

Creativity and self-actualization of higher-secondary (10+2) students-An Empirical study

Mitali Panda

Principal El-Bethel College Rasapunja, Bakrahat Road, Kolkata-700104, West-Bengal.

Abstract

Purpose: Self-actualization and creativity facilitate people to become the unique and distinctive persons of single birth lights, set from all others in their self-realizations. The study aims to understand the relationship between creativity and self-actualization with respect to gender differences, differences in curricular stream and medium of instructions. The study aims to compare individuals having high and low creativity in regard to their self-actualization.

Design/methodology/approach: Torrance Test of Creative thinking and standardized K. N. Sharma's Self-actualization inventory were used to identify Creativity & Selfactualization. Through personal survey, data was collected from five co-educational Bengali and English medium schools in the Metropolitan City Calcutta. A stratified random sample consisted of 400 XI grade students from science and arts streams having the age group of 16+years.

Findings: The standardized survey instruments were used. Data was analyzed by using co-efficient correlation, Partial correlation, F-test, t-test and other descriptive statistics scores. The results of the data analysis revealed sufficient evidence to establish a correlation between creativity and self-actualization with respect to gender difference, differences in streams and in medium of instruction.

Research limitations/implications – It is assumed that creative thinking ability can be measured with a test like T.T.C.T. and test scores from test like Self-actualization Inventory reveal a valid measure of the self-actualization and self-actualized individuals can think with novelty, express themselves in new directions.

Practical implications: It should therefore be ensured that children are provided with the environment and facilities conducive to the nurturing and stimulation of all that which is helpful in the development of creative faculties and qualities.

Originality/value: The study determine whether high creative is superior to low creative on self-actualization measure or not. It reveals whether there is any significant difference between male and female, science and arts streams, English and Bengali medium on the measure of verbal creativity and self-actualization

Keywords: Creativity, self-actualization

Introduction

Frank Baron, a psychologist has remarked: "There are rivers to be washed, air to be cleaned, mouths to be fed, diseases to be conquered, justice to be ensured to all new opportunities to be created, communications and empathy to be increased, secrets of the cosmos and of the mind to be understood. For all this, creativity is to be put to work." Creativity is a precious human resource- the gift of life to the human species. Of all the powers of human beings, 'creativity' is the most unique. Each of us endowed with the unique powers which can be termed as 'Spark of Genius' waiting to be freed. Creativity was believed to be a gift of God which has shifted its source from divine to psychic functioning of human beings. Creativity is a word of power, prestige and religiousness that we all wish to appropriate creativeness counters power and distinction.

Creativity is a human ability, comprising a process and usually product. Creativity may denote 'creative product' or the 'creative process' or 'creative thinking ability'. Guilford (1957) feels that creativity is part of the divergent, convergent and evaluative thinking operations. Convergent thinking involves aiming for a single, correct solution to a problem, whereas divergent thinking involves creative generation of multiple answers to a set problem. In the Guilford's Structure of Intellect model, convergent thinking leads to intelligence, whereas divergent thinking leads to creativity. It is measured by the flexibility, fluency and originality of responses to a given problem situation. Flexibility is the ability to break apart and reform different configurations of classes, relations and

systems. Fluency is measured by the sheer no. of units produced. Originality is the ability to generate a variety of transformations. Wallach & Kogan (1965) define, 'creativity lies in producing more, that are unique'. Stagner & Karwoski (1973) says, 'creativity implies the production of a totally or partially novel identity. Wilson, Guilford and Christensen (1974) claims, "The creative process is any process by which something new is produced an idea or an object including a new form or arrangement of old elements." Torrance (1962, 1993) also emphasized creative thinking process, he indicated that creativity is an important natural process that is based on human needs, and leads to effective learning and continued growth. He (1993) described creative thinking as "the process of sensing of difficulties, problems, gaps in information, missing elements, something askew; making guesses and formulating hypotheses about these deficiencies; evaluating and testing these guesses and hypotheses; possibly revising and retesting them; and, last, the communicating the results". Sternberg, O'Hara, & Lubart (1997) indicated that everyone could possess very style to some degree, but individuals who want to be creative have to prefer and strengthen the inventing style of thinking which means doing things in novel ways. In addition to knowledge, ability and style of thinking, individuals also need to have motivation for creativity in order to cope with difficulties faced and move forward with enjoyment. Creativity also requires a self-determined and risk taking personality that persists for achievement, as well as an environment that supports the investment of ideas and spreads the risks.

