Journal of Peace, Development and Communication

PEACE AND DEVELOPMENT

Volume 06, Issue 03, September 2022
pISSN: 2663-7898, eISSN: 2663-7901
Article DOI: https://doi.org/10.36968/JPDC-V06-I03-03
Homepage: https://pdfpk.net/pdf/
Email: se.jpdc@pdfpk.net

Article:	**Teachers' Creativity Promotion with Respect to Teaching Experience, Teaching Level, Sector and Gender vise Schooling System, and Subject Teachers Teach: Evidence from a Broader Pakistani Context**
Author(s):	*Muhammad Kamran Assistant Professor, Department of Education, University of Loralai, Balochistan, Pakistan
	Nishat Zafar Associate Lecturer, Department of Education, University of Gujrat, Punjab, Pakistan
	Mehnaz Bashir Lecturer, Department of Education, University of Turbat, Balochistan, Pakistan
Published:	19th September 2022
Publisher Information:	Journal of Peace, Development and Communication (JPDC)
To Cite this Article:	Kamran, M., Zafar, N., & Bashir, M. (2022). Teachers' Creativity Promotion with Respect to Teaching Experience, Teaching Level, Sector and Gender vise Schooling System, and Subject Teachers Teach: Evidence from a Broader Pakistani Context. *Journal of Peace, Development and Communication*, *06*(03), 30–51. https://doi.org/10.36968/JPDC-V06-I03-03
Author(s) Note:	*Muhammad Kamran is serving as an Assistant Professor at Department of Education, University of Loralai, Balochistan, Pakistan Corresponding Author's Email: muhammad.kamran@uoli.edu.pk
	Nishat Zafar is serving as an Associate Lecturer at Department of Education, University of Gujrat, Punjab, Pakistan
	Mehnaz Bashir is serving as a Lecturer at Department of Education, University of Turbat, Balochistan, Pakistan

ABSTRACT

This research article drove us to inspect the perception of Pakistani teachers' creativity promotion with respect to teaching experience, teaching level, sector and gender vise schooling system, and subject teachers teach in their classrooms. We used the quantitative research design and applied the survey (questionnaire) as a method of data collection to achieve objectives. Our population of interest was composed of multilevel teachers from broader perspective in Pakistan who taught at various levels and were teaching different subjects in different schooling systems. For data collection, an online questionnaire of 11 items adapted from Sarsani (1999) sent to respondents through WhatsApp, Emails, and Facebook messenger, which responded online by 468 teachers randomly. These respondents were randomly selected through a simple random sampling method. Of 468 questionnaires, one questionnaire was rejected due to missing options, so it made our total sample 467 teachers. The results revealed that Pakistani teachers perceived that creativity among the students must be promoted. About creativity promotion, when the Pakistani teachers' perception was tested against the teaching experience, teaching level, schooling system (sector vise & gender vise) and subjects they teach, significant differences were found only in teaching experience and teaching at different levels. The rest of the demographic variables i.e., schooling system (sector vise & gender vise) and subjects they teach did not yield any significant differences. The results extracted from current study were discussed in light of the past studies on the basis of which recommendations were given.

Keywords: Creativity, Creative Climate, Teachers Perception, Creative Classroom

1. INTRODUCTION

In 1950s, Guilford related the creativity to education due to which creativity gained interest, fame, the status of essentialism, and an obligation (Alencar, 2015; Lambert, 2017) for the world. Further, authors associated creativity to a survival (Miller & Dumford, 2014) because of extremely importance. This altered the world direction towards creativity because there will be no way to manage (Williams et al., 2016) if creativity has not been included in our life. It is declared that creativity has extremely importance in the views of researchers but it has never been defined in unanimous definition. The standard definition of creativity given by Runco and Jaeger (2012) is the name of original ideas and effective products. Intrinsically creativity belongs to every person and can be boosted (Runco, 2014) in every occupation and every subject of education (Cropley, 2015; Kaufman, 2016; Silva & Nakano, 2012).

Researchers have opined this belief that creativity must the part of school curricula because it is the most important concept and has a crucial role in teaching (Cachia, & Ferrari, 2010). Past studies found that promoting creativity is growing with the passage of time (Ng & Smith, 2004) but teachers' perception about creative behavior is different due to cultural and social differences (Ng & Smith, 2004; Scott, 1999; Westby & Dawson 1995; Al-Nouh et al., 2014; Cachia & Ferrari, 2010; Park et al., 2006; Akkanat & Gökdere, 2015; Ng & Smith, 2004).

2. LITERATURE REVIEW

Scott (1999) in USA investigated elementary teachers and university students' perception of creativity. Elementary teachers and university students both did not favor the creative endeavor and felt that creative children are troublemaking. Teachers were more likely to see the creative children as disruptive compared to the university students. This brings a case that creativity might be considered a burden on the teachers due to various factors such as the teaching experience etc.; therefore, it is crucial to examine the teachers' perception of creativity against several factors.

Teaching style specifically the authoritarian style of teaching, mentioned by Ng and Smith (2004) in Singapore has badly affected the creative endeavor. Ng and Smith (2004) mentioned that conservative and autocratic teachers were inclined towards uncreative behavior, and the liberal and democratic teachers supported the creative endeavor. Sometimes even the teachers do not like the creative attitudes of the students because they think that creative students may give them a tough time. It is shown here that teaching style might influence the teachers' perception of creativity promoting, the cause might be the least teaching experience that they hold or it might be the difference in level of teaching. Past literature is not very rich in teachers' teaching experience, difference in level of teaching and other factors when it comes to creativity promotion.

