Attitude towards Nurturing Creativity: A Study of Secondary School Teachers

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ABSTRACT
Aside from testing creativity of individuals, impact of creative strategies on the performance, the present study reports on the attitude of secondary school teachers towards nurturing creativity and awareness of teachers regarding various dimensions of creativity. The study was conducted on a sample of 659 secondary school teachers of Western Uttar Pradesh, India. Teachers’ attitude towards nurturing creativity was assessed by employing a standardized scale constructed by the investigator. Parametric statistics as ‘t’ test for one sample has been employed to analyze the data and to draw out the results. The findings of the study reveal that secondary school teachers have higher level of awareness regarding various dimensions of creativity and have positive attitude towards nurturing creativity among students.

Keywords: Attitude, Nurturing of Creativity, Barriers for Creativity, Myths & Indicators of Creativity

Introduction
“Education is the most powerful weapon, which you can use to change the world.”
(Nelson Mandela, 1940)

In the annals of history, education had many features, shades and meanings but it had only one aim, i.e. to “make the recipient learned”. In the general sense, the term education is used as a form of learning, in which the knowledge, skills, values, beliefs, and habits are transformed from one generation to next (Ahmad & Garg, 2007). In the hierarchy of education system, secondary education is the backbone of entire educational system. It is an important segment of the total education system that contributes significantly to the development of an individual and the nation. It contributes in two important ways: (i) by providing opportunities to students for vertical mobility in the ladder of formal education and (ii) by enabling them to work according to the needs of self and nation (Zaidi, Biswal & Lal, 2011).

A teacher functions within the broader framework of the education system and helps in determining the goals, curricula, materials, strategies, methods and to achieve determined goals (Gupta, 2016). The importance of competent teachers to the nation’s school system can in no way be overemphasized. It is well known fact that pedagogical competence and accountability towards profession and attitude of teachers influence the pupils. The teacher must now be equipped not only to teach but also to understand the students and their needs. It is stated that a teacher should be a facilitator in children’s learning and in constructing their knowledge (NCF, 2005). In the field of education, creativity is basic element and essential for learning. Creativity is the rarest of the human qualities. It is an innate genius present in humans as a distinct potential, a unique gift, which is spontaneous but not common in all the individuals. Creativity, with its many definitions has been known for a long time to have its influence on human activity in almost all spheres: scientific, technical, literary, artistic. Basically, ‘it refers to the ability of a person to produce new compositions, products or novel ideas’ and solutions to complex, ambiguous problems. It is the application of knowledge and skill in new ways sometime going beyond the limits, to achieve valuable outcomes (Husen, & Postlethwaite, 1994; Gandini, 1992). With reference to modern civilization that has become more complex in nature, teacher is the only hope that may bring social and cultural transformation. Everything depends upon teacher and his attitude towards various phenomena. Talking about attitude, it is viewed as ‘the most distinctive and indispensable concept in social psychology’ Allport (1954). It plays an important role to understand stereotype behaviour, prejudices, voting intentions, consumer behaviour and interpersonal attraction. According to Thurstone (1946), an attitude is the degree of positive or negative effect associated with some psychological object. Newcomb’s (1950) defined it as a ‘learned predisposition to respond in a consistently favorable or unfavorable manner with respect to an object clearly related attitudes to behaviour- which is problematic. On the basis of above given discussion, attitude can be described as positive and negative or favorable and unfavorable inclination towards abstract ideas and events, which influence the person to respond in a particular manner. It always implies a relationship between the person and object. As a matter of fact, the seeds of creativity are regarded to be present in every individual. Therefore, nurturance of these seeds of creativity requires proper attention and efforts. Now the task of a
teacher is like a facilitator who nourishes learner’s creative experiences and enables him to think out of the box. In this regard, the present study aims to assess the attitude of secondary school teachers towards nurturing creativity. The study will help not only in understanding the attitude of teachers towards nurturing creativity but also help in presenting some concrete suggestions for the development of positive attitudes towards it.

**Purpose of the Current Study**

The current study makes five key contributions to emerging work on nurturing of creativity among students. Firstly, the knowledge of secondary school teachers regarding creativity was assessed by examining how the creativity is conceptualized by them, what are the various components of creativity. Secondly, the hindrance for creativity enhancement among students was assessed by examining the common barriers for the enhancement of creativity among students according to secondary school teachers. On the third point, teachers’ opinion regarding the nurturance of creativity among student was examined, on the fourth point, misconceptions or myths related to creativity and its nurturance, which are prevailing among the teachers were assessed and on the fifth point, teachers’ opinion regarding the most common indicator of creative being was assessed. Lastly, on the basis of all points, the attitude of secondary school teachers towards nurturing creativity among students was assessed. All these components are derived through the previous studies related to creativity and its nurturance, experts’ opinion and available literature on creativity to assess the attitude of teachers towards nurturing creativity among students.