Davis, Rimm, & Siegle (2011) concluded also that there are many intellectual abilities that contribute to creative potential; they described the major abilities of creativity that have appeared in creativity literature, especially in Guilford (1950) and Torrance's (1962, 1995) work. They (2011) added that creativity is not limited to the common four abilities; Fluency, Flexibility, Originality and Elaboration. They indicated that other important creative abilities include problem finding, problem sensitivity, problem defining, visualization, analogical thinking, evaluation, intuition, curiosity, independence, resisting premature closure, risk taking, logical thinking, seeing structure in chaos, discovering relationships, planning, prioritizing, and making a good decisions.

The creative person is sensitive to the world of the objects, to problems, to other people to unconscious impulses. Creative thinking requires high motivation and persistence. The traits of sensitivity, tolerance of ambiguity, self-acceptance and spontaneity are passively rather than activity engaged in the creative process. Creativity is an expression of our unique perspective to a situation or problem. It transcends our desire to be part of the group.

Self-Actualization

The self is one's inner world. Man, as a total self of irreducible, units superseding the sum of this part functions will be the focal point of developmental behaviour. This approach to developing human behaviour well emphasize the free, responsible, autonomous and creative man who is constantly striving to discover himself and his relation to the world around him, as he works forward becoming the fully functioning person aware of his existence and self-actualizing his unique capacities and potentialities as he identified and solves his problems in the complex process of living and becoming. Abraham Maslow (1954) ^[2] speaks of the person as having a need for self-actualization, for expressing himself in his work. Maslow referred to self-actualization as the need to express our individual talents and become the best that we can. It is a drive to fulfill our potential. Thus a scholar who has been promoted through the ranks to a distinguished professorship in his discipline doesn't usually stop his research and writing. Rather, he desires to spread his ideas, to influence young people coming along in his field. The 'need for achievement' as described by Mc. Clelland *et al.* (1953) and other psychologists seem to resemble Maslow's concept of self-actualizing.

Maslow identified fifteen traits of a self-actualized person. These include highly valued traits such as self-acceptance, spontaneity, independence, tolerance and creative. According to Maslow, self-actualizing persons are individuals who display high levels of creativity, self-esteem, capacity for intimacy, and concern for the well-being of the world community. They seem to have mastered living happily in a complex world.

Self-Actualization and Creativity

According to Carl Rogers (1962) ^[9], "the main spring of creativity appears to be the same tendency which we discover so deeply as the curative force in psychotherapy-man's tendency to actualize himself, to become his potentialities ... the urge to expand, extend, develop, mature-the tendency to express and activate all of the capabilities of the organism" (pp.65-66). Maslow (1962) ^[6] also related creativity to self-actualization with his concept of self-actualized creativity,

"..... a tendency to do anything creatively.... (and to b) more natural and less control and inhibited.... The creativeness of all happy and secure children". In a scientific statement, Maslow (1971, p.57) ^[9] similarly noted "the concept of creativeness and the concept of the healthy, self-actualizing, fully human person seem to be coming closer and closer together, and may turn out to be the same thing".

To add further credibility to this paramount relationship, Clark Moustakis (1967), another early humanistic psychologist, wrote that "It is this experience of expressing and actualizing one's individual identity in an integrated form in communication and with one's self, with nature, and with other persons that I call creative."

According to Goldstein, there is 'only one drive, the drive of self-actualization'. They are expressions of 'man's creative power and of the tendency to effectuate a realization of his nature'. Yung believes that there is an innate creative spark in every individual the basis of which also lies in the unconscious depths of his mind. These inner creative aspects of one's mind also need some form of expression. In this way, one has a strong inner urge of motive to express one's talents or abilities or to make self-actualization the ultimate goal of one's life.

Creativeness is not identical to mentally-healthy self-actualization; however it is an important component. Creativity clearly is more than producing many ideas in art, science, business, and on divergent thinking tests. In self-actualization, the individual will risk safely to explore, to grow and to become actualized. Self-actualization and creativity are extensions of self-differences. Self-actualization and creativity facilitate people to become the unique and distinctive persons of single birth lights, set from all others in their self-realizations. The self-actualizing person is creative, his creation may be a simple thing, but his life is inventive and original. Because the individual in the ongoing process of self-realization accepts and trusts the uniqueness of his own being. Each one reshows in one way or another a special kind of creativeness or originality or inventiveness that has certain peculiar characteristics.