Park et al. (2006) investigated Korean teachers specifically the science teachers about the perception of creativity. The Korean science teachers showed a highly positive perception and greater mindfulness about creativity. The teachers opined the belief that every student can become creative and creativity can be promoted in each individual. In addition, the Korean science teachers have well established perception that a science subject has a greater place for creativity because creativity-led teaching could be practiced in Korea if the opportunity given

to teachers. This study was specifically from the perspective of science teachers but as shown clearly, most of past studies did not address the teachers' teaching experience, teaching level and other demographic variables. Therefore, we have a rational to run a study on teachers' teaching experience, teaching level and other demographic variables like schooling system and subjects that teachers teach in their classrooms.

In Europe in 32 countries, Cachia and Ferrari (2010) initiated study about perception of creativity and teachers' teaching practices. Nearly all the teachers showed a progressive and optimistic approach towards creativity. Teachers revealed that creativity belongs to each domain of knowledge, each teaching subject, and to each student. However, the level of practicing creativity as compared to their beliefs was lower due to traditional teaching and assessment methods. It meant that most of the teachers had not good practice of creativity as were showed according to their beliefs. This study was limited in the variables that we have intended for our study therefore, our study will surely contribute to the knowledge of creativity.

In Kuwait, Al-Nouh et al. (2014) initiated study about female teachers' perception of creativity and their practices at the primary school level. Said study was only limited to female teachers and English subjects as their major. Kuwaiti female teachers showed high attitudes toward creativity. When female teachers' attitudes and perception of their practices towards creativity were tested against their teaching experience, the significant differences were endorsed. The main advantage of this study was that this study also included the analysis of teaching experience against teachers' attitudes and perception of their practices towards creativity.

In Amasya, Turkey through a qualitative study, Akkanat and Gökdere (2015) revealed the teachers' beliefs about creativity but the limitation was that it only recruited the sample of 13 Chemistry teachers. Although the sample was limited to only one subject i.e., Chemistry subject but still their results showed that, the teachers had well-established beliefs about creativity and associated creativity with intelligence, solving problems and novel ideas. In addition, this study also brought the negative beliefs and opined the negative beliefs such as traditional Chemistry curriculum, cultural barriers, lack of knowledge of creative teaching, and weekly lesson hours destitute the creativity. As can be seen, much of the past studies had not explored the teaching experience, teaching level and other demographic variables like schooling system and subjects that teachers teach in their classrooms against the perception of teachers about the creativity.

Morais et al., (2019) steered a study on the adaptation of the scale of Fleith and Alencar (2005) entitled Classroom Creativity Climate in Portuguese samples at the school level. The researchers showed the evidence of validity for the Portuguese samples regarding the said scale. The study was only limited to the school students of approximately nine years of age. When the scale of Fleith and Alencar (2005) was employed to the said sample, the new scale gave the 22 items spread on four factors that were rated on five-pint Likert scale. 22 items of the new scale loaded on four factors, which were teacher support for expression of student ideas, student self-perception of creativity, student interest in learning and student autonomy. However, the original scale of Fleith and Alencar (2005) had five factors. In the new scale, no

item appeared on the factor of teacher's encouragement for the production of student ideas. Reliability coefficients of the new scale was from .52 to .80 considered strong among the researchers. The new scale will be useful in Pakistani students if adopted for identifying the climate for creativity in the classroom.

Khan and Kamran (2021) disclosed the attitudes of 155 (65 male and 90 female) teachers towards creativity in Pakistan. Results revealed that Pakistani teachers had held only the medium attitudes about creativity, which is a question mark for the researchers. However, this study was limited in sample therefore; it is possible that it brought the medium attitudes of teachers into our focus.

Kamran et al., (2021) investigated the definition of creativity by sampling 20 (08 males & 12 females) teachers who were having science as their major. Creativity was defined by four themes, i.e., newness, new tutoring methods, practicality, and natural/God-gifted phenomenon. The amazing finding that came from this study was that creativity is multifaceted rather than relating to a single and fix definition. This study was also limited in several directions such as limited sampling. It was a surface study leaving research gaps for the researchers.

Besides, in a most recent study, Kamran et al., (2021) examined the top-listed factor that promotes creativity. The study found that building of self-confidence is the top-listed promoter (factor) because most of the teachers approved only this factor. Conversely, this article did not catch the whole perception of Pakistani teachers about the promoters, which was a limitation of the said article. The future researchers might go deep into the study to find solution of the limitations.

Although a scattered literature is present about creativity but much of the researchers did not directly explore the creativity promotion with respect to teaching experience, teaching level, sector and gender vise schooling system, and subject teachers teach in Pakistani context. Therefore, we examined the creativity promotion against the said variables.

3. RATIONALE OF STUDY

Why we are doing this research study? In the justifications, it has been frequently mentioned that creativity has been considered to every student (Runco, 2014), every walk of life and to every level of education (Cropley, 2015; Kaufman, 2016; Silva & Nakano, 2012) but failures about the manifestations of creative behavior has been come into notice (Besançon et al., 2013; He & Wong, 2015). Second, creativity has been explored with different contexts (Alencar et al., 2016; Besançon et al., 2013) with respect to different demographic variables but only limited literature is existed about teaching experience, teaching level, sector and gender vise schooling system, and subject teachers teach. Third, the literature review has shown that a mixed level of perceptions of the teachers about creativity and creative thinking has found and most of the studies were not in the Pakistani context but were conducted in west or other Asian countries.

