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Shaping the Future: The Influence of Student Perceptions of Artificial Intelligence Creativity Tools on Their Future Outlooks

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ABSTRACT

Students are increasingly using AI tools for creative academic projects. This research reveals that students tend to view these tools in one of two ways: as collaborative partners with whom they co-create and refine their work, or as subordinate agents to whom they delegate tasks. Notably, students who regard AI tools as collaborators are more likely to have a positive outlook on the future than those who see AI as mere servants. The results suggest this difference stems from a stronger internal locus of control among students who treat AI as a partner, which in turn positively influences their future orientation. Theoretical and practical implications are discussed.

Keywords AI, partner versus servant, perception, locus of control, future outlooks

INTRODUCTION

Artificial intelligence (AI) tools have rapidly expanded into the domain of creative work, transforming how students learn, think, and produce across various disciplines. Once limited to relatively simple tasks such as text processing or automated feedback, AI now supports writing, visual design, music composition, and even complex problem-solving. These developments have prompted widespread debate about whether AI will enhance or undermine students' learning at school (Chandrasekera et al., 2024; Habib et al., 2024; Lee, 2022). On the one hand, AI tools promise to augment ideation, offering novel perspectives and supporting complex projects (Holman et al., 2024; Vinchon et al., 2023). On the other hand, concerns persist that overreliance on AI may displace human agency and narrow opportunities for authentic learning (Luckin & Cukurova, 2019; Zhu & Lee, 2024). Despite these discussions, less attention has been devoted to how students' perceptions of AI might shape their future outlooks an exceedingly important factor in education (Przepiorka & Błachnio, 2016). This research fills this gap.

Anecdotal evidence suggests that students vary in how they frame their relationship with AI. Some see it as a subordinate agent (i.e., servant), a passive tool whose sole function is to perform tasks on demand, whereas others regard it as a partner, a co-creator with whom they can refine and expand ideas (Kim & Kramer, 2015). Thus, in this research, we first empirically test whether students indeed perceive AI along a partner-servant spectrum. More importantly, we demonstrate that these perceptual distinctions are consequential in the sense that they systematically shape how students view their future. To further support our argument, we provide evidence that this effect is mediated by locus of control, which is influenced by whether students perceive AI tools as partners or as servants.

Therefore, the current research provides several unique contributions to the literature. First, the present research extends the general literature on artificial intelligence by providing the first empirical evidence that people's perceptions of AI systematically shape their evaluations of their future. Notably, this effect is demonstrated with data collected from high school students, highlighting the critical role of AI tools in educational contexts. These findings suggest that the integration of AI in education carries crucial implications, as it appears to influence how students envision their future outlooks. Second, this study adds to the expanding literature on the antecedents of people's future orientations, which are frequently conceptualized in terms of financial success (Davidai & Gilovich, 2018; Yoon & Kim, 2016). The findings suggest that perceptions of AI tools are an important factor shaping how individuals anticipate and evaluate their future prospects. Third, our finding that students perceive AI tools as either collaborative partners or subordinate agents is consistent with evidence in the business literature, which demonstrates that people often conceptualize brands as either partners



working with them or as servants working on their behalf (Kim & Kramer, 2015; Teng et al., 2024). Moreover, this finding extends the anthropomorphism literature by illustrating that AI tools are not merely functional technologies but can be construed as anthropomorphized entities. Finally, an important implication of the present research is that, given the positive influence of perceiving AI tools as partners on students' future outlooks, it is essential to emphasize their role as collaborative partners in the learning process rather than merely as conveniences that simplify school tasks. Framing AI tools as "educational enhancers" holds the potential to create long-term benefits for students. The following section provides the conceptual background that guides the current research.

CONCEPTUAL BACKGROUND

Artificial Intelligence Tools in Education

Artificial intelligence (AI) has been playing a transformative role in education, reshaping teaching and students' learning. AI-powered tools provide personalized learning experiences, automate routine tasks, and enhance access to educational resources. Adaptive learning platforms, for instance, analyze student data to tailor content and pacing to individual needs (Holmes et al., 2021), and intelligent tutoring systems further support students by offering instant feedback, which has been shown to improve engagement and achievement (Van Lehn, 2011).