Past Self-Actualization and Creativity Research

A large number of studies have investigated the personality of the creative individual. The creative individual as reported by Stein (1974) ^[3] is self assertive, aggressive, independent, self sufficient and a leader who possesses initiative (Barron, 1965; Mac Kinon, 1959) ^[1]; less inhibited, less formal and less conventional while more self disciplined, and persevering with a high energy output (Blatt and Stein 1957; Stein, 1962) ^[2]; introverted with little interest in social interaction and interpersonal relationships (Blatt and Stein, 1957; Mackinnon, 1959); not well adjusted by psychological definition but adjusted in the broader sense of being socially useful and happy in his work (Roe,1953) who sees himself as creative ; intuitive and empathic (Gough, 1964); and a person who sees himself as creative (Taylor,1961). Menaker (1972) sees creativity as an essential aspect of the ongoing evolutionary process in each person as participant in social change and as fulfiller of his own potential. In fact, the characteristics of the creative individual are remarkably similar to those of the self-actualizer (Craig, 1966) and it is generally held that self-actualizers are creative (Maslow, 1959; Bloomfield, Cain, and Jaffe, 1975) ^[4].

McClain and Andrews report that self-actualizing students (as measured by the Personal Orientation Inventory (POI), the 16

PF, and a questionnaire by Maslow on peak experiences) are more creative (as measured by the creative personality prediction scale of the 16 PF) than non-self-actualizers. A similar study by Walton (1973) also found a correspondence between self-actualization (POI) and creativity (16PF).

The study of Logsdon, Kathy Ann (1988) [6] and Huchingson, June Mary (1990) revealed strong positive relationship between the variables of self-actualization and creative thinking. Wycoff (1991) identifies four traits found in creative people: 1. They are willing to take risks and have the courage to be wrong. 2. they are willing to express their thoughts and feelings. 3. They have a sense of humor. 4. They accept and trust their own intuition. According to career counselor Samuel Sacket (1998), many people fail to achieve self-actualization because they lack trust in themselves, their environment, and in others, which prevents them from freely experiencing life.

Vitterso (2004) reported a study to examine the structure of subjective life quality in addition to addressing the difference between subjective well-being and self-actualization. Self-actualization was collected through openness to experience. There was not a significant correlation found between subjective well-being and openness to experience, which in this study can be considered synonymous to self-actualization. Blanche (2007) described creativity as process oriented and intrinsically motivated behaviour. The researcher found that participants felt that they were able to be creative throughout their everyday life in more mundane ways than expected. These individuals were also more flexible in the way in which they completed tasks and more interested in self-expression (Blanche, 2007).

In a study, 'Cross-cultural aspects of creativity: A relation with self-actualization and schizotypy', on 120 Russian students, Olbertz and Kulke (2014), demonstrate that the correlation between creativity and self-actualization is significant in the subscale 'spontaneity' only. While creativity is not significantly predicted by self-actualization, purpose in life or self-esteem measures, self-actualization is positively and closely related with self-esteem, purpose in life measures, and empathy components.

In India, Roy Chowdhury (1962, '65, '66) reported that high creative were characterized by a preference for and tolerance for ambiguity and structural openness. Bhan (1973) were reported that

- high creative were self-actualizing and competent enough to maintain harmony between their aspiration level and creative potential. Verma, R.S. (1973), found that
- Autonomy, non-conformity and openness of mind were functionally related to the abilities of divergent thinking.
- Autonomy, non-conformity and openness of mind could help in understanding the divergent thinking of adolescents by regarding them as potentially creative persons and differentiating them from nonpotential creative persons. Jha S.K. (1975) [8] revealed that
- the creative person as having rational optimism, healthy attitude towards life, openness to experience, self-confidence and tendency for self-actualization. Bhagyavathy, N.E. (1983) showed that phenomenon belonging to high level of self-actualization were more flexible than those belonging to a low level of self-actualization. Naik, A. P. (2002) reported that there is a significant relationship between creativity and motivational characteristics; creativity and self-esteem for boys,

girls and total sample. He found that there is no significant difference in the relationship of total creativity with self-esteem and motivational characteristics of students.