4. OBJECTIVES OF THE STUDY

In the Pakistani context based on literature review, we designed the following objectives for our study.

i. To compare the level of teachers' perception about creativity promotion in Pakistan with respect to their teaching experience

ii. To compare the level of teachers' perception about creativity promotion in Pakistan with respect to different teaching levels

iii. To compare the level of teachers' perception about creativity promotion in Pakistan with respect to sector vise schooling system

iv. To compare the level of teachers' perception about creativity promotion in Pakistan with respect to gender vise schooling system

v. To compare the level of teachers' perception about creativity promotion in Pakistan with respect to subject teachers teach

5. HYPOTHESES OF THE STUDY

i. H_1: There will exist significant differences in the teachers' perception level about creativity promotion with respect to their teaching experience

ii. H_2: There will exist significant differences in the teachers' perception level about creativity promotion with respect to their different teaching levels

iii. H_3: There will exist significant differences in the teachers' perception level about creativity promotion with respect to sector vise schooling system

iv. H_4: There will exist significant differences in the teachers' perception level about creativity promotion with respect to gender vise schooling system

v. H_5: There will exist significant differences in the teachers' perception level about creativity promotion with respect to subject teachers teach

6. RESEARCH METHOD

6.1. Design of the Study

This study was conducted quantitatively through the survey method in the framework of quantitative research design. To identify the beliefs of individuals in society, the survey is one of the related methods (Sarsani, 1999) because it has the practice of generality. Further, the survey method is used to explore the problems in diverse contexts (Sarsani, 1999).

6.2. Population, Sample and Data Collection Procedure

The population was comprised of diverse areas of Pakistani teachers belonging to different levels of schooling having diverse kind of teaching experience. We took 468 sampled teachers who taught different subjects in their classrooms. One questionnaire was rejected due to missing options so the total sample became 467 finally. An 11items of five-point Likert scale adopted from Sarsani (1999) was sent to the participants randomly through their emails, WhatsApp and Facebook messenger. The said scale was relevant to the phenomenon under investigation and was used by researchers in diverse context in past studies (Sarsani, 1999).

The scale was rated from strongly agree to strongly disagree with a score of 05 (strongly agree) to 01 (strongly disagree) score. No reverse scoring was used because the scale was composed of positive items only. The scale nearly took about 05 minutes to fill in. Instructions about the scale and objectives of the study were mentioned in Part A of the scale. Teachers were informed that they only needed an active internet for filling of the scale. Table 1 has given the picture of the teachers' demographic information.

Table 1: Teachers' Demographic Information

Teachers' Information	Category	Frequency	Percentage
Teachers' Teaching Experience in Years	1-5 years	292	62.4
	6-10 years	58	12.4
	11-15 years	85	18.2
	16-20 years	12	2.6
	Above 20 years	21	4.5
	Total	468	100.0
Teachers' Teaching Level	Primary Level	99	21.2
	Secondary Level	181	38.7
	Higher Secondary Level	78	16.7
	College Level	51	10.9
	University Level	58	12.4
	Total	467	99.8
Type of School Teachers are working in (Sector vise)	Government	233	49.8
	Private	194	41.5
	Semi-government	40	8.5
	Total	467	99.8
Type of School Teachers are working in (Gender vise)	Boys School	147	31.4
	Girls School	83	17.7
	Co-education	237	50.6
	Total	467	99.8

Type of Subject Teachers are Teaching in Classroom	Physics	20	4.3
	Math	39	8.3
	Chemistry	51	10.9
	Biology	77	16.5
	Art/ Drawing	103	22.0
	English	16	3.4
	Other than above	161	34.4
	Total	467	99.8

6.3. Ethical Procedures

Research ethics like confidentiality and anonymity issues were addressed before collection of the data. It was clearly mentioned to the teachers that this is voluntary based research. You can withdraw from it at any stage. Further, no names or emails were asked to write from the sample to keep their identity confidential and anonymous.

6.4. Sarsani's (1999) Validity and Reliability of the Scale - Principal Component Analysis

From the literature survey and through personal experience and review of past studies Sarsani (1999) developed a scale that measure the promoting of creative thinking. The clarity of items, the wording of questions, and length of the questionnaire was confirmed by conducting a pretest study. The items of the scale sent to relevant local professors who were expert in the field of education, psychology and textbook. According to experts, the relevant items were retained in the scale and the content validity and culture and language suitability of the scale was also approved through the consent. Experts stated that items of said scale covered all the aspects of creative thinking and its development.

The principal component analysis further provides evidence for the construct validity. The principal component analysis will be further abbreviated as PCA. It converts all the items into a new set of principle components. Further, it is relatively a simpler process as compare to other factor analysis procedures (Stevens, 1992). Sarsani (1999) applied the PCA and Varimax rotation to the said scale to confirm the validity of the scale and prove the inclusion of the items in the scale (Fryer, 1989). Loading of factors is achieved through the Varimax rotation that display the maximum number of items loading on the minimum number of factors. Fewer the factors, the easier it is (Kinnear & Gray, 1997). Varimax rotation keeps distinctiveness among the factors on the basis of which the resultant factors are easier to interpret (Kaiser, 1960; Stevens, 1992). Eigen value greater than 1 were taken as a cut for the factors so only those factors were retained which had Eigen value greater than 1. In addition, 66.9% of the variance were shown by factors, which were extracted presented in table 2 below. The factors were

called teaching for self-reliance, responsive, question-expanded thinking, building confidence and relations and supportive environment (Sarsani, 1999).

Table2. Sarsani's (1999) Principal Component Analysis and Factors Extracted from Varimax Rotation of the Scale

Principal Component Analysis of TQ				Rotated Factor matrix of TQ		
Factors	Eigenvalue	Percent of variance	Cumulative percent	Factors Labelled	Items	Factor Loading
1	4.75	29.7	29.7	Teaching for self-reliance	12	.87
					13	.77
					11	.61
					15	.59
					14	.58
2	1.84	11.5	41.2	Responsive	8	.76
					9	.68
					10	.66
3	1.69	10.6	51.8	Question-Expanded thinking	6	.83
					7	.69
					5	.67
4	1.27	8.0	59.8	Building confidence and relations	2	.85
					16	.63
					3	.62
5	1.14	7.1	66.9	Supportive environment	4	.82
					1	.76

6.5. Test of the Normality

The test of normality was ignored because the central limit theorem (CLT) states that when the sample size is greater than 100, obliteration of the normality is not a major issue (Altman & Bland, 1995; Ghasemi & Zahediasl, 2012).