Research has shown that students mainly employ AI for generating ideas, summarizing, and clarifying concepts, and report that the benefits of using AI include time savings and writing assistance (Blahopoulou et al., 2025). Positive perceptions of AI often align with better self-reported learning (Habib et al., 2024). However, there are risks associated with using AI in education. They include misinformation, unfair advantages, and confusion about acceptable use (Lee, 2024).

This raises an important question: how do students actually perceive AI tools? Do they regard them primarily as instruments that enhance their learning experience, or do they view them mainly as resources designed to make their school work easier? A stream of business research provides important insights into this question, as discussed below.

Perceptions of Partners versus Servants

Research in business shows that people view brands as collaborative agents (i.e., partners) that work with them to co-produce benefits, or as subordinate agents (i.e., servants) that work for them as outsourced providers (Kim & Kramer, 2015). For instance, some consumers view Tide, a well-known detergent brand, as a partner that assists in cleaning their clothes, whereas others regard it as a servant that performs the laundry on their behalf.

It follows that similar patterns might be observed in people's perceptions of AI tools. For some individuals, AI serves as a means to enhance the quality of their work and to compensate for their own limitations. In this sense, AI is regarded as a collaborative partner to create a synergy effect. In contrast, others may primarily adopt AI tools as a mechanism for efficiency, using them to save time and minimize effort in completing tasks. In such cases, AI functions less as a partner and more as a delegate to which a substantial portion of the workload is delegated. In fact, recent research shows that both perceptions of AI tools are observed among students (Chandrasekera et al., 2024). It should be noted, however, that the concepts of partners versus servants are not intended to be understood in their literal sense. Rather, as in previous research, we employ these terms metaphorically; partners denote entities perceived as collaborative agents, whereas servants refer to entities construed as subordinate agents.

What is particularly important about the distinction between perceiving an AI tool as a partner versus as a servant is its potential influence on the extent to which the user (in this case, the student) perceives himself as owning responsibility, control, and autonomy over the outcome of the task (i.e., the locus of control).

Locus of Control and Future Outlooks

The concept of locus of control (Rotter, 1966) provides a framework for understanding students' perceptions of AI. An internal locus of control reflects the belief that outcomes are determined primarily by one's own choices and efforts, whereas an external locus reflects the belief that outcomes are predominantly decided by outside forces such as luck, fate, or others. Fundamentally, an internal locus of control reflects the perception of personal autonomy and self-determination, whereas an external locus of control reflects a perceived lack of autonomy, with outcomes determined by external forces or circumstances that are beyond one's control.

It follows that people who engage with AI tools as collaborative agents (i.e., partners) are likely to experience a sense of autonomy over both the process and the outcome of a task. By contrast, those who delegate their work to AI tools (i.e., servants) are more likely to perceive the process and the outcome of the task as being primarily conducted and determined by the AI tools. Therefore, we hypothesize that people who perceive AI tools as partners are likely to feel a stronger internal locus of control, and that people who perceive AI tools as servants are likely to experience a weaker internal locus of control or a stronger external locus of control.

Extensive research underscores the significance of an internal, as opposed to an external, locus of control. A recent meta-analysis of research on locus of control documented that an internal locus of control exerts a positive influence on a wide variety of outcomes throughout people's lives (Ng et al., 2006). This finding supports the notion that perceiving oneself as having control creates greater positivity in people's perspectives and lives. An internal locus of control fosters more positive future outlooks since people who perceive themselves as agents of their own outcomes are more likely to expect success and growth in the future. When people believe that their actions directly influence outcomes, they are likely to approach future situations with confidence or proactivity, rather than resignation or passivity (Lefcourt, 1991). This sense of agency enhances motivation but also strengthens resilience, as people attribute negative outcomes to factors that can be tackled and overcome. Consequently, an internal locus of control fosters optimism about the future by reinforcing the belief that one's efforts will result in desirable outcomes.



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In contrast, treating AI as a servant may subtly weaken this sense of agency. People who grant control to external entities (e.g., AI tools) may develop a less optimistic outlook, believing that their futures will be shaped primarily by external factors rather than their own efforts. In other words, by delegating their work to AI tools, they effectively relinquish their autonomy and control. This undermines motivation and resilience, which are critical to managing uncertainties and hardships that they may face in the future.

Hypotheses

Based on the aforementioned discussion, we offer the following two hypotheses.