Cameron (2012) [7] in his study 'Creative Careers and Self-actualization', took roughly 330 participants from the United States and India and showed that (i) instead of the most creative career group ranking highest, the middle group of individuals who were neither creative nor uncreative actually scored the highest on self-actualization. (ii) Highly creative career group scored highest on the life satisfaction scores. For specific motivations, individuals in highly creative careers were more likely to be motivated by factors such as the greater good, personal satisfaction, the desire to be wealthy, and recognition from others. It appears that career creativity is linked to satisfaction with life, and so individuals may want to choose a position where they feel they are able to be creative in their own way.

4.1 Research about Gender Differences and Medium Differences

In the study of 'Comparing gender differences of college students on self-actualization', Velasquez (1996) [37] chose a random sample of 40 full-time (12 hours) students attending a Midwestern college and the results indicated no significant gender differences. By conducting research on a population of graduate students, Sumerlin (1997) maintains that self-actualization involves striving, courage, risk-taking, openness to experience, and attainment of personality growth capacity. Maslow's theory of needs is illustrated, including his views that self-actualized individuals represent the most "healthy" and "enriched" human beings. Results of the study may demonstrate women scored higher on self-actualization, but do confirm the hypothesis that self-actualized individuals will exhibit higher levels of hope than non-self-actualized individuals. Future research needs conducted to account for possible gender bias and to confirm the positive relationship demonstrated within this study between hope and self-actualization.

Lee G.U.J studied 'College students perfection and satisfaction' 2007 At a glance of the mean differences in overall satisfaction by the two gender groups, male students tended to be more satisfied with their learning experiences and online learning community than female students. Although no significant differences were found at fundamental and psychological needs satisfaction, female student's satisfaction with self-actualization needs was significantly lower than that of male students. Allan Okech, Crystal Renée Chambers (2012), conducted a study 'Gender Differences in Self-Actualization', among a sample of Black university students was assessed using the Short Index of Self-Actualization. The eta square index indicated that a medium amount of the variance of the self-actualization variable in Black university students was accounted for by gender. Specifically, Black female university students reported more self-actualization than Black males.

Chahal Jyoti (2013) in her study, "A comparative study of self-actualization and creativity among male and female high school students, Faizabad City, India", on 620 students of 10th standard from different high schools, showed that females displayed a higher tendency towards self-actualization and creativity than males.

Trupti Ambalal Chandaliya (2014) conducted a study, "Self-Actualization among College students: A Study With reference To sex, Place of Living and Medium of Teaching", on 320 college students and revealed that (a) there was significant difference between male and female of college students, (b) the male students less self-actualized than female students, (c) Gujrati medium students have greater self-actualization than English medium college students.

Are creative individuals more likely to score high on self-actualization? Are high creative superior to low creative on self-actualization measure? Is there any significant difference between male and female on the measure of verbal creativity as well as three aspects of verbal creativity and self-actualization? Is there any relation between creativity and self-actualization for science and arts students? Is there any relation between Bengali and English medium creative groups, with self-actualization? Do boys differ from girls on the criterion measure of self-actualization? Are science students more self-actualized than arts students? Are English medium students more self-actualized than Bengali medium students? In India and abroad few attempts have been made in this direction. A thorough investigation was needed in this field so as to make the best use of creative talent, which is of social importance for any developing country. Therefore there an attempt has been made to find out the factors influencing student's creativity

Objectives

To study the relationship between self-actualization and components of creativity a well as verbal creativity.
 To study the Inter-relationship among different dimensions of creativity and selfactualization in respect of Gender differences, b. differences in curricular stream, and c. differences in medium of instructions.
 To compare individuals having high and low creativity in regard to their Self-actualization.
 To find the dependence of self-actualization with respect to Gender differences, b. differences in curricular stream, and c. differences in medium of instructions.

Hypotheses

- In the light of the above objectives the following hypotheses have been formulated
- There is a significant relationship between components of creativity and self-actualization.
- There is a significant relationship between components of creativity and self-actualization in respect of Gender differences (boys and girls), differences in curricular stream (science and arts), and c. differences in medium of instructions (Bengali and English medium). High creative are more self-actualized than low creative.
- There is significant difference in the self-actualization categorized as boys and girls, (b) students of science and arts stream, (c) students of Bengali medium and English medium schools.

