



CREATIVE THINKING ABILITY AND SELF-EFFICACY- AN ANALYSIS BETWEEN HIGH AND LOW CREATIVE ADOLESCENTS

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Abstract

Human beings have been endowed with various capabilities and potentialities, among these creativity is the most unique. Every individual has a spark of genius and brilliance that needs to be nourished. The present study was conducted to compare high and low creative adolescents on Self-efficacy. The study was conducted by using a descriptive method. The sample for the study was selected randomly from government secondary schools of the district Shopian. The initial sample of the study was 803 adolescents. Mehdi's Verbal Test of Creative Thinking (2019) was administered to them. Adolescents scoring above the 75th percentile were identified as high creatives (n = 200), while those scoring at or below the 25th percentile were identified as low creatives (n = 200). The final sample was 400 adolescents (200 high creative and 200 low creative). For the measurement of self-efficacy, the Self-Efficacy scale by Singh and Narain was administered to the final sample. These two groups were compared on self-efficacy by using an Independent samples t-Test. The results of study revealed that highly creative adolescents have a high level of self-efficacy as compared to low creative adolescents. High creative adolescents were found to have higher self-confidence, efficacy expectations, positive attitude, and outcome expectations than low creative adolescents.

Keywords: Creativity, Self-Efficacy, Capability, Belief, Attitude.

Introduction:

The rapid advancement of technology in the 21st century demands high level of competence to address the escalating challenges of global advancement (Purwanto et al., 2023). Taking this into consideration, it becomes imperative to provide quality education to students that prepares them to meet future demands. The education system must prioritise the development of key competencies that enable individuals to adapt to global transformations (Berg et al., 2021). The PISA Framework for 21st-Century Learning outlines key competencies that are essential for contemporary learners, including creativity, critical thinking, strategic problem-solving ability, effective communication, and collaboration. Creativity is recognised as one of the vital competency and acts like a powerful cart that leads society towards progress. It is the ability to thoroughly understand the problems and create novel and effective solutions by utilising diverse strategies and approaches (Kardoyo et al., 2020). It is the ability to produce uncommon, unusual and practical solutions to a problem (Lince, 2016). It is a process where current knowledge is connected with existing ideas to bring about change (Henriksen et al., 2014). Aldalalah (2021) stated that creative thinking entails viewing familiar things originally or unconventionally. Creative thinking can be defined as an iterative process in which a person produces diverse ideas, experiments with those ideas, refines and modifies them through critical analysis, elaborates them and effectively communicates them to address problems, enhance existing solutions, or contribute new insights. In past creativity was studied as a fixed trait, an exceptional talent possessed by only a few genius individuals. Earlier importance was given to big 'C' - the ability to produce a novel, high-quality idea that is recognised globally and little thought was given to nurturing everyday creativity- little c. In the mid-20th

century, creativity was examined as a skill that could be measured and taught. It was regarded as a psychological construct and a cognitive process that could be nurtured through educational endeavours. At present times creativity is viewed as a universal trait present in every individual but in varying degrees (Rahmawati, 2016; Craft, 2003; Beghetto & Kauffman, 2009). It needs identification and needs to be nurtured from an early age. Creativity is a valuable life skill that increases adaptability and resilience (Metzl & Morrell, 2008). It prepares students for unknown future demands, enhances their problem-solving ability, boosts their self-confidence through self-expression, increases their emotional intelligence, improves well-being (Brosowsky et al., 2022), and encourages a growth mindset. Thus, it should be an imperative aim of education to foster this vital skill among students. Creativity research gained momentum after J.P. Guilford's 1950 presidential address to the American Psychological Association, in which he encouraged psychologists to investigate creativity more seriously and expand understanding of this important cognitive ability. Recognising its significance, scholars have examined creativity in relation to various psychological traits deemed essential for its development. Among these, self-efficacy stands out as a key factor, functioning both as an antecedent and an outcome of creative potential. It is a "belief in one's ability to produce desired effects through one's actions." (Bandura, 1997). It is considered to be an essential characteristic of creative individuals because this belief increases motivation, which leads to prioritise one's ideas and activities (Bandura, 1997). It is a situational trait means a person can be highly self efficacious in one situation and low efficacious in another situation (Linen and Pintirich, 2002). It depends upon the task and situation.