H1: Perception of AI tools as partners, as opposed to servants, will lead to more positive outlooks on the future.

H2: The relationship between perceptions of AI tools and future outlooks will be mediated by locus of control, such that perceiving AI tools as partners will foster an internal locus of control, whereas perceiving them as servants will foster an external locus of control.

Overview of Studies

We present and discuss two studies. The first one is a survey-based study designed to test whether students perceive AI tools as partners versus servants. The second one is the main study where we experimentally manipulate partner versus servant perceptions of AI tools to examine whether the difference in perceptions influences future outlook. Furthermore, we also test if locus of control indeed mediates the effect of perceptions of AI tools on future outlooks as hypothesized. Because AI tools serve numerous purposes, this research centers on their use by students in activities that require creative input (i.e., creative writing), as this is the most prevalent application (Blahopoulou et al., 2025). However, the essential insights from this study should extend to general applications of AI tools.

FIRST STUDY

Participants and Design

The goal of this survey-based study was to see if the majority of students use AI tools in their school work, and if they perceive AI tools on a partner-servant spectrum. Sixty-one high school students participated in the study (average age = 16.5, 67.2% female), and we recruited these students as per the federal guidelines. We first measured the frequency of the use of AI tools by asking, "How often do you use AI tools to help with school assignments involving creative input?" (1 = not very often, 7 = very often). We assessed perceptions of AI tools along a partner-servant continuum by measuring participants' agreement or disagreement with four statements (1 = strongly disagree, 7 = strongly agree). Two statements captured perceptions of AI tools as partners ("I am able to collaborate with AI to enhance efficiency and productivity," and "AI works with me," $r = .65, p < .01$), whereas the remaining two reflected perceptions of AI tools as servants ("I am able to delegate certain tasks to AI to enhance efficiency and productivity," and "AI works for me." $r = .70, p < .01$). These four items were presented to participants in a random order. We finished by measuring demographic variables.

Results

Participants appeared to frequently use AI tools in their school assignments ($M = 4.89, SD = 1.60$). Importantly, AI usage frequency, gender, and age were not significantly correlated with any of the four items used to measure perceptions of AI tools (p values $> .12$).

To test whether participants indeed viewed AI tools as partners versus servants, we conducted an exploratory factor analysis on the four items that assessed perceptions of AI tools. As expected, using principal axis factoring with Varimax rotation, two factors emerged, accounting for 85.37% of the total variance. The aforementioned two items measuring servant perceptions loaded on factor 1, with loadings of .93 and .92, respectively. The other two items measuring partner perceptions loaded on factor two, with loadings of .91 and .90, respectively. The correlation of the two factors was not significant ($r = .12, p = .16$), further suggesting that the two factors were distinct.

The result of this study supports the notion that students tend to view AI tools as partners versus servants. This allowed us to proceed with the next study, where we experimentally manipulate partner versus servant perceptions to examine the causal linkage between perceptions of AI tools and future outlooks as stated in our main hypothesis.

SECOND STUDY: MAIN EXPERIMENT

Participants and Design

We collected data from ninety-eight high school students who voluntarily participated in a study described as a study on consumer psychology. We used a between-subject design where we manipulated a factor (perceptions of AI tools) with two levels (partner versus servant perceptions).

Manipulation, Measurement, and Variables

We manipulated perceptions of AI tools via a well-established priming task (Yoon and Kim, 2016). Participants in the partner perceptions condition read an instruction: "Please write three reasons why AI creativity tools are collaborative agents to work with you to enhance your tasks." Participants in the servant perceptions condition read an instruction: "Please write three reasons why AI creativity tools are subordinate agents to whom you can delegate your tasks."

Next, we measured participants' future outlooks, our main dependent variable, on a two-item scale adapted from Scheier and Carver (1985); "I am optimistic about my future," and "I am confident that my future holds positive outcomes," 1 = strongly disagree, 7 = strongly agree, $r = .78$). We averaged these items to form an index of future outlooks ($M = 4.20, SD = 1.43$). We then measured participants' locus of control, our mediator variable, on a two-item scale adapted from Nowicki and Strickland (1973) ("Many times I feel that I have little influence over the things that happen to me," "Sometimes I feel that I don't have control over the direction my life is



taking,” 1 = strongly disagree, 7 = strongly agree, $r = .75$). We reverse-coded these items so that higher scores would indicate a greater internal (vs. external) locus of control, and averaged them to form an index of locus of control ($M = 4.22$, $SD = 1.29$).