7. Methodology

Study was Descriptive Survey in nature and involved correlation technique. A stratified random sample was used for the study drawn from the population of XI grade students both

boys and girls belonging to Metropolitan City Calcutta having both English & Bengali as the medium of instruction. The sample consisted of 400 students primarily from Science and Arts students belonging to five co-educational schools. Tools used for measuring the variables were Torrance Test of Creative Thinking (TTCT), used both in English & Bengali version by Dr. D. Kundu, Self-actualization Inventory in Hindi by Dr. K. N. Sharma and Researcher herself adopted Bengali & English version. Data was analyzed by using co-efficient correlation, t-test, F-test.

Results and Discussions

8.1 Part-I Correlational Statistics In order to understand the relationship between creativity and other variables chosen in the study, the Pearson Product Moment Correlation was computed. A. From the table 1, the following results were found:

1. the correlation between creativity and self-actualization is 0.7998, which is highly significant at 0.0001level.
2. the correlation between originality and self-actualization is 0.6659, which is highly significant at 0.0001 level.
3. the correlation between flexibility and self-actualization is 0.7605 that is highly significant at 0.0001 level.
4. the correlation between fluency and self-actualization is 0.7093, which is highly significant at 0.0001 level.

Table 1: Complete Correlation Matrix: N= 190 Showing inter correlations among originality, flexibility, fluency, creativity and selfactualization

	Ori	Flex	Flun	Crety	Sa	
Sa		0.6659	0.7605	0.7093	0.7998	1.0000

B. To compare the coefficients of correlation between various variables, viz., originality, flexibility, fluency, self-actualization and creativity between males (N= 93), and females (N=97), it finds from table 2 and 3 that:

1. Both males and females show a significant correlation at 0.0001 level with verbal creativity and self-actualization separately.
2. all the creative components (originality, flexibility, fluency) of male and female have a significant positive correlation at 0.0001 level with self-actualization.

Table2: Inter-correlation among different dimensions of creativity and self-actualization in respect of boys

N= 93; Sex= 1

Ori	Flex	Flun	Crety	Sa	
Sa	0.7086	0.8418	0.7799	0.8700	1.0000

Table 3: Inter-correlation among different dimensions of creativity and self-actualization in respect of girls

N= 97; Sex= 2,

Ori	Flex	Flun	Crety	Sa	
Sa	0.6342	0.6798	0.6526	0.7389	1.0000

C. To compare the coefficients of correlation for science (N=113) and arts (N=77) students, table 4 and 5 among the variables viz., originality, flexibility, fluency and selfactualization, the following results are obtained:

The correlation between creative components and self-actualization for science and arts students are found to be highly significant at 0.0001 level which is also true for creativity and self-actualization.

Table 4: Inter-correlation among different dimensions of creativity and selfactualization in respect of science stream

Stream= 1, N= 113

Ori	Flex	Flun	Crety	Sa	
Sa	0.6270	0.6745	0.6114	0.7312	1.0000

Table 5: Inter-correlation among different dimensions of creativity and selfactualization in respect of arts stream

Stream=2, N= 77

Ori	Flex	Flun	Crety	Sa	
Sa	0.6867	0.8038	0.7665	0.8368	1.0000

D. To compare the coefficients of correlation for Bengali (N=67) and English (N=123) medium students, tables 6 and 7 among the variables, viz., originality, flexibility, fluency and self-actualization, the following results are obtained.

- All the components of creativity, i.e., originality, flexibility, fluency have high positive significant correlation at 0.0001 level with self-actualization of Bengali and English medium groups.
- Bengali and English medium creative groups show a significant correlation at 0.0001 level with self-actualization separately.

Table6: Inter-correlation among different dimensions of creativity and self actualization in respect of Bengali medium

Medium= 1, N= 67

Ori	Flex	Flun	Crety	Sa	
Sa	0.6739	0.8066	0.7309	0.8265	1.0000

Table7: Inter-correlation among different dimensions of cr ativity and actualization in respect of English medium

Medium=2;N= 123

Ori	Flex	Flun	Crety	Sa	
Sa	0.6722	0.7798	0.7334	0.8159	1.0000

To see, if there is any difference among high creative and low creative groups of subjects taken in the present study, the two groups were formed out of the 190 subjects. The criterion for the division was taken twenty seven percent (27%) top and twenty seven percent (27%) bottom as high and low creative subjects on the basis of composite verbal creativity scores. Thus both high and low creative groups consisted of 51 subjects each. The scores of the two groups on different variables were subjected to t-test.

