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CREATIVITY AND LOCUS OF CONTROL: AN ANALYSIS BETWEEN HIGH AND LOW CREATIVE SECONDARY SCHOOL STUDENTS

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Abstract

Creativity is a high-order thinking ability that enables individuals to generate new ideas, solve problems, and adapt to changing situations. It plays a vital role in developing critical thinking, innovation, and adaptability in an ever-evolving world. This study aimed to study the locus of control among secondary school students with high and low levels of creativity. The study was conducted by using descriptive method. The sample for the study was selected randomly from government secondary schools of the district Shopian. Initially, 803 secondary school students were part of the study. To assess creativity, Mehdi's Verbal Test of Creative Thinking (2019) was administered. However, three students were excluded due to incomplete responses, leaving a sample of 800 students. Students scoring above the 75th percentile were classified as high creatives', while those scoring at or below the 25th percentile were categorised as low creative students. This resulted in a final sample of 400 students, with 200 in each group. The Locus of Control Scale by Hooda and Dahiya (2022) has been administered to measure LOC. An independent samples t-test was used to compare the two groups on LOC. The Pearson Correlation coefficient was used to find the relationship between these two variables. A significant difference was found among the two groups on dimension wise and composite scores of LOC. Results also revealed that higher the creativity higher is the internal locus of control and higher the creativity lower is the external locus of control.

Keywords: Creativity, Locus of control, Capability, Belief, Attitude.

Introduction

Creativity is an essential human trait that propels our society ahead and is often defined as the "production of novel and practical solutions, ideas, or products" (Runco & Jaeger, 2012). Creativity is a uniquely complex human ability that allows us to come up with new ideas, find innovative solutions, and express ourselves in original ways. It is the capacity to create something novel that has purpose or

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significance. It impacts almost every facet of life, such as planning, organising, communication, and decision-making (Runco & Pritzker, 2011; Sawyer, 2012) and acts as the source of the majority of advancements in science, technology, and society. Lucas and Spencer emphasise that creative thinking is an essential skill for today's youth, helping them adapt to a fast-changing world shaped by globalisation, digitalization, and the demand for flexible, 21st-century skills. Across the globe, from elementary school to university education, creativity is seen as a critical competency (OECD, 2019; Zahidi, Ratcheva, Hingel, & Brown, 2020). According to Begetto and Plucker's research, "A learner's imagination and curiosity can accelerate the learning process, while creative thinking serves as a vehicle for understanding their own learning goals. Vygotsky (1967) stated that if educating pupils is primarily meant to prepare them for the future, then fostering students' creative thinking "should be one of the main forces enlisted for the attainment of this goal." "Creativity is the competence to engage productively in the generation, evaluation, and improvement of ideas that can result in novel and useful solutions, advances in knowledge, or impactful expressions of imagination" OECD (2019, p. 8). This concept emphasizes that being creative involves more than just coming up with original, practical ideas, it also entails assessing and choosing which ones to put into practice. Everyone has the capacity for creativity but degree and kind of creative output vary from person to person (Rahmawati, 2016; Craft, 2003; Solso, 1995). Hernández-Torrano & Ibrayeva (2020) in their study highlighted that research on creativity in education has increased a lot over the past 45 years. The field focuses on how creativity is taught, its role in workplaces, and the thinking and emotions behind it. However, most research comes from a small group of experts and institutions. More studies in different educational settings are needed to better understand, measure, and apply creativity. Creativity has been studied in relation to various personality variables as researchers seek to understand the traits that contribute to creative potential. Personality factors such as openness to experience, intrinsic motivation, risk-taking, self-efficacy, and intelligence have been explored in connection with creativity. Among these, locus of control has emerged as a significant variable influencing creative thinking.