Self-efficacy is not an evaluation of one's abilities, but rather a conviction in one's capacity to succeed at a task. An individual's efficacy beliefs reflect how hard they work on a task, how long they will persist with it when something goes wrong, and how resilient they are under challenging circumstances (Dwyer & Cummings, 2001; Bandura, 1997). Having a high sense of efficacy involves making great efforts and being resilient and persistent. Low self-efficacious individual usually thinks that things are harder than they are. However, high level of self-efficacy serves to enhance task-related efforts and assist attentional focus on the current activity (Zhang & Long, 2011). Low self-efficacy may lead to a drop in confidence (Li et al., 2008), which could then result in a decrease in creative performance (Hahn & Lee, 2017). Learners will generate more creative solutions during the learning process when they possess a strong sense of self-efficacy and creative self-efficacy. Creative people often take time to reflect on their goals, whether they are succeeding, and if not, what they could have done differently (Gardner, 2011). Such individuals typically exhibit a strong belief in their capabilities and view success as attainable through their own efforts. Even in the face of significant challenges, creative people never give up on their job (Helson et al., 1995). Self-efficacy enables students to engage in continuous learning to take advantage of their capacity for creative thinking (Wulansari, Suganda, & Fitriana, 2019). Wilson (1990) discovered that poets continue to write during extended periods of economic hardship even when their work is not well-received. There are two significant set of elements that contribute to such persistence. First of all, those who are creative believe they are capable of succeeding and feel efficacious. Furthermore, creative people understand how to push themselves to complete the parts of their jobs that they find unpleasant in addition to having an innate motivation for what they do.

After an extensive review of the literature, it has been found that studies have been conducted on creativity about academic achievement (e.g., Ojha, 2013), achievement motivation (e.g., Rani, 2013), educational achievement (e.g., Trivedi, 2010), self-concept (e.g., Peerzada, 2006), intelligence (e.g., Yadav, 2015; Gupta, 1977;), self-confidence (e.g., Siddique, 2022), locus of control (e.g., Jain et al., 2014), family climate (e.g., Yadav 2021), personality factors (e.g., Babu, 1977; Parveen, 2013). It has been found that studies have been conducted on high and low creative students by researchers like Nair (1975), Gupta (1981), Kumar (1981), Asthana (1987), Hafeez (2017), Matto (1992), Sarsani (2008), Shukla (2014), Yadav (2015) on personality factors, adjustment, Interest Patterns, anxiety, learning style, motivation, scholastic achievement, cognition, vocational interests, self-regulated learning. Research on the self-efficacy of highly creative and low creative adolescents in India remains limited, and to date, no study has been undertaken in the region of Jammu & Kashmir focusing on the self-efficacy levels of adolescents with varying degrees of creativity. With this background, the investigator decided to study the Self-efficacy of high and low creative adolescents. Despite offering a significant contribution to the theory, the appraisal of self-efficacy of highly creative students shall be very helpful for the policymakers, and educationists to frame genuine strategies for the nourishment of creativity of adolescents. It will be helpful for creative adolescents in particular and adolescents in general.

Objectives:

1. To identify high creative and low creative adolescents.
2. To compare high creative and low creative adolescents on self-efficacy.

Hypotheses:

H1(a) There is a significant difference in self-efficacy of high creative and low creative adolescents. (composite score).

H1(b) There is a significant difference in self-efficacy of high creative and low creative adolescents (factor-wise)

Methodology and Procedure:

The nature of this research study is quantitative. A descriptive research design was used to address the above-mentioned objectives. "Descriptive research is concerned with the conditions, correlations that exist, practices that prevail, beliefs, points of view or attitudes that are held, processes that are going on, effects that are being felt or trends that are developing" (Best and Kahn, 2016, p.).