7. RESULTS, ANALYSIS, AND DISCUSSION

In the previous study conducted by Andleeb et al., (2022), it was detected that the level of teachers' perception about the creativity promotion was 3.90, which comes under the category of high perception range (Al-Nouh et al., 2014). High level of perception about the creativity promotion of Pakistani teachers indicates that they had accepted and permitted that they were ready to boost creativity of the learners.

7.1. Teachers' Teaching Experience and the Creativity Promotion-H_1

The hypothesis about creativity promotion with respect to teachers' teaching experience was tested through ANOVA. It has been represented by the following table 3, which indicates a significant difference among various groups of teachers' teaching experience with respect to teachers' perception about creativity promotion. As the significant value achieved is less than .05, i.e., .011 therefore, the hypothesis regarding teachers' teaching experience was accepted. The result further demonstrates that teachers having above 20 years of teaching experience are showing higher perception to creativity promotion than those of having lower teaching experiences.

Table 3. ANOVA for creativity promotion with respect to teachers' teaching experience

Promoters of creativity	N	Mean	SD	F	Sig.
1-5 years	291	3.83	.61	**3.31**	**.011**
6-10 years	58	3.96	.51		
11-15 years	85	4.01	.63		
16-20 years	12	4.00	.82		
Above 20 years	21	4.20	.53		

In order to know the difference across all possible pairs of the teachers' teaching experience, Tukey's HSD Post-hoc test was applied, as this test helps identify the difference by comparing the means across all groups (Abdi & Williams, 2010). Results from table 4 below determine that only one out of ten groups (i.e., 1-5 years vs Above 20 years) yielded a significant difference. It further signifies that perception level of teachers having above 20 years of teaching experience was found to be higher (M= 4.20) than the teachers having 1-5 years of teaching experience (M= 3.83).

Table 4. Multiple comparisons of teachers' teaching experience

Test	Mean Values	Sig.
1-5 years vs 6-10 years	(3.83) & (3.96)	.556
1-5 years vs 11-15 years	(3.83) & (4.01)	.088
1-5 years vs 16-20 years	(3.83) & (4.00)	.878
1-5 years vs Above 20 years	**(3.83) & (4.20)**	**.053 (Above 20 years > 1-5 years)**
6-10 years vs 11-15 years	(3.96) & (4.01)	.982
6-10 years vs 16-20 years	(3.96) & (4.00)	1.000
6-10 years vs Above 20 years	(3.96) & (4.20)	.526
11-15 years vs 16-20 years	(4.01) & (4.00)	1.000
11-15 years vs Above 20 years	(4.01) & (4.20)	.726
16-20 years vs Above 20 years	(4.00) & (4.20)	.887

It is shown in the current result that old teachers having above 20 years of teaching experience possessed higher perception of creativity development and were more interested in promoting creativity. This found that younger teachers having 1-5 years of teaching experience were not ready to creativity promotion because of several intervening factors. It might be possible that they were newly recruited in the teaching profession due to which they do not have greater amount of experience. Further, it can also be expected that the older teacher seem to be oriented towards the constructivist teaching style in which they need to be friendly with the students. It is also expected that the older teachers had got more teacher trainings compared to the younger teachers therefore, they are more creativity oriented. Further good amount of teaching experience also plays a crucial role in shaping of beliefs towards creativity. Enormously experienced teachers boost creativity since they discover creative features in children more certainly due to their enormous teaching experience in the field. Teaching experience of teachers in lecture control the students in active way. Due to more positive perception, the enormously experienced teachers observe themselves to be the promoter of creativity more efficaciously than teachers having least amount of teaching experience. The highest teaching experience group were more aware of their creative practices and comprehend that experience helps to improve reflection (Fox et al., 2011). Thus, young and least experienced teachers seem to be the least in favor of creativity. Opposite results were found in Cachia and Ferrari's (2010) study that reported that teachers who have been teaching for less than a year foster creativity more than others that have taught longer. The current study results were also inconsistent with the results of Al-Nouh et al. (2014) in which younger teachers showed more positive attitudes towards creative thinking (M = 3.75) compared to older

teachers (M = 3.53) and middle-age teachers (M = 3.70). Thus, young and least experienced teachers seem to be the most in favor of creative thinking in past studies. In conclusion, the current study stated the greater the amount of experience, the higher the perception of teachers towards creativity.

7.2. Teaching at Different Levels and Creativity Promotion-H_2

The hypothesis about creativity promotion with respect to teachers teaching at different levels was tested through ANOVA. It has been represented by the following table 5, which indicates a significant difference among various groups of teachers teaching at different levels against creativity promotion. As the significant value achieved is less than .05, i.e., .001 therefore, the hypothesis regarding teachers teaching at different levels was accepted. The results further demonstrate that teachers teaching at university level are showing higher perception level than those of having teaching at lower levels.

Table 5. ANOVA for creativity promotion differences with respect to teaching at different levels

Promoters of creativity	N	Mean	SD	F	Sig.
Primary Level	99	3.74	.56	**4.54**	**.001**
Secondary Level	181	3.89	.56		
Higher Secondary Level	78	3.88	.62		
College Level	51	3.96	.75		
University Level	58	4.16	.63		
Total	467	3.90	.61		

In order to know the difference across all possible pairs of the teachers teaching at different levels, Tukey's HSD Post-hoc test was applied, as this test helps identify the difference by comparing the mean scores across all groups (Abdi & Williams, 2010). Results from table 6 below determine that only two out of ten groups (i.e., primary level vs university level and secondary level vs university level) yielded significant differences. It further signifies that perception level of teachers having university level teaching was found to be higher (i.e., 4.16) than the teachers having primary level (3.74) and secondary level (3.89).