**Research Methodology**

Research methodology refers to the steps that investigators follow to complete the study from the beginning to end (Marvasti, 2004; Singh, 2006).

**Method:** In the present study, descriptive survey method was used to assess the attitude of secondary school teachers towards nurturing creativity with reference to their stream of teaching (Science/Arts Stream).

**Population & Sample:** The population has been defined as the teachers teaching at secondary level in two streams i.e. science and arts in Western Uttar Pradesh. The sample of the study was selected by employing two techniques of sampling i.e. multi-stage sampling technique and stratified random sampling. Firstly, three divisions of Western Uttar Pradesh namely Aligarh division, Bareilly division and Moradabad division were selected randomly among six divisions of Western Uttar Pradesh. Secondly, from these three divisions, six districts i.e. Aligarh, Kashganj, Bareilly, Badaun, Moradabad and Sambhal were selected randomly then from each district, one city and one block were selected by employing the same simple random sampling technique. Further twelve schools from each district (one city and one block) were selected by employing same technique and at last, stratified random sampling technique was employed to select the teachers from these schools. In this way, 654 secondary school teachers were selected as the sample of the study.

**Tool:** To measure the concerned variable, a self-constructed and standardized scale i.e. ‘Attitude towards Nurturing Creativity Scale’ consisting forty items within five dimensions namely ‘Concept of Creativity’, ‘Factors affecting Creativity’, ‘Enhancement of Creativity’, ‘Myths related to Creativity’ and ‘Identification / Indicators of Creativity’ was used. The reliability criterion of the tool was ensured through two methods: content validity and construct validity. Construct validity of the scale was established by using Alpha Cronbach Method. The validity criterion of the tool was ensured through two methods: content validity and construct validity. Construct validity of the scale was established by using Pearson correlation and confirmatory factor analysis. Correlation coefficients of all the dimensions with total score were respectively 0.73, 0.71, 0.76, 0.47 and 0.59. The contribution of all dimensions in the construct ‘Attitude towards Nurturing Creativity’ was assessed by employing confirmatory factor analysis and the obtained values for domain 1 (6%), domain 2 (19%), domain 3 (37%), domain 4 (23%) and domain 5 (15%) affirmed good construct validity of the scale. After collecting the data, the results were redrawn with the help of SPSS.

**Results & Interpretation**

**Normality of Data and Descriptive Measures**

Many statisticians (Sheskin, 2000; Best & Khan, 2003 & Field, 2009) have suggested that the normality of the data should be checked before using statistical techniques. Keeping this view in mind, z test was applied to check the nature of the data for the variable under study i.e. ‘attitude towards nurturing creativity’. The following table (1) and figure (1) describe the results of descriptive measures and z test for the variable:
The above given table (1) presents various descriptive measures of attitude of secondary level teachers towards nurturing creativity. It is clear from the table that an average secondary school teacher is able to secure 92.24 score on the scale ‘attitude towards nurturing creativity’. The standard error of mean (0.51) implies that the sample mean (92.24) may deviate 0.51 only from the population mean. It depicts that the sample mean is relatively close to the mean of the population. The value of standard deviation is 13.15, which means that the scores may deviate from the mean by 13.15 on both sides (positive and negative) of the mean.

It is also revealed from the table that the data of attitude scale (Attitude towards Nurturing Creativity) is approximately normally distributed as the z value is 1.29 (where $Z = \text{Skewness} / \text{S.E. of Mean}$), which is not significant according to standard ($\pm 1.96$) (Doane & Seward, 2011). It indicates that the parametric statistics can be applied.

Further to know the level of awareness of secondary school teachers about ‘the knowledge related to creativity’, ‘barriers affecting creativity’, ‘enhancement of creativity among students’, ‘misconceptions related to creativity’ and ‘indicators of creativity’ inferential statistics was applied. To test the awareness level,’t’ test for one sample (assumed mean and real mean) was applied, where the assumed mean = number of items $\times$ degree of middle response score (SAS, 2011).