Sample:

The sample for the present study was drawn from government secondary schools of the district Shopian, which consists of four educational zones. There are total 53 government secondary schools in this district. Out of these secondary schools, 8 secondary schools were selected randomly (32 schools) from each zone and all the adolescents aged 13-14 years studying in these selected schools form the initial sample of the study (n= 803) and Mehdi's Verbal test of creative thinking (2019) was administered to them. Following the scoring process, three students were excluded due to incomplete responses. Adolescents scoring above the 75th percentile were classified as highly creative (n = 200), while those scoring at or below the 25th percentile were identified as low in creativity (n = 200). This method of selecting extreme cases has been employed in earlier research by Dar and Rather (2024), Hafeez (2017), Khan and Rather (2014), Shahla and Khan (2024), and Matto (1992).

Tools used:

1. Mehdi's Verbal Test of Creative Thinking (Revised version 2019). This scale consists of 10 items having three dimensions- Fluency, flexibility and originality.
2. Self-Efficacy Scale by Singh and Narain (2014). It contains 20 items divided into four dimensions - self-confidence, efficacy expectation, positive attitude and outcome expectation.

Analysis and Interpretation:

Percentile analysis, Mean, S.D, and t test were used to find out the significance of difference between high creatives and low creatives on self-efficacy.

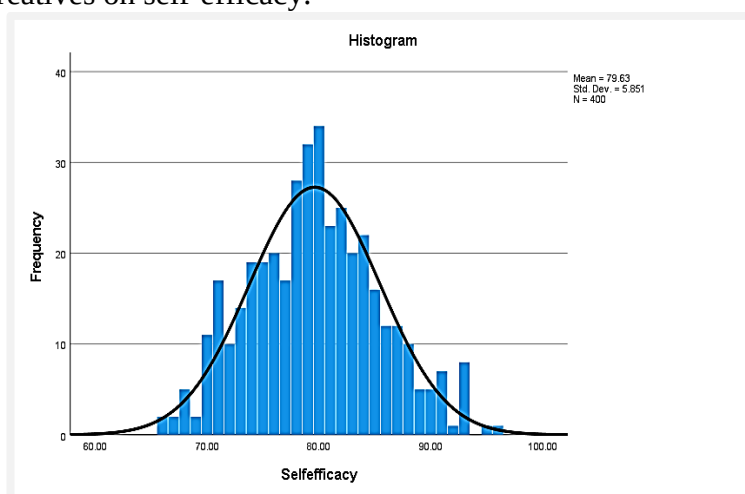


Fig .01 histogram of self -efficacy data

Table. 01 distributional nature of data of self efficacy variable.

N	Mean	S.D	S.E of Mean	SKewness	Std. Error SK	Z score of Skewness	Kurtosis	Std. Error KU	Z score of Kurtosis
400	79.6	5.85	.292	.164	.122	1.34	-.269	.243	-1.1

Before analysing the data, the investigator checked the normality of the data . The absolute value of skewness and kurtosis along with histogram were used to assess the normality of self efficacy data as suggested by Kim (2013). The calculated value of skewness and kurtosis were .164 and -.269 respectively. These values fall with in the range of -2 to + 2 and according to if the value of skewness and kurtosis is in this range it is considered as approximately normal data (George & Mallery, 2010). Further the mean of self- efficacy data for sample 400 is 79.6, S.D is 5.85 , S.E of Mean .29 and Z score of skewness is 1.34 and Z value of kurtosis -1.1.The Z score of -1.96 to +1.96 exhibits the normal distribution of the data (Doane & Seward, 2011). Taking these values into consideration the data was considered normally distributed and t test was used by the researcher.

