

#### Gender wise comparison regarding "Fluency and Flexibility" domain of Creativity

S.N	Gender	N	Mean	Std	T	Df	p-value
1	Male	240	3.8375	.51335	3.113	312.628	.002
2	Female	123	3.9870	.38559			

The testing of significant differences between male and female secondary school students' views about their teachers' on 'Fluency and Flexibility' domain of creativity is made clear in table 5. Since the p-value is less than 0.05, there is a significant difference between the "Fluency and Flexibility" domains of male and female secondary school teachers. Female secondary school teachers perform better than their male counterparts in "Fluency and Flexibility" area, as evidenced by the fact that the mean score for female teachers (M=3.98) is higher than the mean score for men instructors (M=3.83).



**Table 6**

**Gender wise comparison regarding “Personality” domain of Creativity**

S.N	Gender	N	Mean	Std	T	Df	p-value
1	Male	240	4.1725	.39926	.293	361	.770
2	Female	123	4.1593	.41446			

The testing of significant differences between male and female secondary school students' views about their teachers' on 'Personality' domain of creativity is made clear in table 6. Since the p-value is greater than 0.05, there is no significant difference between the "Personality" domains of male and female secondary school teachers. Male secondary school teachers perform better than their female counterparts in "Personality" area, as evidenced by the fact that the mean score for female teachers (M=4.15) is higher than the mean score for men instructors (M=4.17).

**Table 7 Gender wise comparison regarding “Environment” domain of EI**

S.N	Gender	N	Mean	Std	T	Df	p-value
1	Male	240	3.6175	.38402	3.050	361	.002
2	Female	123	3.7496	.40293			

The testing of significant differences between male and female secondary school students' views about their teachers' on 'Environment' domain of creativity is made clear in table 7. Since the p-value is less than 0.05, there is a significant difference between the 'Environment' domains of male and female secondary school teachers. Female secondary school teachers perform better than their male counterparts in 'Environment' area, as evidenced by the fact that the mean score for female teachers (M=3.61) is higher than the mean score for men instructors (M=3.74).

**Table 8**

**Gender wise comparison regarding “Motivation” domain of Creativity Level**

S.N	Gender	N	Mean	Std	T	Df	p-value
1	Male	240	3.9325	.51225	4.6747	361	.000
2	Female	123	4.1545	.37793			

The testing of significant differences between male and female secondary school students' views about their teachers' on 'Motivation' domain of creativity is made clear in table 8. Since the p-value is less than 0.05, there is a significant difference between the 'Motivation' domains of male and female secondary school teachers. Female secondary school teachers perform better than their male counterparts in 'Motivation' area, as evidenced by the fact that the mean score for female teachers (M=4.15) is higher than the mean score for men instructors (M=3.93).

**Table 9**

**Gender wise comparison regarding “Autonomy” domain of Creativity**

S.N	Gender	N	Mean	Std	T	Df	p-value
1	Male	240	3.9525	.48362	3.679	292.976	.000
2	Female	123	4.1268	.39527			

The testing of significant differences between male and female secondary school students' views about their teachers' on 'Autonomy' domain of creativity is made clear in table 8. Since the p-value is less than 0.05, there is a significant difference between the 'Motivation' domains of male and female secondary school teachers. Female secondary school teachers perform better than their male counterparts in 'Autonomy' area, as evidenced by the fact that the mean score for female teachers (M=4.12) is higher than the mean score for men instructors (M=3.95).

**Table 10**

**Gender wise comparison regarding “Imaginative Skills” domain of Creativity**

S.N	Gender	N	Mean	Std	T	Df	p-value
1	Male	240	4.3300	.35632	1.032	361	.303
2	Female	123	4.3691	.31156			

The testing of significant differences between male and female secondary school students' views about their teachers' on 'Imaginative Skill' domain of creativity is made clear in table 10. Since the p-value is less than 0.05, there is no significant difference between the 'Motivation' domains of male and female secondary school teachers. Female secondary school teachers perform better than their male counterparts in 'Imaginative Skill' area, as evidenced by the fact that the mean score for female teachers (M=4.33) is higher than the mean score for men instructors (M=4.36).

**Table 11**  
**Gender wise comparison regarding “Knowledge” domain of Creativity**

S.N	Gender	N	Mean	Std	T	Df	p-value
1	Male	240	4.2308	.40773	2.450	361	.015
2	Female	123	4.3398	.38830			

The testing of significant differences between male and female secondary school students' views about their teachers' on 'Knowledge' domain of creativity is made clear in table 11. Since the p-value is less than 0.05, there is a significant difference between the 'Knowledge' domains of male and female secondary school teachers. Female secondary school teachers perform better than their male counterparts in 'Knowledge' area, as evidenced by the fact that the mean score for female teachers (M=4.33) is higher than the mean score for men instructors (M=4.23).