### Table 2: Awareness Level of Secondary School Teachers

<table>
<thead>
<tr>
<th>Construct</th>
<th>Sample Mean</th>
<th>Assumed Mean</th>
<th>s.d.</th>
<th>df</th>
<th>‘t’ Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge related to Creativity</td>
<td>14.59</td>
<td>12</td>
<td>2.81</td>
<td>653</td>
<td>23.51**</td>
<td>.000</td>
</tr>
<tr>
<td>Barriers affecting Creativity</td>
<td>18.36</td>
<td>16</td>
<td>4.06</td>
<td>653</td>
<td>14.88**</td>
<td>.000</td>
</tr>
<tr>
<td>Enhancing Creativity among the Students</td>
<td>31.30</td>
<td>26</td>
<td>5.30</td>
<td>653</td>
<td>25.56**</td>
<td>.000</td>
</tr>
<tr>
<td>Misconceptions related to Creativity</td>
<td>14.58</td>
<td>14</td>
<td>3.94</td>
<td>653</td>
<td>3.82**</td>
<td>.000</td>
</tr>
<tr>
<td>Indicators of Creativity</td>
<td>13.39</td>
<td>12</td>
<td>3.16</td>
<td>653</td>
<td>11.26**</td>
<td>.000</td>
</tr>
<tr>
<td>Attitude of towards Nurturing Creativity</td>
<td>92.24</td>
<td>80</td>
<td>13.15</td>
<td>653</td>
<td>23.80**</td>
<td>.000</td>
</tr>
</tbody>
</table>

** Significant at 0.01 level
Knowledge related to Creativity: The above given table (2) depicts that the mean score of secondary school teachers is 14.59 for the level of awareness about the knowledge related to creativity, while the assumed mean is 12. The 't' value (23.51, P<0.01) is significant at 0.01 level, which indicates that there is significant difference between real and assumed mean and the level of awareness of teachers is greater than set standard.

Barriers affecting Creativity: It can also be concluded from the above given table (2) that the real mean is 18.36 while the assumed mean is 16 for the level of awareness about the barriers affecting creativity. The 't' value (14.88, P<0.01) is significant at 0.01 level, which indicates that there is significant difference between the means. Thus, it can be concluded that an average secondary school teachers has awareness about the barriers, which may affect creativity. In order to know the most affecting barriers of creativity according to secondary school teachers, the mean of each item was calculated. The result of this step is given in the following table:

Table 3: Descriptive Statistics related to the Barriers affecting Creativity according to Secondary School Teachers

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Barriers affecting Creativity</th>
<th>Mean</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Parenting style (democratic/caring/supportive) shapes creativity of offspring.</td>
<td>2.50</td>
<td>II</td>
</tr>
<tr>
<td>2</td>
<td>Socio-economic status of the family affects the creative ability of the learner.</td>
<td>2.16</td>
<td>VII</td>
</tr>
<tr>
<td>3</td>
<td>Restricted environment of family has negative influence on the development of creativity.</td>
<td>2.33</td>
<td>III</td>
</tr>
<tr>
<td>4</td>
<td>Autonomy or freedom at the work place boosts up the passion for creativity.</td>
<td>2.53</td>
<td>I</td>
</tr>
<tr>
<td>5</td>
<td>Excess of students in each class may increase creativity.</td>
<td>2.09</td>
<td>VIII</td>
</tr>
<tr>
<td>6</td>
<td>Exam oriented teaching-learning process creates hindrance in the development of creativity.</td>
<td>2.31</td>
<td>IV</td>
</tr>
<tr>
<td>7</td>
<td>Anxiety or frustration of learner hampers creativity.</td>
<td>2.24</td>
<td>V</td>
</tr>
<tr>
<td>8</td>
<td>Poor interpersonal relationship among colleagues nurtures creativity.</td>
<td>2.20</td>
<td>VI</td>
</tr>
</tbody>
</table>

Figure 2: Barriers affecting Creativity according to Secondary School Teachers

The table (3) and figure (2) given above reveal that all the barriers included in the tool are affecting the creativity according to secondary school teachers because the mean of each item is greater than assumed mean (2). The most affecting factors of creativity are lack of autonomy or freedom at the work place (mean = 2.53), followed by parenting style (democratic/caring/supportive) (mean = 2.50), restricted environment of family (mean = 2.33), exam oriented teaching-learning process (mean = 2.31), anxiety or frustration of learner (mean = 2.24), poor interpersonal relationship among colleagues (mean = 2.20), socio-economic status of family (mean = 2.16) and excess of students in class (mean = 2.09).