Pre-Analysis Checks

First, we assessed whether our manipulation of AI tool perceptions was successful by asking, “How do you perceive AI tools?” (1 = as servants who work for me, 7 = as partners who work with me). Participants in the partner condition showed a higher tendency to view AI tools as partners ($M = 4.85$, $SD = 1.15$) than those in the servant condition ($M = 3.49$, $SD = 1.09$), and the difference was significant ($p < .01$). This confirmed that our manipulation was successful in temporarily inducing partner versus servant perceptions of AI tools. Second, we found that no demographic variable was correlated with the independent variable or the mediator (p values $> .14$). This suggests that demographic variables did not confound our main variables.

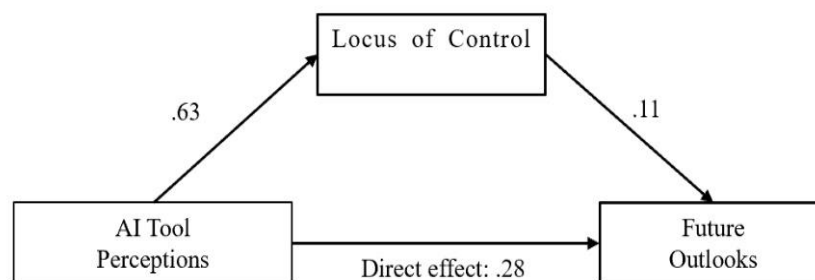
Dependent Variable

In our central premise, we expected that partner versus servant perceptions of AI tools would systematically affect participants’ future outlooks. To test this, we regressed future outlooks on manipulated perceptions of AI tools (1 = partners, 0 = servants). AI tool perceptions predicted future outlooks ($\beta = .71$, $t = 2.54$, $p < .02$). As expected, partner perceptions of AI tools indeed led to more positive future outlooks than servant perceptions of AI tools ($M_{\text{partners}} = 4.56$, $M_{\text{servants}} = 3.85$). This supported this central premise in this research.

Mediation Analysis

We expected that the locus of control would mediate the effect of AI tool perceptions on participants’ future outlooks. To test this, we employed Model 4 in Hayes (2017) with 5,000 resamples. This model indicated that AI tool perceptions predicted the locus of control ($\beta = .63$, $t = 2.49$, $p = .02$), and when both AI tool perceptions and the locus of control were used as predictors of future outlooks, the effect of the locus of control was significant ($\beta = .11$, $t = 2.58$, $p < .02$) and the effect of AI tool perceptions became weaker (from $t = 2.54$ to $t = 1.90$), compared to when the locus of control was not used in the regression equation. Most importantly, bootstrapping analysis to assess this model revealed that the locus of control mediated the effect of AI tool perceptions on future outlooks (95% CI = .0055 to .4312). This shows that partner (vs. servant) perceptions of AI tools induced the internal (vs. external) locus of control, which, in turn, led to more positive (vs. less positive) future outlooks. Our mediation analysis results are summarized in the Figure below.

Figure 1: Perceptions of AI Tools, Locus of Control, and Future Outlooks (all coefficients are significant)



GENERAL DISCUSSION

Summary and Implications

In two studies, we showed that students tend to perceive AI tools as partners or servants, and that these perceptions systematically affect their future outlooks. In particular, we demonstrated that students who perceive AI tools as partners are more likely to have positive future outlooks, whereas those who perceive AI tools as servants are less likely to have positive future outlooks. We further provided evidence that the main effect of AI tool perceptions on future outlooks is mediated by the locus of control. That is, partner perceptions induce an internal locus of control, while servant perceptions induce an external locus of control. Our findings align with prior research indicating that an internal locus of control fosters future-oriented optimism, largely because it enhances perceptions of personal control and autonomy.

This research offers several important contributions to the literature. First, the present research is one of few studies that have examined AI in the context of high school education. Because the pre-adult stage plays a pivotal role in shaping the trajectory of individuals’ adult lives (Hensch & Bilimoria, 2012), it is exceedingly important to understand factors that might affect young students. This research highlights the previously undocumented role of AI tools in shaping these students’ future outlooks. Research attention should focus not only on how students employ AI tools in their academic work, but also on how they perceive and conceptualize these tools, a dimension that warrants equally serious consideration.

