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Examination of the Demographic Variables in Promoting Creativity in Pakistan: A Follow-Up Study

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ABSTRACT

The key objective of the study was to know the level of perceptions of Pakistani teachers about the promoters that promote creativity in students. Furthermore, the teachers' level of perception was compared with respect to their certain demographic features, i.e., age, academic qualification, and professional qualification. The design of the study was quantitative in nature and used the survey method to accomplish the above-mentioned objectives. The target population was all the school teachers from Pakistan at various levels. For data collection, an online questionnaire on social media platforms (WhatsApp, Emails, and Facebook) was uploaded which was filled online by 467 school teachers randomly. Subsequently, the data was analyzed by using ANOVA to analyze the variance of the said demographic variables against the mean score of perception level towards the promoters of creativity. The results revealed that Pakistani teachers had a high level of perception about the promoters that promote creativity in students. Regarding the role of demographic features, teachers' age and their academic qualifications showed a significant difference with respect to their perceptions of creativity promoters. In contrast, no difference was found between teachers' professional qualifications with respect to their perceptions of creativity promoters. The results were discussed in light of past literature, and recommendations were given.

Creativity is an attribute or concept that has been defined by researchers in a variety of definitions because it has no fixed and strict definition (Craft, 2003). A teacher is an agent that cultivates and nurtures creativity and creative thinking among the students. Researchers found an interesting suggestion that creativity should be a part of school curricula (Gibson,

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2005; Ng & Smith, 2004; Park, Lee, Oliver & Cramond, 2006; Arooj, Parveen, Iqbal, Kamran, 2021) because in the 21st century creativity and creative thinking is the most important concept and has a crucial role in teaching and learning (Beghetto & Kaufman, 2013; Cachia, & Ferrari, 2010; Glăveanu, 2011).

Past studies found that promoting creativity is increasing in the Asian context (Ng & Smith, 2004). Therefore, it was felt that Pakistan being an Asian country, should have such research as has been done in other Asian countries like China, Hong Kong, Taiwan, Japan, South Korea, and Singapore (Ng & Smith, 2004). The worst condition is that although many teachers like the students' creative behavior but do not like the creative students (Ng & Smith, 2004) because of hard and tough behavior or maybe any other reason. The past studies have shown a varied level of perceptions of the teachers regarding creativity and creative thinking, e.g., some studies (Scott 1999; Westby & Dawson 1995) have shown the low attitudes of teachers toward creativity while others (Al-Nouh, Abdul-Kareem & Taqi, 2014; Cachia & Ferrari, 2010; Park, Lee, Oliver & Crammond, 2006) have shown high attitudes towards creativity. Some studies (Akkanat & Gökdere, 2015; Ng & Smith, 2004) have shown the mix-attitudes of teachers towards creativity. Here the mix-attitudes of teachers mean that to some factors, they have positive attitudes while to others they have negative attitudes.

It means that there is a gap in the perceptions of teachers about the promotion of creativity among the students. As a research gap was found in other contexts so it was felt that, we should examine the Pakistani teachers' perception level about the said phenomenon and should see that if age, academic qualification and professional qualification can bring significant differences into the perception level of teachers about the promoters to creativity. Therefore, a study was designed to contribute to the literature and might fill the said gap.

Literature Review

The creativity of the students is badly affected by the authoritarian style of teaching, e.g., in a study conducted by Ng and Smith (2004) at the National Institute of Education in Singapore. The participants were enrolled in a 1-year teaching diploma course at the National Institute of Education, where conservative and autocratic teachers were found in favor of uncreative behavior, and the liberal and democratic teachers were in favor of creative behavior.