Enhancement of creativity among students: A perusal of the table 2 shows that the real mean of secondary school teachers is 31.30 for the extent of awareness about enhancing creativity among students while the assumed mean is 26 (where, assumed mean = degree of middle response score × total number of items). The 't' value (25.56, P<0.01) is significant at 0.01 level, which indicates that there is significant difference
between the means. The mean score of secondary school teachers reveals that they have awareness about the ways of enhancing creativity among students.

**Misconceptions related to creativity:** The table number two depicts that the real mean is 14.58 for the extent of awareness about the misconceptions related to creativity while the assumed mean is 14 (where, assumed mean = degree of middle response score × total number of items). The ‘t’ value (3.82, P<0.01) is significant at the specified level indicating that there exists difference between means. To know the most common misconception related to creativity among secondary school teachers, the mean of the each item was calculated. The result of this step is given in the below given table:

Table 4: Descriptive Statistics to Know the Common Misconceptions related to Creativity among Secondary School Teachers

<table>
<thead>
<tr>
<th>Misceptions related to Creativity</th>
<th>Mean</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity is reserved for the people of certain caste and race.</td>
<td>2.32</td>
<td>I</td>
</tr>
<tr>
<td>If creativity is not expressed by a certain age, it can’t be expressed throughout the life.</td>
<td>1.99</td>
<td>V</td>
</tr>
<tr>
<td>Creativity is only an inborn gift.</td>
<td>1.94</td>
<td>VII</td>
</tr>
<tr>
<td>Creativity applies only to science and fine arts.</td>
<td>2.05</td>
<td>IV</td>
</tr>
<tr>
<td>Intoxicated things may make someone more creative.</td>
<td>2.13</td>
<td>III</td>
</tr>
<tr>
<td>Only writers or composers are creative.</td>
<td>2.19</td>
<td>II</td>
</tr>
<tr>
<td>Money works as a motivator for creativity.</td>
<td>1.96</td>
<td>VI</td>
</tr>
</tbody>
</table>

Figure 3: Common Misconceptions related to Creativity among Secondary School Teachers

The above given table (4) and figure (3) show that only four misconceptions are prevailing among the secondary teachers because the mean of these items is greater than assumed mean i.e. 2. The most prevailing misconception among teachers is ‘creativity is reserved for the people of certain caste and race’ (mean= 2.32) followed by ‘only writers or composers are creative’ (mean score= 2.19), ‘intoxicated things may make someone more creative’ (mean score= 2.13), ‘creativity applies only to science and fine arts’ (mean score= 2.05), and the least prevailing misconceptions are ‘if creativity is not expressed by a certain age, it can't be expressed throughout the life’ (mean score= 1.99), ‘money works as a motivator for creativity’ (mean score= 1.96), 'creativity is only an inborn gift' (mean score= 1.94).

Indicators of Creativity: It is clear from the table number two that the real mean of secondary school teachers is 13.39 for the level of awareness about the indicators of creativity while the assumed mean is 12 (where, assumed mean = degree of middle response score × total number of items). The ‘t’ value (11.26, P<0.01) is significant at the specified level indicating that secondary school teachers have awareness about the indicators of creativity.

To know the most common indicator of creativity from the point of view of secondary school teachers, the mean of the each item was calculated. The result of this step is given in the below given table (5):

Table 5: Descriptive Statistics related to Indicators of Creativity

<table>
<thead>
<tr>
<th>Indicators related Creativity</th>
<th>Mean</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative people have exploratory and curious nature.</td>
<td>2.28</td>
<td>III</td>
</tr>
</tbody>
</table>
Creative people may be ambiguous. 1.94
Creative people have apathy towards problems. 2.05
Creative people have more diversity of ideas in comparison to non-creative people. 2.45
Creative people have an ability to elaborate the things in different ways. 2.42
Creative people have attraction towards unusual or mysterious things. 2.26