E. Table 8 shows that the two groups differed significantly in terms of selfactualization test scores i.e. high creative individuals are superior to low creative individuals on self-actualization measure.

Table 8: Comparison between high Creativeandlow Creativeonself-actualization

		Mean	SD	T	Level of Significance	Level
Self-actualization	High Creative	181.608	21.0783	7.3949	.0001	S
	Low Creative	157.471	21.0783			

F. Table 9: shows that, there is no significant difference between male and female on the measure of self-actualization.

Table9: Comparison between Male and Female creative groups on self-actualization

		Gender	Mean	SD	T	Level of Significance	Level
Self-actualization	Male		171.6559	14.2283	0.304	-	NS
	Female		173.6186	11.8598			

G. Table 10: shows that science students are more self-actualized than arts students

Table 10: Comparison between Science and Arts Subject Creative Groups on Self- Actualization

		Stream	Mean	SD	T	Level of Significance	Level
Self-actualization	Science		176.283	11.220	4.90	.01	S
	Arts		167.337	13.834			

H. Table 11 shows that, English medium students are more self-actualized than Bengali medium students. Therefore, it can be concluded that English medium groups are high on self-actualization

Table11: Comparison between Bengali medium and English medium creative groups on self-actualization

		Medium of instruction	Mean	SD	T	Level of Significance	Level
Self-actualization	Bengali Medium		174.91	12.09	1.82	0.1	S
	English Medium		171.43	13.46			

The major findings of this study are:

- A positive and significant relationship has been seen to exist among self-actualization and the three aspects of creativity.
- There is a positive and significant relationship between self-actualization and verbal creativity.
- All the creative components (originality, flexibility, fluency) as well as total creativity have a significant positive correlation with self-actualization in respect of male and female.
- The correlation between creative components as well as total creativity and self-actualization for science and arts students are found to be highly significant
- Bengali and English medium creative groups show a significant correlation with self-actualization separately.
- High creative are superior to low creative on self-actualization measure.
- Boys don't differ from girls on the criterion measure of self-actualization.
- Science students are more self-actualized than arts students.
- English medium students are more self-actualized than Bengali medium students.

Conclusion

One of the main important findings of the present study is that the high creative students are significantly high on self-actualization measures, and also the low creative students are low on self-actualization measure. Those who are self-actualized (i.e. spontaneity, autonomy, openness, problem centering, democratic, tolerance of ambiguity, philosophical humour in nature) should not be discouraged and condemned for their failure in other than the field of their special interest. It has revealed that Boys don't differ from girls on the criterion measure of self-actualization and all the creative components (originality, flexibility, fluency) as well as total creativity have a significant positive correlation with self-actualization in respect of male and female. Therefore, we should not brand the members of a particular sex. There should be great emphasis on learning creativity in domain or subject matter context. Developing creativity should be viewed as a long range process leading to adult creative achievement and self fulfillment. There is a need for properly planned, deliberate and conscious efforts on the part of teachers, parents, member of the society, government as well as the children themselves for the appropriate nurturing and stimulation of the creative urge and potential. It should therefore, be ensured that children are provided with the environment and facilities conducive to the nurturing and stimulation of all that which is helpful in the development of creative faculties and qualities like originality, flexibility, fluency, divergent thinking, self-confidence, persistence, sensitiveness, the ability to see relationship and make association

References

1. Barron F. The psychology of creativity in *New Directions in Psychology*, N.Y. Holt 1965; 2:51 1-34
2. Blott SJ Stein. Some personality value and cognitive characteristics of the creative person, *American Psychologist* 1957; 12:406.

3. Burleson Winslow. *Developing creativity, motivation, and self-actualization with learning systems*, MIT Media Lab, Cambridge, USA, 2005.
4. Butcher HJ. *Recent research into creativity & Divergent thinking in Great Britain*.
5. Buch MB, *A Survey of Research in Education*, 6th edition.
6. Chandaliya TA. *Self-actualization among College Students: A Study With Reference To Sex, Place of Living and Medium of Teaching*. *The International Journal of Indian Psychology*. 2015; 2(2).
7. Cameron TK. *Creative Careers and Self-actualization, Honors Thesis*, University of New Hampshire Scholars' Repository, retrieved from, 2012. <http://www.scholas.unh.edu/>...>HONORS.141>.
8. *Encyclopedia Britannica*. Published by Encyclopedia Britannica, Inc, 1970, 1.
9. Foster FP. *The human relationships of creative individual*. *Journal of creative behavior*. 1908; 2(2):111-118.
10. Gardner H. *Multiple intelligences*. *Encyclopedia of creativity*, Academic Press, SanDiego, 1999.
11. Garrett HE, Woodworth RS. *Statistics in Psychology & Education*, Bombay Vakils, Feffer and Simons Ltd, 1981.
12. Getzels JW, Jackson PW. *Creativity & Intelligence. Explorations with Gifted Students*, New York, Wiley, 1976.
13. Guilford JP. *Traits of Creativity*. H. H. Anderson (ed.), *Creativity & its exhibition*. New York, Harper, 1959.
14. Guilford JP. *Creativity: American Psychologist*, 1950.
15. Kitcher RW. *Creativity, Self-actualization and Meditation Programmes, Thesis and Dissertations (comprehensive)*, UMI Dissertation Publishing, 1977, 1530.
16. Logsdon Kothy Ann. *A study of the relationship between intuition and perception, self actualization & creative thinking*. *Dissertation abstract International*, 1988.
17. Mackinnon DW. *on becoming an architect*, *Architectural Record* 1959; 126:64-66
18. Mac Callum MJ. *Transcendental meditation and creativity, scientific research on the transcendental meditation program, collected papers*, Ed. DW. Ormo Johnson and J.T. Farrow, New York, NIU press, 1975. 1.
19. Maul TL. *An vestigation of the relationship between self-actualization and creative thinking processes*, *Dissertation Abstracts International*, 1971; 32(2-A):793.
20. McClain HW, Anderson HB. *Self-actualization among extremely superior students*, *Journal of college student personnel*. 1972; 13:505-510.
21. Maslow AH. *Creativity in self-actualizing people*, in H. H. Anderson (ed.), *Creativity and Its Cultivation*, New York: Harper, 1959.
22. Maslow AH. *Motivation and Personality*. NYC; Harper, 1954.
23. Maslow AH. *Theory of human motivation*, P. L. Harriman (Ed.), *Twentieth Century Psychology*, New York: The Philosophical Library, 1946.
24. Maslow AH. *Creativity in Self-actualizing people*. H. H. Anderson (Ed.) *Creativity & its cultivation*. New York: Harper, 1959, 83-95
25. Maslow AH. *Motivation and Personality*. NYC; Harper, 1954.
26. Maslow AH. *Toward a Psychology of being*. Princeton, N.J; Van Nostrand, 1962.

27. Maslow AH. Theory of human motivation, P. L. Harriman (Ed.), Twentieth Century Psychology, New York; The Philosophical Library, 1946.
28. Raina MK. Creativity Research in India: An analysis. The Journal of creative behavior. 169, 3.3.
29. Rogers CR. Toward a theory of creativity. Parnes, SJ. & Harding H.R, (eds.). A source book for creative thinking NYC: Scribners, 1962
30. Rogers CR. On becoming a Person. Boston Houghton, Mifflin, 1962.
31. Rogers CR. The concept of the fully functioning person'. The University of Chicago, 1954.
32. Sharma KN. Manual for Self-actualization Inventory (SEAI). Lucknow: Ankur Psychological Agency.
33. Stein HI Stimulation: Creativity, New York, Academic Press, 1974.
34. Taylor JW. How to create new ideas, Englewood Cliffs, New Jersey, Prentice-Hall. Torrance EP. Guiding Creative Talent. New Delhi: Prentice Hall of India, 1960.
35. Torrance EP. Torrance Test of Creative Thinking: Norms Technical Manual (Res. Ed.), Princeton, N.J.: Personal Press, 1966.
36. Velasquez MA. Comparing gender differences of college students on selfactualization, Missouri Western State College, 1996,
37. Wadaani MR. Teaching for creativity as human development toward selfactualization: the essence of authentic learning and optimal growth for all students, Creative Education 2015; 6:671-672.
38. Young JG. What is creativity? The Journal of Creative Behaviour. 1985; 19(2).