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Research Paper

Motivated to Create or Dependent to Produce? Understanding the Relationship between Use of Artificial Intelligence and Creative Behavior among Students

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ABSTRACT

Since the earliest days of civilization, creativity has served as the foundation of human progress. From ancient cave paintings and musical expressions to groundbreaking scientific revolutions and modern digital innovations, it is the creative spirit that empowers individuals to solve problems, express their identities, and adapt to an ever-evolving world. This research aimed at studying the relationship between Artificial Intelligence (Motivation to use AI and Dependence on AI) and perceived Creativity among students in India. A sample of 51 college students aged 18-25 years from various cities in India were selected for the study. Standardized self-report Questionnaires were used to assess students' Motivation (Questionnaire for Use AI Motives; QUAIM), Dependence (Dependence on AI Scale; DIA) and Creative behavior (Kaufmann Domains of Creativity Scale; KDOCS). Descriptive statistics and Pearson's product moment correlation coefficients were calculated using SPSS. Results indicated positive correlations between intrinsic interest in AI and – self/everyday and mechanical- forms of creativity. While utility value was positively correlated with everyday creativity. Conversely, Vulnerability to AI, showcasing dependence, was negatively correlated with Artistic and Performance creativity. While correlations do not speak for causal attributions, these results suggest that while the intrinsic motivation to engage with AI tool may foster or facilitate Creativity in certain aspects, overdependence on AI could negative impact expressive and performance-based creativity. This study also highlights the importance of fostering a balanced and interest focused approach to the integration of AI tools in the Education workspace.

Keywords: *Artificial Intelligence, Creativity, Motivation, Dependence, Creative Ability*

Creativity has been the cornerstone of human progress since the earliest days of civilization. From cave paintings and music to scientific revolutions and digital innovations, it is creativity that drives the ability to solve problems, express identity, and adapt to a changing world (Runco & Jaeger, 2012; Kaufman & Beghetto, 2009). Defined broadly, creativity is the capacity to generate ideas that are both novel and useful

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(Runco & Acar, 2012). It involves a balance of divergent thinking—the ability to explore multiple solutions—and convergent thinking—the ability to integrate ideas into coherent, applicable forms (Guilford, 1967). Creativity is not only reserved for artists or inventors; it appears in everyday tasks, from improvising a solution in a stressful moment to reshaping academic ideas in new ways (Richards, 2007).

Researchers have long examined the cognitive and environmental conditions that support or hinder creativity. Several psychological constructs are known to influence creative expression. For instance, intrinsic motivation—the drive to engage in tasks for their own sake—has consistently been associated with enhanced creative output (Amabile, 1996). Autonomy, or the perception of self-direction, fosters ownership over one's ideas and the confidence to take creative risks (Deci & Ryan, 1985; Wang & Dong, 2019). Knowledge provides the informational foundation for making novel connections, while openness to experience encourages the exploration of alternative perspectives (King et al., 1996). A supportive environment—whether in classrooms, workplaces, or homes—has also been shown to play a vital role in nurturing creative thinking (Amabile, 1983).

In parallel with developments in creativity research, the rise of artificial intelligence (AI) has transformed how individuals interact with information and produce content. AI refers to computer systems capable of performing tasks typically requiring human intelligence—such as learning, reasoning, and creative production (Burchardt & Ebert, 2018; Russell & Norvig, 2016). Generative AI tools like ChatGPT, Google Gemini, and Microsoft Copilot rely on deep learning algorithms and large language models to generate text, suggest ideas, and even simulate conversation. These technologies are trained on vast datasets and designed to recognize patterns, solve problems, and support content generation (Goodfellow et al., 2014).

In the educational domain, particularly higher education, AI use has become increasingly common. Students often turn to AI for academic writing, brainstorming, language support, and problem-solving (Chen et al., 2020; Zawacki-Richter et al., 2019). In India—where access to digital tools is growing and educational competition remains high—college students aged 18–25 have become early adopters of generative AI. These tools are frequently used to improve efficiency in assignments, presentations, and research tasks.