Julian Rotter has introduced the psychological construct - locus of control in 1954, building its framework on social learning theory. Locus of control is a belief held by individuals that how much the experiences and circumstances of their lives are under their control (Education Reform, 2013). According to Rotter (1966), reinforcements such as incentives or punishments guide behaviour, and it is through these experiences that a person forms beliefs about what motivates his

conduct or the forces at play in his environment. "It is a belief about whether the outcomes of our actions are contingent on what we do (internal control orientation) or on events outside our personal control (external control orientation)" (Zimbardo, 1985, 275). It is "an individual's perception about the underlying main causes of events in his/her life" (Rotter, 1966). It describes how people assign control to their surroundings, events, and the success or failure of their actions. It gives us information about the forces that regulate our lives. In academics, locus of control refers to how pupils see the reasons behind their academic achievement or shortcomings. A person's locus of control affects both their motivation to act and how they react to academic situations (APA, 2021). The locus of control of an individual can be either internal or external (Rotter, 1954). Rotter (1975) stated that these two categories are not entirely independent, but rather two ends of a spectrum, with people falling somewhere in the middle. Individuals have an internal locus of control when they commonly ascribe their successes and failures to their own controlled conditions (i.e., success or failure occurred as a result of the individual's effort or lack thereof). Students with an internal locus of control think that their hard work and effort will determine whether they succeed or fail. Those who have an external locus of control attach success to outside forces like fate or luck. They frequently attribute their triumphs and failures to circumstances beyond their control, such as luck, fate or challenging tasks. Externals held a view they have no influence over a lot of the things that happen in their lives.

Researchers have studied the relationship between creativity and LOC, and no consistency was found in results of various studies. Some showed internals are more creative (Michaela et al., 2015; Lather et al., 2014; Flor et al., 2013; Chadha ,1989 ; Gary, 2003; Heasaker, 1981; Moneta & Siu, 2002 and some studies revealed high creativity is found in persons with more external orientation (Zi ,1998; Richmond & De La Serna, 1980; Pannells & Claxton). Also, few research studies (Bolen & Torrance, 1978; Moradi et al., 2015) concluded that no difference is found in creativity levels of internals and externals. After an extensive review of the literature, it has been found that studies have been conducted on creativity with 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), Mattoo (1992), Sarsani (2008), Shukla

(2014), Yadav (2015) Hafeez (2017) on personality factors, adjustment, Interest Patterns, anxiety, learning style, motivation, scholastic achievement, cognition, vocational interests, self -regulated learning, vocational interests. Few studies have been conducted in India on high and low creative secondary school students concerning their LOC, and no study has been conducted in Jammu & Kashmir on the Locus of Control of students with high and low creative thinking abilities at the secondary level. Further, while reviewing literature, studies revealed mixed results regarding the relationship between creativity and Loc, so the investigator has recognised the need to further investigate the relationship between locus of control and creativity, particularly by examining differences between high and low-creative students. Despite offering a significant contribution to the theory, this study shall be very helpful for the policymakers and educationists to frame genuine strategies for the nourishment of creativity of secondary school students. It will be helpful for creative students in particular and students in general. Taking these points into consideration, the researcher has decided to conduct the study on Locus of control of high and low creative students at the secondary level.

Objectives

1. To identify High and Low Creative Secondary School students.

2. To compare High and Low Creative Secondary School students on Locus of Control.

3. To find out the relationship between creativity and Locus of control among secondary school students.

Hypotheses

H1(a) There is a significant difference in the Locus of Control of High and Low Creative Secondary School students. (Composite Score).

H1(b) There is a significant difference in Locus of Control of High and Low Creative Secondary School students. (Factor-wise)

H1(c) There is a significant relationship between locus of control and creativity of secondary school students.

Sample

The sample for the study was selected from government secondary schools of the district Shopian. There are four educational zones in the district Shopian. In these

four zones, there are 53 government secondary schools. Out of these 53 secondary schools from each zone, 8 secondary schools were selected randomly (32 schools) and all the 9th class students 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. After scoring, three students were screened out due to incomplete responses. Those students whose scores fall 75th percentile above were considered as high creative (n =200), and those whose scores fall on the 25th percentile and below were considered as low creative students (n =200). This criteria of extreme case selection has been used by (Dar and Rather, 2024; Hafeez , 2017; Khan & Rather, 2014; Khan & Jabeen,2013; Matto, 1992).

Tools used

1. Mehdi's Verbal Test of Creative Thinking (Revised version 2019). This scale consists of 10 items and three dimensions – Fluency, Flexibility and Originality.