Table 6. Multiple comparisons of teachers teaching at different levels

Test	Mean Values	Sig.
Primary Level vs Secondary Level	(3.74) & (3.89)	.322
Primary Level vs Higher Secondary Level	(3.74) & (3.88)	.767
Primary Level vs College Level	(3.74) & (3.96)	.520
Primary Level vs University Level	**(3.74) & (4.16)**	**.001 (University Level > Primary Level)**
Secondary Level vs Higher Secondary Level	(3.89) & (3.88)	1.000
Secondary Level vs College Level	(3.89) & (3.96)	.999
Secondary Level vs University Level	**(3.89) & (4.16)**	**.043 (University Level > Secondary Level)**
Higher Secondary Level vs College Level	(3.88) & (3.96)	.999
Higher Secondary Level vs University Level	(3.88) & (4.16)	.100
College Level vs University Level	(3.96) & (4.16)	.758

Significant differences were shown in teachers' perception based on their teaching levels. Significant differences were shown between primary school and university level teachers. The university level teachers revealing more positive attitudes towards creative thinking than the primary and secondary level school teachers. It could be that university level teachers were accustomed to teaching adults or older children; thus, they might believe that creative thinking requires higher-order thinking skills relative to older learners (Torrance, 1983; de Souza Fleith, 2000). Some of the researchers have opposite opinions regarding this matter and stated that according to Grainger et al. (2004), as children move through school, their voluntary creativity declines. Current study results has led to a focus on adult learners to make them prepared for the creative thinking. The university level teachers understand from their expertise that children have the potential to be creative (Szerencsi, 2010).

7.3. Type of School (Sector vise) Differences and Creativity Promotion-H_3

The hypothesis about creativity promotion with respect to type of school (sector vise) differences was tested through ANOVA. It has been represented by the following table 7, which indicates insignificant difference among various groups of teachers with respect to type of school (sector vise) differences about creativity promotion. As the significant value achieved is greater than .05, i.e., .735. Therefore, the hypothesis regarding type of school (sector vise) differences was rejected.

Table7. ANOVA for creativity promotion differences with respect to type of school (sector vise)

Promoters of creativity	N	Mean	SD	F	Sig.
Government	233	3.88	.53737	**.307**	**.735**
Private	194	3.92	.64360		
Semi-government	40	3.90	.85		
Total	467	3.90	.61		

7.4. Type of School Differences (Gender vise) and Creativity Promotion-H_4

The hypothesis about creativity promotion with respect to type of school differences (gender vise) was tested through ANOVA. It has been represented by the following table 8, which indicates insignificant difference among various groups of teachers with respect to type of school differences (gender vise) about creativity promotion, as the insignificant value achieved is greater than .05, i.e., .064. Therefore, the hypothesis regarding type of school differences (gender vise) was rejected. It is shown in following table 8.

Table 8. ANOVA for Creativity Promotion differences with respect to type of school differences (gender vise)

Promoters of creativity	N	Mean	SD	F	Sig.
Boys School	147	3.8349	.65192	**2.761**	**.064**
Girls School	83	3.8346	.59480		
Co-education	237	3.9678	.59100		
Total	467	3.9023	.61378		

7.5. Type of Subjects Teachers Teach and Creativity Promotion-H_5

The hypothesis about creativity promotion with respect to type of subjects teachers teach was tested through ANOVA. It has been represented by the following table 9, which indicates insignificant difference among various groups of teachers teaching different types of subjects with respect to teachers' perception about creativity promotion, as the insignificant value achieved is greater than .05, i.e., .083. Therefore, the hypothesis regarding teachers teaching different types of subjects was rejected. It is shown in following table 9 below.

Table 9. ANOVA for Creativity Promotion differences with respect to teachers teaching different types of subjects

Promoters of creativity	N	Mean	SD	F	Sig.
Physics	20	3.8909	.58068	**1.876**	**.083**
Math	39	4.0536	.79710		
Chemistry	51	3.7665	.56283		
Biology	77	3.8713	.52001		
Art/ Drawing	103	3.9188	.61274		
English	16	3.5568	.45982		
Other than above	161	3.9486	.62727		
Total	467	3.9023	.61378		

8. CONCLUSION, RECOMMENDATIONS AND LIMITAION OF THE STUDY

Existing study was conducted to explore the perception level of teachers regarding creativity promotion along with the role of certain demographic features mentioned in hypothesis section. The results designate that Pakistani teachers ascertain their positive perception about creativity rise. Regarding the role of demographic features, teachers' experience and their level of teaching showed a significant difference with respect to their perceptions of creativity promotion. In contrast, no difference was found in rest of the demographic variables with respect to their perceptions of creativity promotion. Therefore, it is recommended that teachers' experience must be noted in the school curricula when the curriculum designing takes place. Besides, experienced and well-versed teachers should be provided to practice creativity. Experienced teachers will not only help students acquire creativity but will prepare them for the innovative education. Furthermore, concerned authorities and policymakers should be aware of certain demographic variables about creativity. In addition, due to time and resources obstacles, this study is limited to Pakistani teachers at local level only. The authors used the adopted and self-reported survey. Due to time

limitation and other restricted resources, we could not develop our own instrument for data collection. Further, the study is good enough to consider for the generalization over the broader population.

References

Abdi, H., & Williams, L. J. (2010). Tukey's honestly significant difference (HSD) test. *Encyclopedia of research design*, *3*(1), 1-5.

Akkanat, Ç., & Gökdere, M. (2015, June). Chemistry teachers' views of creativity. In *Asia-Pacific Forum on Science Learning & Teaching* (Vol. 16, No. 1).

Alencar, E. M. L. S. (2015). Promoção da criatividade em distintos contextos: Entraves e desafios. In M. F. Morais, L. Miranda, & S. Wechsler (Eds.), Criatividade: Aplicações práticas em contextos internacionais (pp. 15-32). São Paulo, SP: Vetor.

Alencar, E. M. L. S., Braga, N. P., & Marinho, C. D. (2016). Como desenvolver o potencial criador. Petrópolis, RJ: Vozes.

Alencar, E. M. L. S., Bruno-Faria, M. F., & Fleith, D. S. (2014). The measurement of creativity: Possibilities and challenges. In E. M. L. S. Alencar, M. F. Bruno-Faria, & D. S. Fleith (Eds.), Theory and practice of creativity measurement (pp. 1-20). Waco, TX: Prufrock Press.

Alencar, E. M. L. S., & Formiga-Sobrinho, A. B. (2017). A gestão da criatividade. Curitiba, PR: Prismas.

Al-Nouh, N. A., Abdul-Kareem, M. M., & Taqi, H. A. (2014). Primary School EFL Teachers' Attitudes towards Creativity and Their Perceptions of Practice. *English language teaching*, *7*(9), 74-90.

Altman, D. G., & Bland, J. M. (1995). Statistics notes: Absence of evidence is not evidence of absence. *Bmj*, *311*(7003), 485.

Amabile, T. M. (1996). Creative in context. Boulder, CO: Westview Press.

Andleeb, N., Kamran, M., & Akram, H. (2022). Examination of the Demographic Variables in Promoting Creativity in Pakistan: A Follow-Up Study. *International Journal of Business and Management Sciences*, *3*(2), 35-47.

Baer, J. (2016). Domain specificity of creativity.London: Academic Press.

Bahia, S., & Trindade, J. P. (2013). Transformar o velho em novo: A integração da criatividade na educação. In F. H. Piske & S. Bahia (Eds.), Criatividade na escola: O desenvolvimento de potencialidades, altas habilidades e talentos (pp. 15-32). Curitiba, PR: Juruá.

Beghetto, R. A., & Kaufman, J. C. (2014). Classrooms contexts for creativity.High Ability Studies, 25(1), 53-69. doi: 10.1080/13598139.2014.905247

Beghetto, R. A., & Kaufman, J. C. (Eds.). (2016). Nurturing creativity in the classroom. New York: Cambridge University Press.

Beghetto, R. A., & Plucker, J. A. (2016). Revisiting the relationship among schooling, learning, and creativity. In J. C. Kaufman & J. Baer (Eds.), Creativity and reasoning in cognitive development (pp. 72-91). New York: Cambridge University Press.

Besançon,M., Lubart, T., &Barbot, B. (2013). Creative giftedness and educational opportunities. Educational and Child Psychology, 30(2), 79-88. Retrieved from http://public-montessori. org/wp-content/uploads/2017/03/Besancon- Lubart-Barbot-2013-Creative-giftedness-and- educational-opportunities.pdf

Bramwell, G., Reilly, R. C., Lilly, F. R., Kronish, N., & Chennabathni, R. (2011). Creative teacher. Roeper Review, 33(1), 228-238. doi: 10.1080/02783193.2011.603111

Cachia, R., & Ferrari, A. (2010). *Creativity in schools: A survey of teachers in Europe* (No. JRC59232). Joint Research Centre (Seville site).

Cho, H., Pemberton, C. L., & Ray, B. (2017). An exploration of the existence, value and importance of creativity education. Current Issues in Education, 20(1). Retrieved from http://cie.asu.edu/ojs/index.php/cieatasu/article/ view/1537

Cropley, A. (2015). Creativity in education and learning. A guide for teachers and educators. New York: Routledge

Davies, D., Jindal-Snape, D., Digby, R., Howe, A., Collier, C., & Hay, P. (2014). The roles and development needs of teachers to promote creativity: A systematic review of literature. Teaching and Teacher Education, 41(1), 34-41. doi: 10.1016/j.tate.2014.03.003

de Souza Fleith, D. (2000). Teacher and student perceptions of creativity in the classroom environment. *Roeper Review*, *22*(3), 148–153. https://doi.org/10.1080/02783190009554022

Dias, C. A. F. (2014). Criatividade no Ensino Básico: Um olhar sobre as representações de alunos e de professores em escolas de diferentes contextos socioeconômicos (Master's thesis, Universidade do Minho, Instituto de Educação, Braga, Portugal).

Fleith, D. S. (2010). Avaliação do clima para a criatividade em sala de aula. In E. M. L. S. Alencar, M. F. Bruno-Faria, & D. S. Fleith (Eds.), Medidas de criatividade (pp. 55-66). São Paulo, SP: Artmed.

Fleith, D. S. (2016). Criatividade, motivação para aprender, ambiente familiar e superdotação: Um estudo comparativo (Special issue). Psicologia: Teoria e Pesquisa, 32, 1-9. doi: 10.1590/0102-3772e32ne211

Fleith, D. D. S., & Alencar, E. M. (2005). Scale of the classroom climate for creativity. *Psicologia: Teoria e Pesquisa*, *21*, 085-091.

Fleith, D. S., & Morais, M. F. (2017). Desenvolvimento e promoção da criatividade. In L. S. Almeida (Ed.), Criatividade e pensamento crítico: Conceito, avaliação e desenvolvimento (pp. 45-73). Porto, Portugal: Centro de Estudos e Recursos em Psicologia.

Fryer, M. (1989). Teachers' views on creativity. Unpublished PhD thesis, Leeds: Leeds

metropolitan University.

Fox, K. R., Campbell, M., & Hargrove, T. (2011). Examining reflective practice: Insights from pre-service teachers, in-service teachers and faculty. *Journal of Research in Education*, *21*(2), 37-54.

Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. *International journal of endocrinology and metabolism*, *10*(2), 486.