However, this growing reliance on AI has sparked debate. While AI may enhance efficiency, structure, and access to information, it may also reduce the productive struggle that underlies deep learning and creativity (Selwyn, 2019). Some scholars argue that overuse of AI can diminish autonomy and creative confidence, especially when students overlook foundational learning for quick solutions (Holmes et al., 2019). The cognitive and emotional conditions that support creativity—like curiosity, problem-solving persistence, and self-efficacy—may be disrupted by passive engagement with AI (Amabile, 1996; Haase & Hanel, 2023).

Despite growing interest, literature on AI and creativity remains limited in scope. Most existing studies focus on the quality of AI-generated content rather than on how human users perceive their own creativity when using these tools. Emerging findings suggest that not all motivations for using AI are equal; while some students are driven by curiosity and genuine interest, others may approach AI tools out of pressure, fear of falling behind, or simply to save time (O'Toole & Horvát, 2024). Understanding which of these motivations enhance or diminish creative behavior remains an open question. Moreover, few studies examine these

dynamics in the Indian student context, where educational pressures and digital adoption intersect uniquely. Little is also known about how specific motivational factors (e.g., interest, utility, cost) or psychological dependencies (e.g., vulnerability, validation) influence students perceived creative behaviors. Additionally, since creativity is both a cognitive function and a personal experience, how students perceive their own creative abilities, becomes a vital dimension of inquiry (Ivcevic & Brackett, 2015).

This study addresses these gaps by examining how students' motivations for using AI and their psychological dependence on it relate to self-perceived creativity across five domains: everyday, scholarly, performance, mechanical, and artistic. Anchored in expectancy-value theory (Eccles & Wigfield, 2002) and grounded in emerging frameworks on AI dependence (Morales-Garcia et al., 2024), this research focuses on Indian college students navigating the cognitive opportunities and challenges posed by generative AI. By identifying how motivational quality and emotional reliance on AI shape creative self-perception, the study contributes to a more nuanced understanding of the interplay between technology and human cognition.

Thus, this investigation seeks to determine whether generative AI serves as a catalyst or a crutch in the creative development of students. This research adds empirical clarity to a topic of growing global importance by examining how both motivational drivers and emotional dependencies on AI relate to students' self-perceived creative behavior across distinct domains.

METHODS

Aim of the study:

The present study examines the relationship between motivation to use artificial intelligence, dependence on AI, and creativity among students in India. This study employed a quantitative research approach, utilizing a cross-sectional research design.

Objectives of the study:

1. To study the significant relationship, if any, between motivation to use the usage of artificial intelligence (expectancy, attainment, cost, intrinsic/interest value, utility value) and creativity (self/ everyday, scholarly, performance, mechanical, artistic) among students in India.
2. To study the significant association, if any, between dependence on artificial intelligence (vulnerability, relevance, social motivation, external validation, obsolescence) and creativity (self/ everyday, scholarly, performance, mechanical, artistic) among students in India.

Hypothesis of the study:

1. There is no significant relationship between motivation to use artificial intelligence (expectancy, attainment, cost, intrinsic/interest value, utility value) and creativity (self/ everyday, scholarly, performance, mechanical, artistic) among students
2. There is no relation between dependence on artificial intelligence (vulnerability, relevance, social motivation, external validation, obsolescence) and creativity (self/ everyday, scholarly, performance, mechanical, artistic) among students.

Variables under study:

- **Motivation to Use AI:** Motivation to use artificial intelligence was conceptualized as a multidimensional construct based on expectancy-value theory (Wigfield & Eccles, 1992). This framework included five components: **Expectancy**, referring to individuals' beliefs about their ability to use AI tools effectively; **Attainment value**, which reflects the personal significance of mastering AI in alignment with one's identity and goals (Eccles & Wigfield, 2002); **Cost**, referring to the perceived drawbacks or sacrifices associated with AI use, such as time, effort, or risk (Barron & Hulleman, 2015); **Intrinsic value,** defined as the inherent enjoyment and interest experienced when engaging with AI technologies (Ryan & Deci, 2000); and **Utility value**, denoting the perceived usefulness of AI tools in achieving academic, personal, or professional goals. These dimensions together represent students' internal motivations and perceived trade-offs in engaging with AI within academic contexts.
- **Dependence on AI:** AI dependence was conceptualized as a multifaceted construct reflecting various aspects of psychological and behavioural reliance on AI technologies. **Vulnerability** represents feelings of anxiety, insecurity, and helplessness that individuals experience when AI tools are unavailable or inaccessible, indicating emotional dependence on these technologies (Young, 1998). **Relevance** encompasses concerns about maintaining competence and performance standards in academic or professional contexts, reflecting the perceived necessity of AI tools for effective functioning (Caplan, 2002). **Social motivation** refers to the desire to maintain a current and technologically sophisticated image among peers, driven by social desirability and the need to appear competent with contemporary technologies (Ryan & Xenos, 2011). **External validation** indicates the extent to which individuals rely on AI for decision-making processes and seek confirmation from AI systems for their choices and judgments (Kuss & Griffiths, 2011). **Obsolescence** captures fears and anxieties about being replaced or becoming irrelevant due to advancing AI capabilities, reflecting concerns about the long-term implications of AI development on human roles and value (Chui et al., 2016).
- **Creative Behaviour:** Creative behaviour was assessed across five distinct domains, reflecting varied expressions of creative thinking and output (Kaufman et al., 2022). **Self/Everyday creativity** involves originality in daily life, such as problem-solving and novel approaches to routine situations. **Scholarly creativity** pertains to innovative thinking within academic settings, including generating original ideas, drawing unique conceptual connections, and approaching academic tasks from fresh perspectives. **Performance creativity** captures real-time expressive creativity in areas like music, theatre, and dance, often involving improvisation and audience engagement. **Mechanical creativity** reflects problem-solving and innovation in scientific and technological contexts, such as engineering, coding, or technical design. **Artistic creativity** involves visual and plastic arts, including painting, sculpting, and drawing, where tangible creative products are produced.

Sampling

Participants were selected using purposive sampling technique, based on the criteria that they were current students and between the ages of 18 and 25. A total of 51 participants from various cities across India were included in the study. This age group is particularly relevant, as college students and young adults represent a high-engagement demographic with generative AI tools (Thormundsson, 2024). The sample consisted of 58.8% female and 41.2% male participants. No participants reported a history of physical or psychiatric illness,

and only one participant disclosed a family history of mental illness. These controls were not exclusionary but were recorded for contextual understanding. All participants provided informed consent to take part in the research.

Tools Used

1. **QAIUM:** The Questionnaire for AI Use Motives (QAIUM) is an instrument that measures individual motivations for using artificial intelligence tools.it is based on the expectancy-value theory (Kasarci & Yurt, 2024). It measures across two fundamental dimensions expectancy and task value. The task value is further sub-divided into Attainment, utility, interest and cost; which are thereby measured as separate dimensions. Thus, the QAIUM has a total of 5 dimensions. The questionnaire consists of 20 total items, with 4 questions in each dimension. The questionnaire was rated on a 5-point Likert scale (1= completely false through 5=completely true). The reliability scores for the QAIUM were- expectancy: 0.88, attainment: 0.92, utility value: 0.91, interest value: 0.93, cost: 0.86 (Kasarci & Yurt, 2024).
2. **DIA:** the Dependence on AI scale (DIA) is a reliable tool to measure student's dependence on artificial intelligence. It measures across five dimensions Feelings of vulnerability, Concerns about relevance, need to maintain an updated image, Seeking external Validation, Fear of personal obsolescence. The DIA uses a 5-point Likert scale (1- completely false for me, 5- describes me perfectly). The Reliability Scores (both the α and ω =.87) showed proper internal consistency suggesting that the tool is reliable for measuring the construct (Morales-Garcia et al., 2024).
3. **KDOCS:** The Kaufmann Domains of Creativity (KDOCS) is a self-report questionnaire that measure creative behaviour. It consists of five domains; everyday, scholarly, performance, artistic, scientific. The tools used a 5-point Likert scale to compare themselves (the participants) to others of their age and life experiences (1 = much less creative, 5 = much more creative). The Internal Consistency reliability scores for the five domains were- everyday: 0.90, scholarly: 0.83, performance:0.84, artistic:0.73, scientific:0.72. The test-retest reliability scores- everyday: 0.52, scholarly: 0.62, performance: 0.82, artistic: 0.77, scientific:0.69 (Kaufmann et al., 2022).