2. Locus of Control scale by Hooda and Dahiya (2022). This scale consists of 31 items divided into two dimensions - (I) Internal Locus of Control (II) External Locus of Control.

Statistical techniques

Percentile analysis, skewness, kurtosis, t-test and Pearson's Correlation.

Analysis and interpretation

Table 01. Distributional Nature of Data of Locus of Control Variable.

N	Mean	Median	Mode	S.D	S.E of Mean	Z valueof Sk.	Z value of Ku.	Z standard
400	92.88	92.00	90.00	12.85	.642	.36	-1.20	±1.96

Before analysing the data, the investigator checked the normality and the distributional nature of LOC data. The range of Z value -1.96 to +1.96 exhibits the normal distribution of the data (Doane & Seward, 2011). Table 01 highlights the z value, which fall under the acceptance range of Z values. Therefore, the data distribution for the Locus of Control variable met the basic assumptions to be normally distributed. The mean of Locus of Control data for sample 400 is 92.88, S.D is 12.85, S.E of Mean is .642, Z value of skewness is 0.36 and z value of kurtosis -1.20 which depicts that data is normally distributed.

Table 02. Significance of mean difference between high and low creative students (N=200)on composite score of Locus of control.

Dimension	Group	N	Mean	S.D	t	Results
Internal LOC	High creative	200	90.91	12.65	3.00	** Significant
	Low creative	200	**94.86**	**12.80**		

***Significant at 0.01 level*

From Table 02, it is evident that High creative secondary school students significantly differ from Low creative students on Composite score of LOC. High creative students had a mean score of 90.91, and low creative students exhibited a mean score of 94.86, which indicates high creative students have higher self-efficacy than low creative students. The obtained 't' value is 3.00, which is far beyond the tabulated 't' value at the 0.01 level. Thus, the H1(a) *There is a significant difference in the Locus of Control of High and Low Creative Secondary School students.* (Composite Score) is accepted at a 0.01 level of significance.

Fig.01. Showing comparison of high and low creative students on Locus of control (Composite score).

Table. 03. Significance of mean difference between high and low creative students (N=200)Locus of control. (Factor Wise)

Dimension	Group	N	Mean	S.D	t	Results
Internal LOC	High creative	200	47.00	6.72	2.67	** Significant
	Low creative	200	48.83	6.97		
External LOC	High creative	200	43.92	7.00	3.10	** Significant
	Low creative	200	46.10	6.98		

***Significant at 0.01 level*

The perusal of table 03 makes it obvious that high and low-creative students significantly differ on the Internal loc dimension of self-efficacy. The obtained 't' value is 2.67, which is significant at 0.01 level of confidence. Table 03 depicts that the mean of high creative students on the external loc dimension of locus of control is 43.92, which is greater than the mean score of low creative students, 46.10. The obtained 't' value is 3.10, which is significant at 0.01 level of confidence. Thus H1(b) *There is a significant difference in Locus of Control of High and Low Creative Secondary School students. (Factor-wise) is accepted at 0.01 level.*

Table 03 Significance of mean difference between high and low creative students (N=200)Locus of control. (Factor Wise)

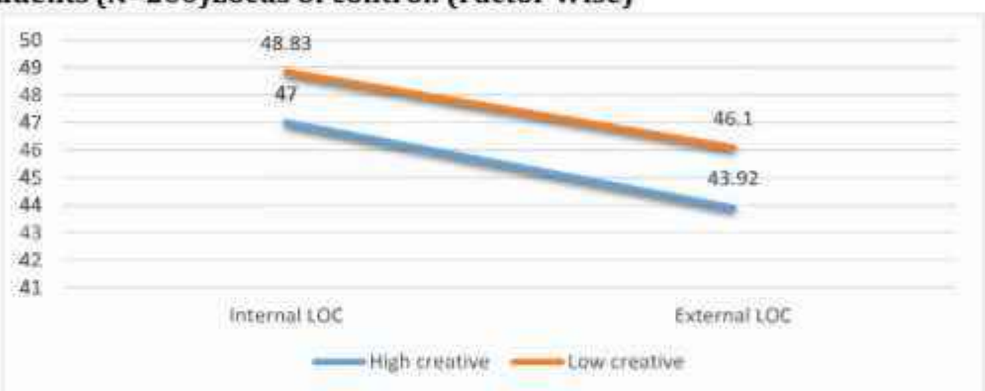

Table.04: Showing correlation between creativity and Locus of control of secondary school students