Although creativity is of great importance and has been focused on in various countries, but the teachers' perceptions are not observed as good in promoting creativity because the teachers do not like the creative habits of the students due to tough and worrying behavior. For example, Westby and Dawson (1995) revealed in their study that when the Albany (New York, USA) elementary school teachers were asked to rate the favorite and least favorite

students against the personality characteristics associated with creative children. Then they negatively correlated the judgments of the favorite students with creativity while positively correlated the judgments of the least favorite students with creativity. Scott (1999) in the USA did another study from the perspective of elementary school teachers in California and undergraduates of Kansas state university. The study showed that the teachers and undergraduate students both considered the creative children disruptive and the interesting information was that the teachers were more likely to see the creative children as disruptive compared to the undergraduate students, which raises the question of whether teachers encourage or suppress the creativity.

Another study conducted by Park et al. (2006) involved the Korean science teachers, where teachers revealed the changes in their perceptions of creativity. The Korean teachers showed a greater awareness and highly positive perception of creativity and stated that creativity can be enhanced and every student can become creative. They further stated that a science subject has a greater place for creativity fostering activities, and creativity-led science teaching could be practiced in Korea.

Cachia and Ferrari (2010) conducted a study in Europe on teachers at the school level to examine their perception of creativity and reflection of their own teaching practices in classrooms. Data collection was done from 32 countries in Europe, resulting in 7659 total responses. Approximately all the teachers showed a positive and democratic attitude towards creativity and revealed that almost all the teachers perceive that creativity belongs to every domain of knowledge, every school subject, and to every student. In this study, almost all teachers revealed that every student could become creative. It means the democratic perception of creativity was given. However, the level of practicing creativity as compared to their beliefs was lower due to traditional teaching and assessment methods.

Al-Nouh et al. (2014) conducted a study in Kuwait at the primary school level. The participants were only female which were from English subject. The female EFL teachers of Kuwait showed high attitudes toward creative thinking. Further, the age, major subject, educational zone, teaching experience and in-service training attributed to the significant differences when they tested against their attitudes towards creative thinking and perception of practices.

Khan and Kamran (2021) conducted a study to reveal the attitudes of Pakistani teachers towards creativity in the sociocultural perspective of Pakistan because most of the studies belonged to the western context. Some studies were from the Asian context but still, the Pakistani context was lacking in such kinds of studies. The study had a low sample of 155 (65

male and 90 female) teachers, and the results revealed medium attitudes towards creativity. In the said study, only the attitudes were examined, not the other areas of creativity. Therefore, the current researchers embark on another study to know the promoters that promote creativity because this area was left behind in the above-mentioned study. Besides, in a most recent study, Kamran, Maqbool, and Fatima (2021) examined the top-listed promotor (factor) that promotes creativity but left the overall perceptions of the Pakistani teachers about the promotors to creativity. The study found that building of self-confidence is the top-listed promoter (factors) among the 11 factors to which most of the teachers were agreed. However, this study did not find the overall level of perception of Pakistani teachers about the promoters of creativity, which was a gap in the study.

Akkanat and Gökdere (2015) conducted their study to reveal the only chemistry teachers' beliefs about creativity in Amasya, Turkey through a qualitative study. The study involved the 13 chemistry teachers and their results showed that the teachers had well-established beliefs about creativity and associated creativity with intelligence. This study also revealed that creativity could be used for solving problems and creating novel ideas. Besides, the study revealed that the traditional chemistry curriculum, cultural barriers, lack of knowledge of creative teaching, and weekly lesson hours broke the creativity. Based on the above literature review, a rationale for the current study has been devised which is given in the following lines.

Justification of Study

Past studies have shown a mixed level of perceptions of the teachers about creativity and creative thinking, e.g., some studies (Scott 1999; Westby & Dawson 1995) were in disfavor of creativity while others (Al-Nouh et al., 2014; Cachia & Ferrari, 2010; Park et al., 2006) were in favor of creativity. Some studies (Akkanat & Gökdere, 2015; Ng & Smith, 2004) have shown neither the favor nor the disfavor towards creativity, which revealed a gap in the perceptions of teachers' towards the promotion of creativity among the students. Additionally, most of the studies were not in the Pakistani context but were conducted in west or other Asian countries. Therefore, a study was intended to know the perceptions of the Pakistani teachers about the promoters of creativity regarding the specific demographic variables of age, academic and professional qualification. It was intended that it will contribute to the literature and will fill the research gap aforementioned.

Objectives of the Study

i. To know how teachers perceive the promoters of creativity in Pakistan

ii. To compare the teachers' level of perception in Pakistan through their demographic variables of age, academic qualification, and professional qualification about the promoters of creativity

Hypotheses of the Study

i. H1: There will exist significant differences among the age group of teachers against the perception level of teachers towards the promoters of creativity

ii. H2: There will exist significant differences among the academic qualification group of teachers against the perception level of teachers towards the promoters of creativity

iii. H3: There will exist significant differences among the professional qualification group of teachers against the perception level of teachers towards the promoters of creativity

Research Method

Design of the Study

This study was conducted quantitatively through the cross-sectional survey method. The survey is one of the common methods to know the beliefs (Sarsani, 1999) because it encompasses the process of generalization. Further, the survey technique is used to explore the problems in local, national, and international contexts (Sarsani, 1999).

The population of the study was all the teachers from miscellaneous areas of Pakistan. A self-reported questionnaire of a five-point Likert scale was adopted from Sarsani (1999). The scale was related to creative thinking and creativity and was employed in past studies (Sarsani, 1999). The said rating scale was ranged from Strongly Agree to Strongly Disagree with a score of 05 (Strongly Agree) score to 01 (Strongly Disagree). The scale was composed of 11 positive items, so no reverse scoring was used.

Validity of the instrument

Sarsani (1999) validated the survey and clarified from five experts in the field of Education and Psychology who determined the content validity of the survey. The appropriateness of the culture and language of the survey was also validated by the said experts. Experts reviewed each item, and their comments were positive mainly. They agreed that the items of the questionnaire covered all the aspects of creativity and its development. In the present survey, Sarsani (1999) applied principal component analysis and varimax rotation to each batch of Likert-type items in the survey to examine the common trait for evidence of the validity of these items and justify their inclusion in the questionnaire. All the Likert items in

the survey were factor analyzed to examine the common trait. Only factors having an Eigenvalue greater than 0.5 were considered.

Pilot Study and Reliability of the Instrument

We the authors opted only 11 items from the said survey, and after finalizing it, the survey was distributed among 66 teachers for the pretesting of the actual study. Actually, the pretesting of the actual study was performed to see the likelihood of the said survey in the Local context of Pakistan that weather the actual study is doable or not. The SPSS gave the 0.7 as Cronbach's Alpha Reliability Coefficient, which is well-thought-out reliability for actual study. The detail of the Cronbach's Alpha Reliability and its Coefficient is given in table 1 below.

Table1. Cronbach's Alpha Reliability Coefficient

Reliability Statistics of the Scale		
Cronbach's Alpha Value	Standardized Value	No of Items
0.72	0.72	11

Population and Sample

The target population was all the teachers from Pakistan. The current researchers uploaded the adopted questionnaire on social media platforms (Facebook and WhatsApp) and opened it for all the teachers. Through random sampling technique 467 Pakistani teachers were selected from different backgrounds and schools, comprised of 59% males and 40% female teachers. Regarding marital status, 55.5% of teachers were single (unmarried), while 45.5% of teachers were married. Most of the teachers were from urban areas (55%), while 45% of teachers were from rural areas. This study only sought the comparison of age, academic and professional qualifications as demographic variables against the dependent variable of creativity promoters (shown in table 2).