Glaveanu, V. P. (2018). Educating which creativity? Thinking Skills and Creativity, 27(1), 25-32. doi: 10.1016/j.tsc.2017.11.006

Grainger, T., Barnes, J., & Scoffham, S. (2004). A creative cocktail: Creative teaching in initial teacher education. *Journal of Education for teaching: International Research and Pedagogy*, *30*(3), 234-253.

Grohman, M. G., & Snyder, H. T. (2017). Why do we create? The roles of motivation, mindset, and passion in human creativity. In J. A. Plucker (Ed.), Creativity & innovation. Theory, research, and practice (pp. 165-179). Waco, TX: Prufrock Press.

Guilford, J. P. (1950). Creativity. American Psychologist, 5(9), 444-454. doi: 10.1037/ h0063487

Harris, A., & de Bruin, L. R. (2018). Secondary school creativity, teacher practice and STEAM education: An international study. Journal of Educational Change, 19(2), 153-179. doi: 10.1007/s10833-017-9311-2

Hennessey, B. A., & Amabile, T. (2010). Creativity. Annual Review of Psychology, 61(1), 569-598. doi: 10.1146/annurev.psych.093008.100416

He, W., & Wong, W. (2015). Creativity slump and school transition stress: A sequential study from the perspective of the cognitive-relational theory of stress. Learning and Individual Differences, 43(1), 185-190. doi: 10.1016/j. lindif.2015.08.034

Hong, H. Y., Chang, Y. H., & Chai, C. S. (2014). Fostering a collaborative and creative climate in a college class trough idea-centered knowledge building. Instructional Science, 42(3), 389-407. doi: 10.1007/s11251-013-9289-y

Isaksen, S. (2007). The climate for transformation: Lessons for leaders. Creativity and Innovation Management, 16(1), 3-15. doi: 10.1111/j.1467- 8691.2007.00415.x

Jesus, S. N., Rus, C., Lens, W., & Imaginário, S. (2013). Creativity and intrinsic motivation: A meta-analysis of the studies between 1990-2010. Creativity Research Journal, 25(1), 80-84. doi: 10.1080/10400419.2013.752235

Kaiser, H. F. (1960). The application of electronic computers to factor analysis.: Educational and Psychological measurement, pp. 20, 141-151.

Kamran, M., Hayat, F., & Khan, M. (2021). SHAPING A CONTEXTUALIZED THEORY FOR THE DEFINITIONS OF CREATIVITY: A CASE OF PAKISTANI SECONDARY SCIENCE TEACHERS. *PalArch's Journal of Archaeology of Egypt/Egyptology*, *18*(10), 2306-2317.

Kamran, M., Maqbool, M. A., & Fatima, M. (2021). Exploration of the Promoters that Promote Creativity in Classrooms at the Secondary School Level in Pakistan. *LINGUISTICA ANTVERPIENSIA*, 7650-7660.

Kaufman, J. C. (2016). Creativity 101. New York: Singer.

Khan, P., & Kamran, M. (2021). Seeing Creativity: Attitudes towards Creativity from a Pakistani Sociocultural Background. *International Journal of Innovation, Creativity and Change*, *15*(06), 766–780.

Kinnear, P. R., and Gray, C. D. (1997). SPSS for Windows: Made simple (2nd ed.). East Sussex (UK): Psychology Press, Publishers, pp. 260-272.

Krumm, G. L., Vargas-Rubilar, J. A., Lemos, V. N., & Oros, L. B. (2015). Percepción de la creatividad en niños, padres y pares: efectos en la producción creativa. Pensamiento Psicologico, 13(2), 21-32. http://dx.doi.org/10.11144/Javerianacali. PPSI13-2.pcnp

Lambert, P. A (2017). Understanding creativity. In J. B. Cummings & M. L. Blatherwick (Eds.), Creative dimensions in teaching and learning in the 21st century. Advances in creativity and Giftedness (pp. 1-21). Rotterdam, The Netherlands: Sense. doi: 10.1007/978-94-6351-047-9_1

Leite, C. (2017). Criatividade e representações do clima criativo em sala de aula: Um estudo exploratório no 1º ciclo do Ensino Básico (Master's thesis, Universidade do Minho, Instituto de Educação, Braga, Portugal).

Miller, A. L., & Dumford, A. D. (2014). Creative cognitive processes in Higher Education. The Journal of Creative Behaviour, 48, 1-17. doi: 10.1002/jocb.77

Morais, M. F., & Fleith, D. S. (2017). Conceito e avaliação da criatividade. In L. S. Almeida (Ed.), Criatividade e pensamento crítico. Conceito, avaliação e desenvolvimento (pp. 19-44). Braga, Portugal: Centro de Estudos e Recursos em Psicologia.

Morais, M. D. F., Viana, F. L., Fleith, D. D. S., & Dias, C. (2019). Climate scale for creativity in the classroom: Evidence of factorial validity in the portuguese context. *Trends in Psychology*, *27*, 837-849.

Nakano, T. C. (2018). A criatividade pode ser medida? Reflexões sobre métodos utilizados e questões envolvidas. Arquivos Brasileiros de Psicologia, 70(1), 128-145. Retrieved from http://pepsic.bvsalud.org/scielo.php?script=sci_ arttext&pid=S1809-52672018000100010&lng= pt&nrm=iso&tlng=pt

Nehardani, H., Mormoosavi, S. Sani, A., Tabarraei, Y., & Ghodrati (2013). Studying the personal creativity barriers in the students of Sabzevar Medical Sciences University. International Journal of Advanced Studies in Humanities and Social Science, 1(10), 1566-1572. Retrieved from http://ijashss.com/upload/IJASHSS-2013-%20 SI-1007.pdf

Ng, A. K., & Smith, I. (2004). Why is there a paradox in promoting creativity in the Asian classroom?. In *Creativity: When east meets west* (pp. 87-112).