Table.02. significance of mean difference between high creative (n=200) and low creative adolescents (n=200) on composite score of self-efficacy

Self - Efficacy (composite score)	Group	N	Mean	S.D	't'	0.05 level of significance
	High creative	200	80.72	5.97	3.8	Significant
	Low creative	200	78.53	5.92		

From table 02 and fig.02 it is clear that High creative adolescents had a mean score of 80.72 and Low creative adolescents exhibited a mean score of 78.53 on composite score of self-efficacy which indicates high creative adolescents have higher self-efficacy than low creative adolescents. The obtained 't' value is 3.8 which is far beyond the table 't' value at 0.05 level. Thus the H1 (a) There is a significant difference in self-efficacy of high and low creative adolescents (composite score) is accepted at 0.05 level of significance .

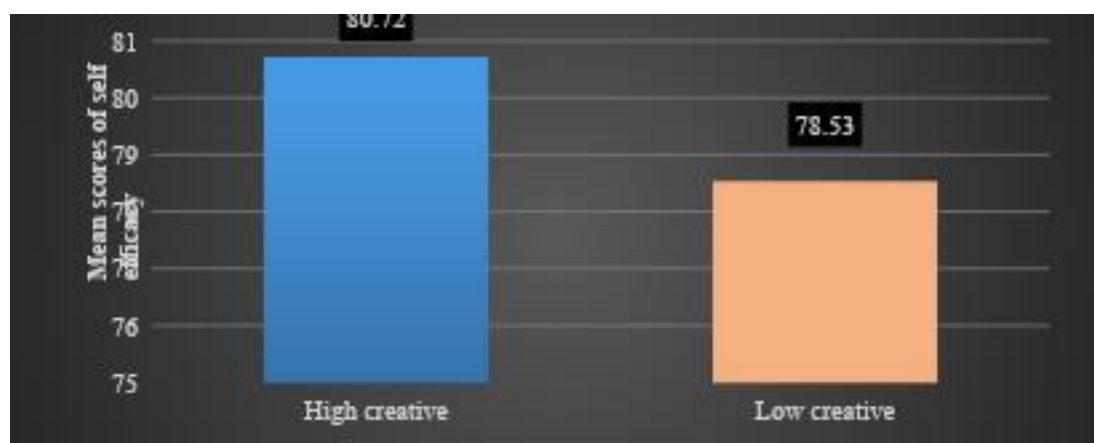


Fig 02.bar diagram showing mean difference between high and low creative adolescents on self-efficacy (composite - score)

Table 03. Showing mean difference between high creative (N=200) and low creative adolescents (N=200) on self-efficacy. (factor - wise).

Dimension	Group	N	Mean	S.D	't'	0.05 level of significance
Self-Confidence	High creative	200	20.32	1.67	4.22	Significant
	Low creative	200	19.60	1.73		
Efficacy Expectation	High creative	200	20.07	1.72	2.56	Significant
	Low creative	200	19.61	1.86		
Positive Attitude	High creative	200	20.05	2.22	2.49	Significant
	Low creative	200	19.54	1.84		
Outcome Expectation	High creative	200	20.27	1.88	2.78	Significant
	Low creative	200	19.77	1.73		

The table 03 highlights a statistically significant difference in the self-confidence of adolescents with high and low creative thinking levels. The mean of high creative adolescents on self-confidence dimension is 20.32 which is greater than the mean score (19.60) of low creative adolescents. The calculated 't' value is 4.22 which is significant at 0.05 level of confidence. Table 03 depicts that the mean of high creative adolescents on efficacy expectation dimension of self-efficacy is 20.07 which is greater than the mean score of low creative adolescents i.e. 19.61. The obtained 't' value is 2.56 which is significant at 0.05 level of confidence. Results regarding the positive attitude dimension of self-efficacy Table 03 depict that the mean score of high creative is 20.05 is greater than the mean score of low creative adolescents i.e. 19.54. High creative adolescents significantly differ from low creative adolescents with a 't' value of 2.49 which is significant at 0.05 level. Table 03 and fig 03 also depicts that the mean of high creative adolescents on an outcome expectation dimension of self-efficacy is 20.27 which is greater than the mean score of the low creative adolescents i.e. 19.77. The calculated 't' value is 2.78 which is significant at 0.05 level of confidence. Thus the H1 (b) There is a significant difference in self-efficacy of high and low creative adolescents (factor-wise) is accepted at 0.05 level of significance .