Table 2: Demographic Information of Participants

Category	Frequency	%age
Age		
20-30	303	64.8%
31-40	100	21.4%
Above Forty	64	13.7%
Academic Qualification		
Graduation	213	45.6%
Masters	192	41.1%
PhD	62	13.2%
Professional Qualification		
B.Ed.	172	36.8%
M.Ed.	143	30.6%
Masters in Education	144	30.8%
Others	8	1.71%

The scale of Measuring Perception Level of the Construct

To measure the level of perception we took the help of scale developed by Al-Nouh et al. (2014) in their published study. Al-Nouh et al. (2014) also used this as an amount of level of perception. The scale is written as:

i. 1 to 2.33 value of mean shows the low perception level of the construct
ii. 2.34 to 3.66 value of mean shows the medium perception level of the construct
iii. 3.67 to 5.00 value of mean shows the high perception level of the construct

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, eradication of the normality is not a major issue (Altman & Bland, 1995; Ghasemi & Zahediasl, 2012).

Results, Analysis, and its Discussion

1. Teachers' Perception about the Promoters to Creativity

The primary objective of the study was to detect the level of teachers' perception about the promoters to creativity, which was merely analyzed by using descriptive statistics by calculating the mean value and standard deviation. The following table 3 represents it.

Table 3. Teachers' Perception Level about the Promotors to Creativity

Descriptive Statistics			
Promoters of creativity	N	Mean	Std. Deviation
	467	3.90	.61

Table 3 shows that the mean value of teachers' perception level is 3.9, which drops in the category of high perception range according to the above-mentioned scale of Al-Nouh

et al. (2014). It demonstrates that the Pakistani teachers had a high level of perception about the promoters to creativity, which indicates that Pakistani teachers had accepted and permitted those promoters that were given in the survey. This result was supported by a study conducted by Ng and Smith (2004) at the National Institute of Education in Singapore who showed that conservative and autocratic teachers were in favour of uncreative behaviour while the liberal and democratic teachers were in favour of creative behaviour. Since the Pakistani teachers in the existing study exhibited a high level of perception about the promoters to creativity, which meant that they were also in support of creativity. Park et al., (2006) investigation were also consistent with current study results, which showed a greater responsiveness and extremely positive perception towards creativity and stated that creativity can be enhanced and every student can become creative.

The existing study results were also replicated in Cachia and Ferrari (2010), who conducted a study in Europe on teachers about the said construct. Almost, all the teachers showed a positive and democratic attitude towards creativity and discovered that nearly all the teachers have a perception that creativity fits to every domain of knowledge, every school subject, and to every student. Al-Nouh et al. (2014) also supported the outcomes of the current study in which the teachers' attitudes and perceptions of the practice of creative thinking were generally high. In a study by Akkanat and Gökdere (2015), teachers viewed creativity and intelligence in the same connection and further linked creativity with novel ideas and problem-solving skills and supported the current study results.

Some research studies showed opposing results. For example, Scott (1999) in the USA revealed the perspective of elementary school teachers in California and undergraduates of Kansas State University. The teachers and undergraduates both saw creative children as disruptive. Further, the teachers considered the creative children as disruptive, which arises the question that teachers encourage or discourage creativity. Therefore, this question should be explored from other perspectives as well.

2. Age-wise Differences in Promoters of Creativity

The hypothesis about age was tested by using inferential statistics through ANOVA portrayed by the following table 4. It indicates a significant difference among various age groups of teachers for their perception towards the promoters of creativity, as the significant value achieved 0.007 is less than .05. Therefore, the hypothesis regarding various age groups was accepted. The results further demonstrated that the perceptions of teachers towards the creativity promotors of above the forty age group are higher than those of teachers from the other age groups.

Table 4. ANOVA for Age-wise Differences

Promoters of creativity	N	Mean	SD	F	Sig.
20-30	303	3.82	.576	3.592	.007
31-40	100	4.02	.676		
Above Forty	64	4.06	.697		

In order to know the difference across all possible pairs of the teachers' age groups, Tukey's honestly significant difference (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 5 determine that only one out of three groups (i.e., 20-30 vs. Above 40 age group) yielded a significant difference among each other. It further signifies that perceptions of teachers about creativity promotors of above forty age group was found to be significantly (i.e., 4.96) higher than the teachers from the age group 20-30 years of age (i.e., 3.82).