### Discussion

It is clear from the evidences that the role of creativity is very important for teachers because of its straight effect on teaching, learning and most essentially on the forthcoming lives of the students (Pishghadam, Baghaei and Shayesteh, 2012, p. 2). The main aim of the present study was to find out secondary school teachers' creativity and compare the creativity level of male and female secondary school teachers in district Bannu. The study's results showed that there was a significant difference in the views of secondary school students about their teachers' creativity level.

The main question of this study was: Is there any significant difference between male and female secondary school teachers creativity level?

In spite of the fact that scholars have been taking interest in gender and creativity for last four decades, but this critical and complicated concept has not yet clear. Inconsistent findings of the studies on gender differences in creativity also created confusion. Credible results are obtained in empirical studies in which the performance of male and female are compared. In some studies, no differences in the performance male and female are found (Kaufman, Baer, & Gentile, 2004). On the other hand in some others the performance of females is better than male in creative ability (Reuter et al., 2005; Wolfradt & Pretz, 2001). There are also some studies in which the males beat female (Cox, 2002; Dollinger, Dollinger, & Centeno, 2005).

In the same way, when the personalities of creative male and female were compared, the results were mixed. In some researches similarities were found (Chavez-Eakle, Lara, & Cruz-Fuentes, 2006; Szobiova, 2006), but in others personality differences were found (Labouvie-Vief, 1994). Because the proportion between questions and answers about the creative pursuits of male and female is not equal, Baer (1999) suggested some studies designed to explore several variability that describe this oeuvre. According to Ai (1999), this variability can be clarified, somewhat in part, by recognizing the role of male and female. In these empirical studies of creativity, the "gender" is of more importance than the 'role of the gender'

Findings of this study proved that there is a significant difference between creativity level of male and female teachers. Female teachers are more creative than male teachers. Although the difference between the mean scores is very little but female teachers proved to be more creative. The results are similar with Khodabakhshzadeh et al (2018) conducted a study on examining the impact on EFL teachers creativity on their teaching effectiveness in Iran. They found the same result in their study that EFL female teachers are more creative than male teachers. In another study done by Forisha (2015, p.1) about the creativity of male and female, it was found that female were better in imagination and male were better in innovation and novelty. Kimmelmeier & Walton (2016, p.78), in their research on gender differences in self-reported creativity found that female are much better and have more knowledge about the objective level of ingenuity of their creative work than male. According to Spiel & Von Korff (1998) in the eyes of women 'idea' is the focal point of creativity while the main focus of men in creativity is 'newness' and 'originality'. Additionally, the notion of 'imagination' is used by men as important notion in creativity. But the thought of women are different. They usually define creativity by what it is not. A study done by Fryer's (1996), in which he involved a large number of teachers from primary, secondary and high level, it was found that the inclination of male teachers toward creativity was in terms of sophistication, critical reasoning, and evolution and not considered it as a product of experience. Contrarily, the views of female teachers about creativity were different. They considered creativity in terms of deep thinking, deep feelings, ingenuity and experience.

### **Conclusion**

In the light of the results of the study it was concluded that secondary school teachers of district Bannu are highly creative. Overall position of the entire sample is palatable. They achieve the high level of creativity. In simple terms, they are very fluent and flexible. Their ideas are original and they can elaborate it clearly. They keep the environment of the class very flexible and creative. They can motivate their students. They are able to make their student learn independently. Their imaginative and intellectual skills are very impressive. Their knowledge about their subject is also very impressive.

Students' rating is used to find out teachers' teaching effectiveness. According to the students of secondary school teachers of district Bannu, their teachers are performing their duties very impressively. Their content and pedagogical skills are extraordinary and can competently manage their classes. Their relations with their students are good. The environment of their classroom is supportive and good. They have the ability to evaluate their students' performance and have a balanced personality.

It is concluded that there is a significant difference between the creativity level of male and female secondary school teachers. Female teachers are proved to be more creative than man with a slight difference in their mean score of creativity level.

### **Applications**

- i. Since creativity has a significant impact on teaching effectiveness so teachers should improve themselves in all the dimensions of creativity so that they can teach more effectively and attain their educational objectives.
- ii. Teachers should not only be creative themselves but should help their students to improve their creativity and teach them to establish patterns and programs for thinking creatively. It will surely help them in their future lives.
- iii. In addition, some training courses should be organized for teachers and administrators. With help of these courses teachers will improve their creativity and administrator will hire those teachers who will be more creative and successful.

### **Recommendation**

- i. It is highly recommended that some further studies should be done to investigate the relation between creativity and other elements like IQ and motivation etc.
- ii. Additionally, it is also recommended that the same study should be replicated with a bigger sample to ensure the findings.
- iii. One more feasible study might concentrate on techniques to enhance teachers' inclination towards applying more creative strategies and methods in their classroom.

### **Data Availability Statement**

The raw data supporting the conclusion of this article will be made available by the author, without undue reservation.

### **Ethics Statement**

The studies involving human participants were reviewed and approved by Dr. Ikramullah Khan University of Science and Technology Bannu and Dr. Allah Noor Gomal University DIK. Written informed consent to participate in this study was provided by the participant's legal guardian/next of kin.

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