Omdal, S., & Graefe, A. K. (2017). Investing in creativity in students: The long and short (term) of it. In J. A. Plucker (Ed.), Creativity & innovation. Theory, research, and practice (pp. 205-221). Waco, TX: Prufrock Press.

Park, S., Lee, S. Y., Oliver, J. S., & Cramond, B. (2006). Changes in Korean science teachers' perceptions of creativity and science teaching after participating in an overseas professional development program. *Journal of Science Teacher Education*, *17*(1), 37-64.

Patston, T. J., Cropley, D., Marrone, R. L., & Kaufman, J. C. (2017). Teacher self-concepts of creativity: Meeting the challenges of the 21st century classroom. The International Journal of Creativity & Problem Solving, 27(2), 23-34. Retrieved from http://go.galegroup.com/ps/anonymous?id=GALE%7CA533556209 &sid=googleScholar&v=2.1&it=r&linkaccess= abs&issn=22890408&p =AONE&sw=w.

Richardson, C., & Mishra, P. (2018). Learning environments that support student creativity: Developing the SCALE. Thinking Skills and Creativity, 27(1), 45-54. doi: 10.1016/j.tsc.2017.11.004

Romo, M. (2008). Creatividad en los domínios artísticos y científicos y sus correlatos educativos. In M. F. Morais & S. Bahia (Eds.), Criatividade e educação: Conceitos, necessidades e intervenção (pp. 65-90). Braga, Portugal: Psiquilíbrios.

Runco, M. A. (2014). Creativity: Theories and Themes: Research, Development and Practice. San Diego, CA: Academic Press.

Runco,M., & Jaeger,G. (2012). The standard definition of creativity. Creativity Research Journal, 24(1), 92-96. doi: 10.1080/10400419.2012.650092

Russ, S. W., & Lee, A. W. (2017). Pretend play and creativity. In J. A Plucker (Ed.), Creativity and innovation-theory. Research and practice (pp. 133-149). Waco, TX: Prufrock Press.

Santos, F., & Fleith, D. S. (2015). Efeitos de um programa de criatividade para professoras em alunos do Ensino Fundamental. Estudos de Psicologia (Campinas), 32(4), 755-766. http://dx.doi.org/10.1590/0103-166X2015000400018

Sarsani, M. R. (1999). *Exploring the promotion of creative thinking among secondary school students in India* (Doctoral dissertation, Institute of Education, University of London).

Scott, C. L. (1999). Teachers' biases toward creative children. *Creativity Research Journal*, *12*(4), 321-328.

Sierra, M. D., Escobedo, P. S., Cuervo, A. V., & Rosal, A. B. (2015). Estratégias e programas para o desenvolvimento da criatividade nas escolas do México. In M. F. Morais, L. C. Miranda, & S. M. Wechsler (Eds.), Criatividade. Aplicações práticas em contextos internacionais (pp. 257- 268). São Paulo, SP: Vetor.

Silva, T., & Nakano, T. (2012). Criatividade no contexto educacional: Análise de publicações periódicas e trabalhos de pós-graduação na área da psicologia. Educação e Pesquisa, 38(3), 743-759. doi: 10.1590/S1517-97022012005000013

Soh, K. (2017). Fostering student creativity through teacher behaviors. Thinking Skills and Creativity, 23(1), 58-66. doi: 10.1016/j.tsc.2016.11.002

Soulé, H., & Warrick, T. (2015). Defining 21st century readiness for all the students: What we know and how to get there. Psychology of Aesthetics, Creativity and the Arts, 9(2), 178-186. doi: 10.1037/aca0000017

Starko, A. J. (2014). Creativity in the classroom: Schools of curious delight. New York: Routlege.

Sternberg, R. J. (2015). Teaching for creativity: The sounds of silence. *Psychology of Aesthetics, Creativity, and the Arts*, *9*(2), 115–117. https://doi.org/10.1037/aca0000007

Stevens, J. (1992). Applied multivariate Statistics for the Social Sciences (2nd ed.). New Jersey: Lawrence Erlbaum Associates, publishers, pp. 374-407.

Szerencsi, K. (2010). The need for linguistic creativity in FL classroom discourse. *Acta Univeritatis Sapientiae Philologica*, *2*(2), 286-298.

Tan, M., Mourges, C., Hein, S., MacCormick, J., Barbot, B., & Grikorenko, E. (2015). Differences in judgments of creativity: How do academic domain, personality and self-reported creativity influence novice judges' evaluations of creative production? Journal of Intelligence, 3(1), 73-90. doi: 10.3390/jintelligence3030073

Torrance, P. (1983). *Creativity in the classroom*. Washington, DC: National Education Association.

Vygotsky, L. S. (2004). Imagination and creativity in childhood. Journal of Russian and East European Psychology, 42(1), 7-97. Retrieved from http:// lchc.ucsd.edu/mca/Mail/xmcamail.2007_08.dir/att-0149/LSV_1967_2004_._Imagination_ and_creativity_in_childhood.pdf

Wechsler, S., Oliveira, K. S., & Tonete-Suárez, J. (2015). Criatividade e saúde mental: Desenvolvendo as forças positivas do caráter. In M. F. Morais, S. M. Wechsler, & L. C. Miranda (Eds.), Criatividade: Aplicações práticas em contextos internacionais (pp. 59-76). São Paulo, SP: Vetor.

Westby, E. L., & Dawson, V. L. (1995). Creativity: Asset or burden in the classroom?. *Creativity research journal*, *8*(1), 1-10.

Williams, R., Runco, M., & Berlow, E. (2016). Mapping the theme, impact, and cohesion of creativity research over the last 25 years. Creativity Research Journal, 28(4), 385-394. doi:10.1080/10400419.2016.1230358