	Dimensions	Locus of Control	
		Internal LOC	External LOC
Creativity	Fluency	-.231	-.253
	Flexibility	-.288	-.264
	Originality	-.255	-.265
	Composite Score	-.241	-.267

Discussion

The above-mentioned results indicate that there exists a significant negative correlation between creativity and internal locus of control, which suggests that as students become more creative, their internal locus of control scores also increases. Since lower Internal LOC scores indicate a higher internal control, it implies that students with high creative thinking ability tend to believe that their success is

determined by their own efforts rather than external forces. Among the three creativity dimensions, flexibility shows the strongest relationship with Internal LOC, suggesting that students who can think in diverse ways are more likely to feel in control of their outcomes. Results also reveal there is significant negative correlation between fluency, flexibility, originality, and External LOC, implies that as students become more creative, their reliance on external factors decreases. This means that students with higher creativity are less prone to blame fate, luck, or outside factors for their results. Again, originality has the strongest correlation with External LOC, indicating that students who generate novel ideas have a lower tendency to depend on external circumstances. Overall, these findings suggest that creativity is strongly linked to an internal locus of control, meaning that creative students are more self-reliant and confident that events in their lives are under their control. It indicates that students who are more creative have dominant internal loc and less external Locus of control. High creative ability is accompanied by high belief that one can control his destiny, outcome by efforts and believes less on luck while low creative ability decreases belief of student on hardwork and make him more reliant on luck.

These findings are supported by (Xu et al., 2020;Khoshsima& Izadi, (2015) ; Lather et al., 2014; Torrance ,1971; Chadha,1989 ; Gary, 2003; Heasaker, 1981; Moneta & Siu, 2002). Khoshsima & Izadi (2015) concludes that the learners with high creative writing ability were found to have higher the internal locus of control. Lather et al. (2014) found that students having high internal locus of control exhibit greater fluency and originality. Chadha (1989) confirmed the notion that creative thinking is more likely to occur among self-driven persons. Our findings are in contrary with (Bolen and Torrance ,1978 ;Richmond and De La Serna, 1980; Zi ,1998; Pannells and Claxton ,2008) . Pannells and Claxton (2008) found the creative ideation and external dimension of locus of control were positively correlated with each other. Zi (1998) studied Chinese college students and found that chance perception was more effective than internality in predicting creative abilities. These results can be justified on the grounds that the active engagement, initiative in problem-solving, and introspective nature inherent in creativity significantly contribute in developing an internal locus of control. These individuals actively seek solutions to challenges, exploring multiple perspectives and experimenting with novel ideas, which reinforces their belief in personal agency and responsibility for outcomes (Amabile, 1983; Csikszentmihalyi's, 1996; Bandura, 1982). Moreover, creativity promotes introspection and self-reflection, prompting high creative students to recognize and capitalize on their strengths and abilities (Runco, 2007). In contrast, low creatives'

often held a belief that external factors such as luck or circumstances beyond their influence determine their success and failure. This tendency stems from a lack of proactive problem-solving and self-reflective behaviours that are integral to creative thinking, limiting their belief in personal agency and undermining their sense of responsibility for outcomes (Lefcourt, 1976).

Conclusion

This study emphasizes the strong link between creativity and locus of control in secondary school students. The findings indicate that highly creative students tend to have a dominant internal locus of control, believing that their efforts and persistence directly influence outcomes. On the other hand, students with an external locus of control are generally less creative, as they attribute success or failure to outside factors. These insights highlight the need for a learning environment that nurtures creativity, empowering students to take charge of their learning and develop strong problem-solving skills. Creativity is not just a higher-order thinking skill, it is essential for society and shapes how we perceive and respond to life events.

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