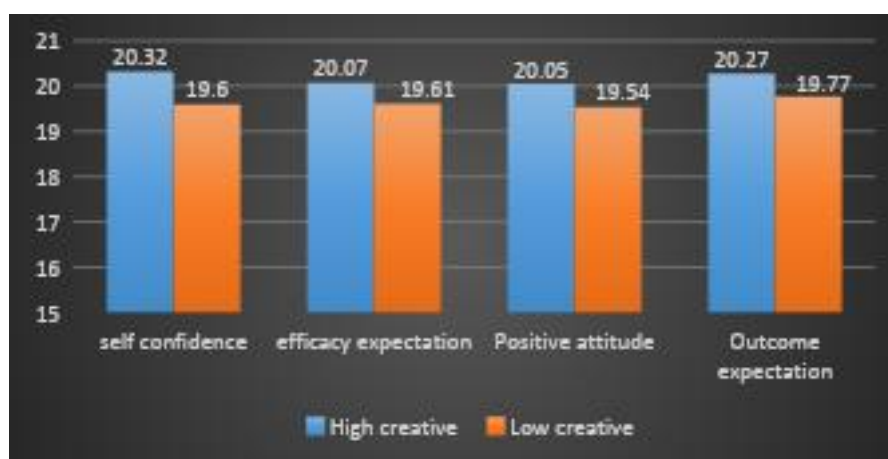


Figure 03. mean difference between high creative and low creative adolescents on self-efficacy (Factor-wise).

Discussion and conclusion:

The findings of this study indicate that high creative adolescents are high on self-confidence dimension than low creative adolescents. High creative adolescents exhibit a strong sense of confidence in their abilities, feeling capable of resolving difficult problems with minimal effort. They believe in their ability to reach their goals and are proactive in pursuing them. They rely on their skills and creativity to meet deadlines efficiently. They believe that success is attainable through delightful effort and perseverance. They exhibit self-control even during challenging situations. Low creative adolescents experience self-doubt, lack of confidence in their work or ideas. The results revealed that high creative adolescents hold a conviction that

they can successfully produce the behaviour required to generate particular outcomes and they try hard and persist in the particular behaviour. They are inclined to the mindset that with effort anything can be achieved. They attribute their achievements to their potential and take ownership of their success. They believe that success requires dedication and continuous improvement. In contrast low creative adolescents don't believe that they can solve any problem. They don't believe that their efforts always lead to success and can't achieve everything. High creative adolescents have faith in their abilities to perform a certain task. High creative adolescents exhibit a more optimistic outlook especially when facing creative challenges. Creative adolescents tend to focus on possibilities and potential solutions rather than dwelling on problems. This optimistic outlook helps them to maintain a positive attitude even in challenging situations. They maintain the conviction that they can face such situations independently without relying heavily on external assistance. They have a growth mindset as they view challenges as opportunities to grow rather than unsurmountable setbacks. Despite hurdles, they remain motivated by a strong sense of purpose and a determination to meet their goals. Low creative adolescents have a pessimistic outlook and are doubtful about their capacities to solve any difficulty and have a fear of failure. They don't see failures as an opportunity to learn which prevents them from taking part in new activities. They believe that they can't get up after falling. High creative adolescents believe that while engaging in any activity of interest they will achieve a positive outcome. They have strong belief in their abilities leading to higher expectations for successful outcomes. They are goal-oriented and have clear objectives for their projects. They believe that if they work as per plan they will finish their task efficiently. They work hard with full dedication as they believe success does not only need talent but efforts. Low creative adolescents approach the task with a sense of uncertainty. They lack a clear sense of purpose and struggle with strategic planning due to which they have self-doubt and don't expect good outcomes.