Table 5. Multiple Comparisons of teachers' age groups

Test	Mean values	Sig.
20-30 vs 31-40	(3.82) & (4.02)	.45
20-30 vs Above Forty	(3.82) & (4.06)	.04 (Above Forty > 20-30)
Above Forty vs. 31-40	(4.06) & (4.02)	1.0

2. Academic Qualification wise Differences in Promoters to Creativity

The hypothesis about academic qualification was tested through ANOVA. It has been represented by the following table 6, which indicates a significant difference among various groups of teachers' academic qualifications for their perception of promoters to creativity, as the significant value achieved is less than .05, i.e., 0.006. Therefore, the hypothesis regarding various age groups was accepted. The results further demonstrate that Ph.D. qualified teachers' perceptions of creativity promotors are higher than those of other academic qualifications.

Table 6. ANOVA For academic qualification differences

Promoters of creativity	N	Mean	SD	F	Sig.
Graduation	213	3.81	.61	3.54	.006
Masters	192	3.90	.53		
PhD	62	4.00	.82		

In order to know the difference across all possible pairs of the teachers' academic qualifications, Tukey's honestly significant difference (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 7 determine that only one out of three groups (i.e., Graduation vs. Masters) yielded a significant difference among each other. It further signifies that perceptions level of Masters qualified teachers was found to be higher (i.e., 3.90) than the Graduation qualified teachers (3.80).

Table 7. Multiple Comparisons of teachers' academic qualification

Test	Mean values	Sig.
Graduation vs Masters	(3.81) & (3.90)	.04 (Masters > Graduation)
Graduation vs. PhD	(3.81) & (4.00)	.51
Ph.D. vs Masters	(4.00) & (3.90)	1.0

3. Professional Qualification wise Differences in Promoters to Creativity

The hypothesis about professional qualification was tested through ANOVA. It has been represented by the following table 8, which indicates no difference among various groups of teachers' professional qualifications for their perception towards the promoters of creativity, as the significant value achieved is more than .05, i.e., 0.16. Therefore, the hypothesis regarding various age groups was rejected. Due to the non-significant difference, no further test was conducted to check the difference across possible pairs with respect to teachers' professional qualifications.

Table 8. ANOVA For Professional Qualification Differences

Promoters of creativity	N	Mean	SD	F	Sig.
B.Ed.	172	3.92	.60	1.73	.16
M.Ed.	143	3.97	.61		
Masters in Education	144	3.96	.57		
Others	8	3.75	.28		

Conclusions and Recommendations

The contemporary study was conducted to explore the perception level of teachers regarding creativity promoters along with the role of certain demographic features such as age, academic and professional qualification. The results designate that Pakistani teachers identify and favour those promoters that were given in the survey and hold a positive perception of the promoters about creativity. Regarding the role of demographic features, teachers' age and their academic qualifications showed a significant difference with respect to their perceptions of creativity promoters. In contrast, no difference was found between teachers' professional

qualifications with respect to their perceptions of creativity promoters. Therefore, it is recommended that creativity must be included in the school curricula at the various educational stages because Pakistani teachers perceive positively the promoters of creativity. Besides, teachers should be provided with professional development programs to bridge the gap between knowledge and practice in promoting creativity among students. As meeting students' creative needs, not only help them acquire academic success (Akram & Yingxiu, 2019), high moral well-being (Akram et al., 2021) but also keep their psychological health stable (Bhutto et al., 2019). Furthermore, concerned authorities and policymakers should be aware of certain demographic variables' differences' effect on teachers' perceptions of creativity. Hence, teachers' demographic variables and differences should be monitored closely while attending professional development programs and during their instructional practices.

In addition, due to time and resources obstacles, this study is limited to Pakistani teachers at local level only. Another limitation of the study is that the authors used the adopted and self-reported survey. Due to time limitation and restricted resources, we could not develop our own instrument for data collection.

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