Procedure

The research used self-report questionnaires to collect data. Each participant was provided with a questionnaire, before beginning ethical guidelines were maintained and proper consent was taken, confidentiality and right to withdraw was ensured. The participants were asked for basic sociodemographic details and to fill the questionnaires without thinking too much about the questions, to answer intuitively. After the data collection proper scoring was done according to the manual and necessary statistical analyses were done according to the objectives of the study.

Statistical Analysis

Data were analyzed using IBM SPSS Statistics (v.30.0). Parametric statistics were employed in this study. Descriptive statistics, including means and standard deviations, were calculated to summarize participants' scores on motivation to use AI, dependence on AI, and the five domains of creativity. To examine the relationships between students' motivation to use AI, dependence on AI, and self-perceived creativity across five domains, Pearson's correlation coefficient (r) was calculated. This analysis was used to determine the strength

and direction of linear associations between the subscales of motivation and dependence, and the creativity domains. All statistical tests were conducted at a significance level of $\alpha = 0.05$.

RESULTS

This research aims to study the relationship between motivation to use and dependencies on AI and perceived creativity of college students in India.

- **Descriptive statistics** (Mean and Standard deviation) were calculated with respect to the variables of the study; Motivation to use Ai, Dependence on AI and Perceived creativity.

Table 1: Values of mean and standard deviation (SD) For Motivation to use Ai, Dependence on AI and Perceived creativity.

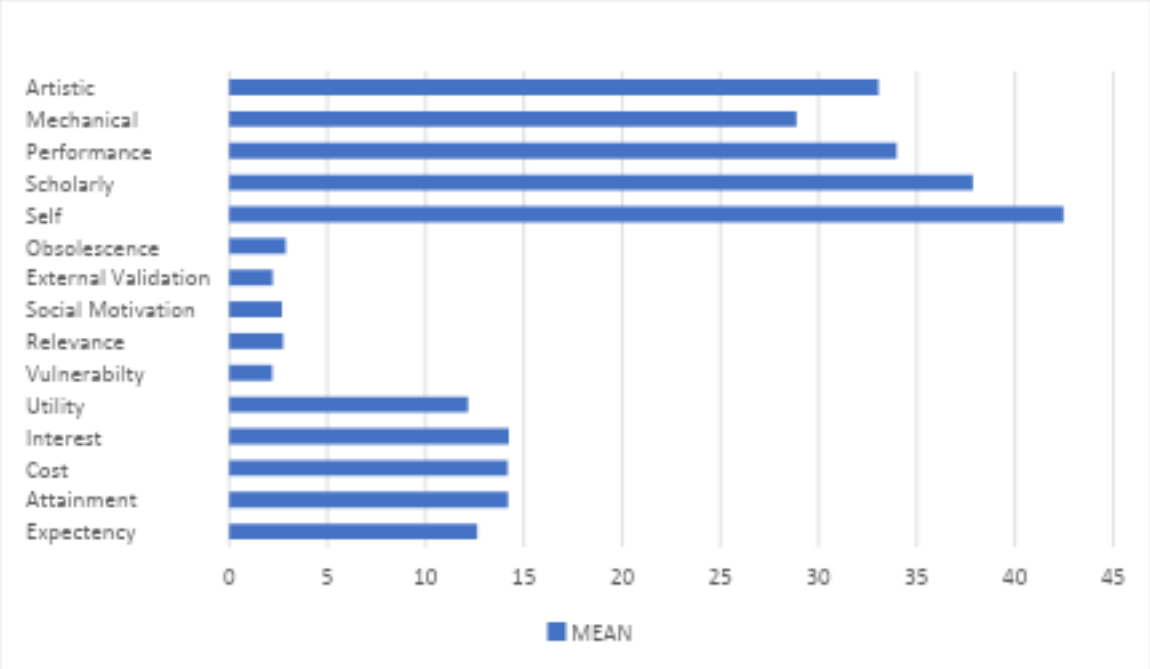
Variables	Mean	Standard Deviation
Expectancy	12.6275	2.61504
Attainment	14.1961	3.38242
Cost	14.1765	3.10294
Interest	14.2353	3.37395
Utility	12.1569	3.02240
Vulnerability	2.1961	1.05867
Relevance	2.7451	1.18056
Social Motivation	2.6863	1.04862
External Validation	2.2157	1.10116
Obsolescence	2.8824	1.19410
Self	42.4706	5.72487
Scholarly	37.8627	7.51537
Performance	33.9804	8.82154
Mechanical	28.8824	9.32233
Artistic	33.0588	7.46836

When evaluating the student's motivations to use ai the following scores were determined: Expectancy (M = 12.63, SD = 2.62), Attainment (M = 14.20, SD = 3.38), Cost (M = 14.18, SD = 3.10), Interest (M=14.24, SD = 3.37), and Utility (M = 12.16, SD = 3.02).

In case of the dependence on ai scale we found: Vulnerability (M = 2.20, SD = 1.06), Relevance (M = 2.75, SD = 1.18), Social Motivation (M = 2.69, SD = 1.05), External Validation (M = 2.22, SD = 1.10), and Obsolescence (M = 2.88, SD = 1.19).

While assessing student's creative behaviour, the reported scores for the domains were; Self (M = 42.47, SD = 5.72), Scholarly (M = 37.86, SD = 7.52), Performance (M = 33.98, SD = 8.82), Mechanical (M = 28.88, SD = 9.32), and Artistic (M = 33.06, SD = 7.47).

Overall, it was seen that the participants were motivated to use ai and they perceived themselves as actively creative while not being excessively dependent on ai, indicating that ai might play role in enhancing creative behaviour in students.



- **Inferential statistics** (Product Moment Correlation) was conducted to find the significant association between to the variables of the study; Motivation to use Ai, Dependence on AI and Perceived creativity

Table 2: Correlation values / Matrix for IV1 (Motivation to Use Ai) And DV (Creative Behaviour)

Variables		Self	Scholarly	Performance	Mechanical	Artistic
Expectancy	Pearson Correlation Sig. (2-tailed) N	.274 .052 51	-.041 .773 51	.059 .678 51	.219 .123 51	-.040 .781 51
Attainment	Pearson Correlation Sig. (2-tailed) N	.181 .204 51	.010 .946 51	.179 .209 51	.169 .235 51	.025 .862 51
Utility	Pearson Correlation Sig. (2-tailed) N	.337* .015 51	.120 .401 51	.041 .775 51	.147 .305 51	-.047 .743 51
Interest	Pearson Correlation Sig. (2-tailed) N	.452** .001 51	.189 .184 51	.168 .238 51	.310* .027 51	.008 .955 51
Cost	Pearson Correlation Sig. (2-tailed) N	.264 .061 51	.117 .413 51	.161 .260 51	.175 .219 51	.084 .559 51

***Significant at the 0.01 level* ** Significant at the 0.05 level*

When examining the correlations between students' motivation to use AI and their creative behaviour, several meaningful relationships emerged. Most prominently, **Interest** was found

to be significantly positively associated with both **Self creativity** ($r = .452$, $p < .01$) and **Mechanical creativity** ($r = .310$, $p < .05$), suggesting that students who are intrinsically motivated to engage with AI tend to perceive themselves as more creative in personal and technical domains. Additionally, **Utility** demonstrated a significant positive correlation with **Self creativity** ($r = .337$, $p < .05$), indicating that when students find AI practically helpful, it may enhance their self-expressive creative behaviours. Other motivational factors—**Expectancy**, **Attainment**, and **Cost**—did not show statistically significant relationships with any specific domain of creativity. These findings suggest that **intrinsic and task-value-related motivations** (like interest and perceived usefulness) may be more influential in supporting creative tendencies compared to outcome-oriented or cost-based motivations.

Table 3. Correlational Analysis for IV2 (Dependence on Ai) and DV (Creative Behaviour)

Variables		Self	Scholarly	Performance	Mechanical	Artistic
Vulnerability	Pearson Correlation Sig. (2-tailed) N	.090 .530 51	-.059 .679 51	-.291 .038 51	-.204 .150 51	-.490** .000 51
Relevance	Pearson Correlation Sig. (2-tailed) N	-.139 .332 51	-.180 .207 51	-.216 .129 51	.001 .995 51	-.207 -.145 51
Social Motivation	Pearson Correlation Sig. (2-tailed) N	.175 .219 51	.015 .918 51	-.016 .912 51	.137 .337 51	-.192 .178 51
External Validation	Pearson Correlation Sig. (2-tailed) N	-.007 .962 51	.166 .246 51	-.179 .210 51	.047 .742 51	-.123 .389 51
Obsolescence	Pearson Correlation Sig. (2-tailed) N	-.085 .551 51	.083 .563 51	.074 .607 51	.011 .937 51	.176 .217 51

***Significant at the 0.01 level * Significant at the 0.05 level*

When evaluating the student's motivations to use ai the following scores were determined: Expectancy ($M = 12.63$, $SD = 2.62$), Attainment ($M = 14.20$, $SD = 3.38$), Cost ($M = 14.18$, $SD = 3.10$), Interest ($M=14.24$, $SD = 3.37$), and Utility ($M = 12.16$, $SD = 3.02$).

In case of the dependence on ai scale we found: Vulnerability ($M = 2.20$, $SD = 1.06$), Relevance ($M = 2.75$, $SD = 1.18$), Social Motivation ($M = 2.69$, $SD = 1.05$), External Validation ($M = 2.22$, $SD = 1.10$), and Obsolescence ($M = 2.88$, $SD = 1.19$).

While assessing student's creative behaviour, the reported scores for the domains were; Self ($M = 42.47$, $SD = 5.72$), Scholarly ($M = 37.86$, $SD = 7.52$), Performance ($M = 33.98$, $SD = 8.82$), Mechanical ($M = 28.88$, $SD = 9.32$), and Artistic ($M = 33.06$, $SD = 7.47$).

Overall, it was seen that the participants were motivated to use ai and they perceived themselves as actively creative while not being excessively dependent on ai, indicating that ai might play role in enhancing creative behaviour in students.

DISCUSSION

This study sought to explore how students' motivation to use artificial intelligence (AI) and their psychological dependence on it relate to their self-perceived creative behaviour across multiple domains. The results showed that among various motivational dimensions, intrinsic interest in using AI had the strongest positive association with creativity, particularly in the self/everyday and mechanical domains. This suggests that students who genuinely enjoy interacting with AI tools may be more likely to apply them in flexible, everyday problem-solving tasks (such as writing, brainstorming, or planning), and in more structured, technically driven domains like mechanical or computational thinking. The intrinsic enjoyment may lead to playful engagement, more exploratory thinking, and greater comfort with trial and error — all of which are hallmarks of the creative process (Amabile, 1996; Clapham, 2001).

In addition, perceived utility of AI — the belief that AI helps in achieving goals or simplifying tasks — was positively associated with self-everyday creativity. This indicates that when students see AI as a practical tool that enhances their productivity, they may feel more resourceful or creatively competent in day-to-day academic or personal tasks. These students may not use AI just to save time, but as a way to refine or elevate their output, fostering a sense of creative confidence and ownership over the final product (Chen et al., 2020).

Conversely, motivational factors such as attainment value (importance placed on succeeding), expectancy (belief in one's competence), and cost (perceived effort or sacrifice) were not significantly correlated with creativity in any domain. This suggests that external goals, self-beliefs about performance, or concerns about investment may not directly influence students' creative behaviour in relation to AI use. One possible interpretation is that creativity — especially self-perceived creativity — is more influenced by how enjoyable and useful a tool feels, rather than by performance-oriented goals or cognitive evaluations. This finding stands in partial contrast to earlier literature emphasizing the role of self-efficacy and goal-setting in creativity (Kaufman & Sternberg, 2010), and may reflect a shift in how students engage with emerging technologies like AI — prioritizing convenience and interest over mastery or long-term attainment.

Motivation to Use AI and Creativity

Among the motivational variables, intrinsic interest and perceived utility of AI are shown as meaningful predictors of creative behaviour. Students who reported greater utility in using AI tools tended to rate themselves as more creative in everyday and mechanical domains. This aligns with the expectancy-value theory, which suggests that individuals are more likely to engage with tasks they find enjoyable and useful (Kasarci & Yurt, 2024). These findings also supported by prior research showing that intrinsic motivation is a key driver of creative engagement, particularly in problem-solving contexts (Kaufman & Sternberg, 2010; Clapham, 2001).

The relation between interest in AI and mechanical creativity suggests how curiosity toward technology can facilitate creative thinking and iterative refinement (O'Toole & Horvát, 2024). When students view AI as more than just a means to an end—or a shortcut—it appears to foster ideation and engagement, particularly in domains that require building, testing, and modifying solutions. This finding can be understood through the lens of Self-Determination Theory (Deci & Ryan, 1985), which posits that intrinsic motivation—driven

by curiosity, enjoyment, and interest—leads to deeper cognitive engagement and more flexible problem-solving. When students are intrinsically interested in AI tools, they are more likely to explore their functions, manipulate inputs, and test novel ideas—behaviours central to mechanical creativity.

Additionally, this pattern aligns with constructivist learning theory, which emphasizes the role of active exploration in constructing knowledge. Tools like AI can serve as facilitators that support students' attempts to test hypotheses and model solutions. Students who engage with AI out of genuine interest are more likely to treat the learning process as experimental and creative, rather than transactional or outcome-driven. Thus, psychological theories of motivation and learning offer strong support for the observed link between technological interest and domain-specific creative behaviour.

It was seen, however other motivational domains like that of Expectancy, Attainment, and cost, didn't show consistent relation with creativity. This is definitely an area that invites further research, as of this study, as it appears; there isn't significant evidence to say that they influence the perceived creative abilities of the students. It is possible that students are still figuring out how AI fits into their learning identities, particularly in newer educational landscapes where these tools are emerging faster than pedagogical norms can adapt.

Dependence on AI and Creativity

The results related to dependence on AI paint a more cautious picture. Specifically, feelings of vulnerability; a sense of discomfort or anxiety when AI tools are unavailable — were negatively associated with performance and artistic creativity. These domains often require spontaneity, emotional expression, and confidence in one's unique perspective. The data suggest that when students rely too heavily on AI for direction or output, it may erode their willingness to take creative risks or trust their personal voice (Wang & Dong, 2019; Guilford, 1967).

This observation aligns with growing concerns about the potential for generative AI to undermine autonomy and self-efficacy in creative tasks (Haase & Hanel, 2023; Guernsey, 2023). When AI is used passively — as a substitute for thinking rather than a catalyst for it — it may reduce opportunities for students to struggle productively, explore divergent paths, and gain confidence in their own ideas.

Other dimensions of AI dependence; including concerns about staying relevant, seeking external validation, or fears of obsolescence; did not show significant associations with creative behaviour. These results suggest that not all forms of AI dependence are equally impactful. While this may be attributed to presence of confounding variables in the study, there can be further studies exploring this elaboratively, these findings don't align with findings of previous literature where dependence on ai have been shown to influence cognitive capabilities (Gerlich, 2025).

Educational Implications

These findings are consistent with earlier research by Amabile (1996) and Deci and Ryan (1985), who emphasized the role of intrinsic motivation in fostering creative expression. The observed correlation between interest in AI and higher levels of self-everyday and mechanical creativity aligns with the work of Chen et al. (2020), who reported that digital tools can enhance creative output in technically oriented tasks. At the same time, cautionary

perspectives from Selwyn (2019) and Guernsey (2023) highlight that excessive reliance on AI may undermine students' autonomy and expressive confidence—an idea supported by the negative association found in this study between vulnerability to AI and performance or artistic creativity.