These results are supported by study conducted by Muti'ah et al. (2022) that revealed self efficacious students were able to excel in all areas of creative thinking. (Qadri et al., 2019) opined that there is a correlation between creative thinking and self-efficacy. Nufus (2018) study revealed that students with moderate to high levels of creativity are confident and well-assured in themselves as compared to students with low creativity. Ghorbani et al. (2012) found fluency as a favourable predictor of self-efficacy. Additionally, Davis (1986) highlighted that one quality of creative people is their self-confidence. Creative people tend to see complexity and ambiguity more positively, whereas those with low levels of creativity may adopt a more conventional mindset (Runco and Nemiro 1994). The social cognitive theory supports these findings by holding that persistence in creative endeavour demands a strong belief in one's own capabilities owing to the high risks and multiple hurdles involved. Results can be justified on the grounds that when creative students come up with innovative ideas and solutions they receive positive feedback and recognition, which boosts their self-confidence. Additionally being creative allows them to tackle challenges with a sense of curiosity and openness, making them more resilient and confident in their abilities to overcome obstacles. Their ability to think outside the box and produce original work contributes to a sense of accomplishment and pride, further enhancing their self-efficacy. Participating in creative activities fosters a sense of independence and autonomy, enabling students to express their thoughts and emotions in a genuine and meaningful way. This empowerment contributes to a positive attitude towards their own abilities and choices.

It can be concluded that adolescents with high creative thinking ability are highly confident, have a belief that they can utilize their abilities to do any work, remain optimistic in case of difficulties, have high hope that they by utilising their ability task will be completed. On the other side adolescents with low creative thinking ability have low confidence in themselves and in their abilities, have pessimistic attitude when they encounter any difficulty, have less hope that their efforts will lead to positive outcomes.

Implications:

- Peer mentorship Programmes should be organised in which creatively inclined students coach their less creative peers which in turn could cultivate a pleasant learning atmosphere and raise self-efficacy. Exceptionally creative students can inspire and mentor their peers, acting as role models and offering support and direction, increasing their self-assurance and faith in their abilities. Peer mentors can offer encouragement and validation, which can help mentees develop a greater belief in their own abilities to succeed.
- To account for the differing degrees of self-efficacy among students with high and low levels of creativity, educational curricula could be modified. For instance, giving less creative students more guidance and scaffolding for difficult assignments could boost their academic achievement and sense of self-efficacy.

- Encourage low creative students to actively participate in class discussions, activities, and projects. Provide opportunities for them to present their ideas, seeing their work recognized and appreciated can boost their confidence and belief in their creative abilities.
- Provide constructive feedback to students that emphasize strengths rather than weaknesses. Instructors and parents should never make fun of a child for making a mistake; instead, they should highlight the good responses and actions. Encourage them to learn from their failures and offer advice on how to improve their original concepts. By recognising and applauding the efforts of all sizes, a constructive learning environment that fosters the growth of self-efficacy can be established.
- Low creative students' self-efficacy can be raised through individual counselling using suitable intervention strategies. Counsellors can provide tailored support and feedback, helping students recognize and build on their strengths while addressing any underlying issues that may be hindering their creative confidence.
- The school administration should schedule motivational speakers and professional psychologists to give low-creative students essential guidance on how to cultivate a positive outlook and self-confidence.
- The study gave information regarding the gap in self-efficacy among high and low creative students. Government, educators, parents, school administrators, and students can all benefit from the findings, which can also serve as a roadmap for programmes run inside or outside schools to promote high levels of self-efficacy.
- Offer creative problem-solving challenges, brainstorming sessions, and artistic expression chances to students may increase their self-confidence.

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