Current research highlights that students’ perceptions of AI tools can exert long-term influences on their future outlooks. Our finding that perceiving AI tools merely as subordinate agents is associated with less positive future outlooks underscores the importance of guiding students to regard these tools not simply as time-saving instruments, but as collaborative partners capable of co-creating meaningful outcomes.



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The findings of this study suggest the need for educational policies that foster students' perception of AI tools as collaborative partners rather than merely functional aids. Given that we were able to manipulate perceptions of AI tools in the main study, it indicates that influencing such perceptions may be a feasible strategy for fostering more positive future outlooks.

In line with existing research, the present study underscores the importance of maintaining an internal locus of control. Despite advances in AI, individuals who perceive themselves as retaining control and autonomy in their interactions with these tools are likely to experience more favorable outcomes. Since the locus of control is not fixed and can be situationally affected (Lefcourt, 1991), retaining an internal locus of control appears to be even more important in the age of AI.

In this research, we examined students' perceptions of AI tools in the context of tasks that involve creative input, as such tasks represent one of the most frequent areas at school. By focusing on this domain, we were able to explore how students' perceptions shape their future outlooks. We expect that the core findings provide insights that are likely to extend to broader patterns of AI usage in other settings and beyond.

Limitations and Future Research Direction

The limitations of the current research provide some interesting future research avenues. First, although this research is focused on the consequences of AI tool perceptions, it would be highly rewarding to explore the antecedents of certain AI tool perceptions. Are certain people more likely to perceive AI tools as partners versus servants? One interesting factor affecting AI tool perceptions might be people's tendency to seek power. Some people are inherently more interested in seeking power in social situations (French, 1956). It follows that these people are more likely to view other entities as subordinate to them. In other words, these people might tend to view AI tools as servants rather than partners. An additional question worth examining is, "Under what conditions do people perceive AI tools as collaborative partners rather than subservient instruments? It is plausible that under time pressure, when expediency becomes crucial, people may be more inclined to have a mindset to delegate tasks to AI. In such contexts, AI tools are likely to be construed less as partners in problem-solving and more as servants that handle assigned work.

Recall that we employed a writing priming task to manipulate perceptions of AI tools in the main study. Although such a manipulation served our purpose in this research, it lacked realism. Future research might want to look into more subtle ways to influence perceptions of AI tools. Given that even very subtle advertising cues have been found to influence people's behavior (Brumbaugh, 2002), incorporating simple built-in messages may be an effective means of shaping how AI tools are perceived.

We used high school students as participants in order to better tackle the purpose of the current research (i.e., perceptions of AI tools in education). However, it would be interesting to investigate adults' perceptions of AI tools in workplaces because it provides insight into how AI is integrated into established professional practices. Unlike students or younger populations who encounter AI primarily in educational contexts, adults engage with AI tools in environments where the use of such tools has direct consequences for organizational and individual performance. Examining their perceptions of AI tools as partners versus servants might reveal more insights into the degree of trust and acceptance, as well as the concerns and resistances. By investigating these perceptions, researchers can better anticipate the factors that facilitate or obstruct the use of AI tools.

Another fruitful research avenue might be to identify moderators of the main effect presented in the current research. One plausible candidate is the nature of the task itself. For highly routine tasks that demand minimal creativity, people may be more inclined to perceive AI tools as subordinate or instrumental servants. Conversely, when engaging in complex or novel tasks that require creativity and a high degree of problem-solving, people may be more likely to view AI tools as collaborative partners. Another potential moderator is people's prior experience with AI tools. Users with greater familiarity and expertise are often able to leverage AI tools more effectively, which may lead them to perceive AI not merely as a subordinate instrument but as a collaborative partner that enhances their performance. In contrast, those with limited experience may engage with AI tools only at a superficial level, perceiving it primarily as a convenient, time-saving tool rather than as an instrument with the capacity to extend their own capabilities.

AI tools are here to stay. This research highlights that people's perceptions of AI tools may have a significant and enduring effect that shapes their future outlooks. As AI tools become increasingly integrated into everyday activities, understanding these perceptions will be ever more critical. It is our hope that the current research encourages scholars to further investigate and address the pressing questions that emerge in this research domain.

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