However, other researchers (Lubart & Thornhill-Miller, 2023; Morales-Garcia et al., 2024) suggest that under certain conditions, generative AI tools may in fact enhance creative ideation, even in expressive domains. These contrasting perspectives underscore the importance of context and individual learner characteristics in determining AI's impact. While the current findings call for caution regarding psychological dependence, future research should also explore how AI might function as a collaborative enhancer of creativity rather than a replacement for self-driven cognitive effort.

Furthermore, these findings carry important implications for educational practice. First, they emphasize the value of cultivating intrinsic interest in AI tools, rather than simply mandating their use. When students are encouraged to explore and play with AI, their creative capacities — especially in problem-solving and applied contexts — may be enhanced. Integrating ai tools into educational curriculum, such that the students will be tested on their knowledge and not their ability to write paragraphs of information, which may be irrelevant. This supports the call by Chen et al. (2020) for designing technology experiences that align with learners' curiosity and engagement, not just curricular outcomes. Second, the effects of AI on creativity likely depend on deeper psychological processes — including how students view themselves as learners and creators in technology-rich environments.

Finally, promotion of ai use should be aiding in fostering creative autonomy rather than being viewed as replacing it. Students must learn to use their own cognitive and creative abilities; educational structures must alternate between AI-dependent and AI-independent tasks which helps preserve and enhance their natural cognitive abilities.

An additional variable from the dataset that warrants consideration is the number of hours participants reported using AI tools. Although not a core focus of the current analysis, this detail adds meaningful context to the interpretation of the findings. The data showed clear variability in AI usage—some participants used it minimally, while others engaged with it far more frequently. It is possible that the frequency of AI use interacts with motivational patterns and psychological dependence in complex ways. For instance, students who use AI tools more regularly might derive more practical value or enjoyment from them, potentially reinforcing intrinsic motivation. At the same time, increased use could also lead to emotional overreliance, particularly for those who view AI as a cognitive safety net. This may help explain why some dimensions of motivation—like interest and utility—were positively linked to creativity, while vulnerability to AI use was negatively related. These patterns align with emerging findings (e.g., Zhang & Dafoe, 2023) that suggest AI's influence is not linear or uniform, but instead shaped by how often, why, and in what context it is used. Future studies should explore this further by examining usage hours as a moderator or even as a standalone predictor when analysing creativity outcomes.

Limitations and Future Directions

Several limitations of the study must be acknowledged. The relatively small and homogeneous sample may limit generalizability, and the correlational nature of the study

precludes causal inferences. Self-report measures, though reliable, are subject to biases that may affect the accuracy of both AI-related attitudes and creativity assessments. Future research should consider combining self-report data with behavioural tasks or peer evaluations to provide a more holistic view of creative behaviour.

One of the most prevalent limitations in this study was that, due to the fair novelty of the subject matter in the field of psychological research on creativity, there was a limited number of literature and subsequently, appropriate and standardised scales that measure the various dimensions of the usage of Artificial Intelligence; like the type/nature of usage, total time spent, etc.

Further it must be noted that due to the primary mode of data collection being self- report questionnaire; there always is a possibility that participants were fatigued or were biased in their answers. Although proper precautions were taken and inappropriate data was excluded from the analysis. Additionally, as AI tools keep evolving, research will be essential to understand how students' motivation and dependencies on AI develop and influence their cognitions. Another area, that is worth looking into, is individual differences; like personality traits (King et al., 1996), cognitive flexibility, etc as variables that influence AI-creativity relationship.

CONCLUSION

This study provides early but meaningful evidence that students' motivations and dependencies surrounding AI are intricately linked to how they view and express their creativity. While interest in AI can foster creativity in technical and everyday domains, emotional vulnerability linked to dependence may inhibit expression in more personal, performance-based areas. As educators and designers shape the future of AI in learning, it is crucial to support students' autonomy, encourage reflective engagement, and ensure that AI is used to complement and not replace the human process of creative thinking. This study also draws these findings to pay attention to the use of Artificial Intelligence in education, inevitably both are linked, it would be wiser to use it wisely and enhance students' relations with the same.

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