The above given table (5) and figure (4) indicate that there are five most common indicators of creative person according to secondary school teachers because the mean of those items is greater than assumed mean (2). The most common indicator of creativity is 'creative people have more diversity of ideas in comparison to non-creative people' (mean= 2.45) followed by 'creative people have an ability to elaborate the things in different ways' (mean score= 2.42), 'creative people have exploratory and curious nature' (mean score= 2.28), 'creative people have attraction towards unusual or mysterious things' (mean score= 2.26), 'creative people have apathy towards problems' (mean score= 2.05) and least common indicator is 'creative people may be ambiguous' (mean score= 1.94). To sum-up, it can be concluded that secondary school teachers have awareness about various aspects of creativity i.e. knowledge about creativity, barriers affecting creativity, enhancing creativity among students, misconceptions related to creativity and indicators of creativity. Mean scores (real mean & assumed mean) of secondary school teachers have been presented graphically (figure 5) indicating that they have awareness about various aspects of nurturing creativity.
P<0.01), which is significant at 0.01 level indicates that there is significant difference between real mean and assumed mean. The mean score (92.24) of secondary school teachers shows that they have positive attitude towards nurturing creativity. The teachers have positive attitude towards developing creativity among their students as the creativity is very important for the student’s academic achievement, personality development, career and solving the problems of life.

Mean scores (real & assumed mean) of secondary school teachers are also presented graphically in figure 6. The figure shows that teachers in the sample have positive attitude towards nurturing creativity.

Figure 6: Attitude of Secondary School Teachers towards Nurturing Creativity

Discussion: The role of teachers in the present day society is not confined to teaching-learning process. They are interested with some more responsibilities like all round development of personality and value development etc.. They are supposed to nurture the talents lying hidden in the individuals. Their role is to prepare individuals for creative contribution in the progress of society therefore they understand the importance of enhancing creativity and have awareness about techniques and methods by which students can learn actively. The high level of awareness about the knowledge related to creativity among teachers maybe due to their previous knowledge which they obtained at their graduation and master’s level. Apart from this teachers also read educational books and journals which include the educational and psychological concepts like creativity.

The results of the study are incoherence with the study of Lee &Seo (2006) and O’Farrell (2009) who also found that teachers have awareness about the nature of creativity. As the teachers of secondary level were found to be aware of factors affecting creativity nurturing so the reason behind this result may be the practical experience in the field of education and teaching as they have been working with the students for many years so they can understand the barriers, which influence the development of creativity. Lack of autonomy or freedom at the work place is found most affecting barrier because freedom is always considered as a pre condition to do any novel work. It is very obvious that when limitations or restrictions are ignored, new things are originated. The findings given in the table are also confirmed by many previous researches (Bhandarkar, 1989; Rehm, 1989; Hill, 1992; Alotaibi, 2006; Abdulrab& Sridhar, 2012). Bhandarkar (1989) found that school and family are the causes of suppressing the creative abilities of meritorious individuals; Rehm (1989) concluded that lack of courage and autocratic thinking hinder the development of creative abilities. Hill (1992) revealed that lack of necessary equipments and in the study of Alotaibi (2006) extra work load on teachers, less attention towards school activities have also been found as main barriers in enhancing creativity. Abdulrab& Sridhar (2012) found that many factors related to teaching process, curriculum, school environment (lack of tools and equipments, traditional environment of classroom and school) and student’s interest affect creative teaching in schools. Teachers were also showed their awareness regarding how to develop creativity among students, which are in coherence with the findings of O’Farrell (2009) and Okoli and others (2014) who found that teachers are aware of the techniques and methods of enhancing creativity among students. But the results of Chakraborthy (1992) contradict the findings of the present study. He arrived at the conclusion that teachers do not make any attempt to promote creativity in classroom because of the ignorance about strategies and methods of enhancing creativity. The results reveal that teachers have higher level of awareness about misconceptions related to the nurturance of creativity. Such findings may be attributed to the fact that teachers are highly educated people and possess knowledge about various aspects of creativity as it is an important component of teachers’ training program. According to National Curriculum Framework for Teacher Education (2009), development of creativity in all the teaching subjects is one of the duties entrusted to the teachers. It seems quite logical because teachers play a role of perceiver who recognizes the potential of students and guide
them accordingly. He shapes the personality of students and sparks them; stimulate them to achieve knowledge in an effective manner. The findings of Chan and Chan (1999) Aljughaiman and Reynolds (2005) also support the results who assessed the perception of teachers regarding creative individuals and found that creative individuals possess various kind of qualities like high intellect, attentive, disciplined positive self concept, imagination, diverse thinking and courage more than average level.

To sum-up, it can be concluded that secondary school teachers have awareness about various aspects of creativity i.e. knowledge about creativity, barriers affecting creativity, enhancing creativity among students, misconceptions related to creativity and indicators of creativity and possess positive attitude towards enhancement of creativity among students.

References: