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Student perceptions of AI-generated lecture avatars in online higher education

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Abstract

The evolution of generative AI has transformed synthetic media from a controversial "deepfake" niche into a powerful instructional tool. Modern platforms now allow for the creation of realistic AI avatars capable of delivering high-quality educational content. However, as higher education institutions integrate these technologies to enhance scalability and accessibility, the impact on student-instructor dynamics remains unclear. This study addresses the gap between technological capability and student acceptance. Results indicate that students generally support AI-generated avatars as supplemental instructional tools while expressing concern regarding authenticity, transparency, and replacement of human interaction. Participants strongly favored disclosure of AI-generated content and demonstrated greater acceptance of blended human-and-AI instructional models than fully synthetic instructional delivery. By examining perceptions of trust, authenticity, and ethical transparency, this research provides a framework for educators seeking to balance the efficiency of AI with the necessity of human connection.

Keywords: Generative AI, AI avatars, online learning, higher education, synthetic media

Introduction

Artificial intelligence (AI) technologies capable of generating realistic human likenesses, voices, and video presentations have advanced rapidly in recent years, transforming how digital content is created, distributed, and consumed. Early breakthroughs in synthetic media and “deepfake” technologies demonstrated the ability of machine learning systems to convincingly replicate facial expressions, speech patterns, and human behavior through the use of generative adversarial networks (GANs) (Goodfellow et al., 2014). While early public discourse surrounding these developments focused heavily on concerns related to misinformation, identity manipulation, and ethical misuse, the technology has since evolved into a robust ecosystem of generative AI tools with expanding applications in entertainment, marketing, customer service, training, and education (Masood et al., 2023).

Recent advancements in generative AI platforms such as OpenAI Sora, Synthesia, Runway, and HeyGen have accelerated the adoption of AI-generated avatars and synthetic video systems. These platforms are capable of producing increasingly lifelike digital presenters that can narrate lectures, simulate human interaction, and generate multimedia instructional content with minimal traditional production requirements. However, this rapid technological growth has also generated

substantial debate regarding authenticity, labor displacement, copyright concerns, misinformation, and ethical transparency. As synthetic media becomes increasingly sophisticated and accessible, the distinction between human-created and AI-generated content continues to blur, making issues of credibility and trust central concerns in digital communication environments.

Within higher education, the continued expansion of online and hybrid learning environments has created a natural opportunity for AI-assisted instructional technologies. Educational institutions increasingly utilize AI for adaptive learning systems, automated transcription, tutoring support, multimedia production, and instructional design assistance. More recently, educators have begun experimenting with AI-generated lecture avatars capable of presenting course material using synthetic or semi-synthetic representations of instructors themselves. These systems offer potential advantages in scalability, accessibility, personalization, consistency, and the ability to rapidly update instructional materials.

Despite these potential efficiencies, the integration of AI-generated avatars into higher education introduces significant pedagogical and ethical questions. Research in online learning has consistently emphasized the importance of instructor presence, authenticity, engagement, and human connection in fostering effective educational experiences. The use of synthetic instructional presenters raises important questions regarding student trust, emotional connection, instructional credibility, and the appropriate balance between technological innovation and meaningful human interaction. As generative AI systems become increasingly realistic, students may also experience uncertainty regarding the authenticity of instructional content and the role of the instructor within the learning process.

Although scholarly research related to deepfakes, synthetic media, and generative AI has expanded rapidly in recent years, there remains a substantial lack of empirical research conducted within authentic higher education environments. In their scoping review of synthetic media in academia, Roe and Perkins (2024) observed that while the technical capabilities of deepfake and generative AI systems are well documented, the field lacks a sufficiently developed research agenda focused on student perceptions and educational implications. Understanding how students perceive AI-generated instructional avatars is therefore essential for educators, instructional designers, and institutions seeking to balance technological innovation with pedagogical responsibility and ethical transparency.

This study addresses this emerging research gap by exploring student perceptions of AI-generated lecture avatars in online higher education environments. Specifically, the study examines how comfort, trust, authenticity, and perceived instructional effectiveness are influenced by the use of synthetic media, while also identifying the ethical boundaries students expect regarding disclosure, transparency, and acceptable uses of AI-generated instructional content.

Literature Review

One of the clearest higher-education studies is Vallis et al.'s (2024) qualitative work in a postgraduate business ethics course. In that study, students reported that AI-generated avatars were appropriate for lecture delivery and were at times even preferred, especially when used to present

structured content. At the same time, students also noted that the avatar's delivery could feel overly scripted and less authentic than a live instructor. Some participants described the AI-generated presentation as polished but lacking the spontaneity, emotion, and character associated with human teaching. The study concluded that students were largely untroubled by the automation of content presentation, but that their judgments depended heavily on the instructional purpose and design context.

A similar pattern appears in Tan et al.'s (2024) study of AI-generated content avatars used in a learning management system with postgraduate students. Most participants held positive perceptions of the avatar, especially because it increased their sense of instructor social presence and motivation to learn. Students particularly valued avatar-delivered assignment guides and feedback, and many praised the avatar's clear and professional speech. However, some participants still noticed a lack of naturalness. This suggests that students may welcome AI avatars when they enhance communication and support in online environments, especially when the avatar supplements rather than replaces core human teaching functions.

Experimental studies comparing AI-generated instructional videos with human-recorded ones also show an important nuance: learning outcomes are often similar, even when perceptions differ. Netland et al. (2025) found that human-made videos were rated slightly better in terms of learning experience, indicating an ongoing preference for human instructors, yet students achieved equally high learning outcomes with AI-generated teaching videos. This distinction matters because it suggests that student perception is shaped not only by whether learning occurs, but by how socially and emotionally satisfying the learning experience feels.

Arkün-Kocadere and Çağlar-Özhan (2024) reached a related conclusion in a university study of AI-generated versus human instructors in video lectures. Their findings showed that engagement favored the human instructor, while academic performance did not significantly differ between groups. Qualitative results revealed that students often experienced the AI-generated instructor as distracting, uncomfortable, and disconnected, with concerns tied especially to synthetic voice, animation, and the lack of a personal connection. Even so, some students said these drawbacks became less important when the content itself was interesting or when they were strongly focused on learning.

More recent work on instructor-cloned avatars in online learning reinforces the role of social presence and authenticity in student perceptions. In Moon's (2025) qualitative case study, college students reported higher engagement with the human instructor, attributing this to stronger personal connection and more authentic interaction. The AI-cloned avatar was often perceived as detached, and some students experienced discomfort because of its near-human appearance. Even so, students showed moderate acceptance of the technology because of its potential for scalability and accessibility. The study ultimately argued that AI avatars still fall short in reproducing subtle human behaviors that support meaningful instructional relationships.

The broader literature increasingly explains these mixed perceptions through three recurring concepts: social presence, anthropomorphism, and the uncanny valley. Social presence refers to the degree to which learners feel they are interacting with a real, responsive other; several recent studies indicate that students are more satisfied when instructor communication feels authentic and

relational (Moon, 2025). At the same time, more human-like designs can be helpful only up to a point. If the avatar appears almost human but not quite natural, students may experience eeriness or discomfort. This tension helps explain why some learners appreciate realistic avatars while others find them unsettling.

Recent studies also suggest that design quality strongly influences perception. In foreign-language learning research, Zhang et al. (2025) found that AI-generated voice and AI-generated avatar elements, especially when aligned together, could improve engagement and reduce extraneous cognitive load relative to some human-based conditions. Yet even this promising result does not overturn the broader trend that students often still prefer human instructors when judging relational quality or social presence. In other words, technical quality can improve perceptions, but it does not automatically replace the human dimensions of teaching.

Adoption studies further show that students' willingness to use AI teaching assistants or avatars is shaped by factors such as anthropomorphism, social language use, engagement quality, perceived usefulness, and ease of communication. In a 2026 higher-education study, Muneer et al. (2026) found that each of these factors positively influenced students' attitudes, and those attitudes in turn predicted intention to adopt AI-based teaching assistants. This suggests that acceptance is not fixed; it can be increased when the system is easy to use, socially legible, and clearly valuable.

Overall, the literature indicates that students do not view AI teacher avatars in purely negative terms. Rather, they appear to see them as most appropriate for structured lecture delivery, announcements, feedback, routine guidance, multilingual communication, and scalable online support. Students are much less convinced that AI avatars can fully substitute for the human instructor's role in relationship-building, emotional attunement, credibility formation, and nuanced interaction (Hai et al., 2025). Recent reviews therefore argue for a human-and-AI model, where avatars are used strategically for efficiency and access, while human instructors remain central to mentorship, dialogue, and trust. Ethical issues such as disclosure, privacy, impersonation, and academic integrity also remain central in the literature and are increasingly treated as necessary conditions for sustainable adoption.

Purpose of Study

The purpose of this study was to examine student perceptions regarding the use of AI-generated lecture avatars in online higher education environments. As generative artificial intelligence technologies continue to expand within educational settings, instructors and institutions are increasingly exploring the use of synthetic media and AI-generated presenters as tools for instructional delivery. While these technologies offer potential benefits related to scalability, accessibility, efficiency, and content personalization, limited empirical research has examined how students perceive the use of AI-generated instructional avatars within authentic academic environments.

This study specifically explored student perceptions related to comfort, trust, authenticity, instructional effectiveness, and ethical transparency associated with AI-generated lecture avatars. In addition, the study examined student attitudes regarding acceptable and unacceptable uses of

AI-generated instructional content, disclosure expectations, and concerns related to the replacement or reduction of human instructor interaction.

The study was guided by the broader question of how students perceive the role of synthetic media technologies within online higher education instruction. More specifically, the research sought to better understand whether students view AI-generated lecture avatars as useful instructional supplements, potential enhancements to online learning environments, or possible threats to authenticity, instructor presence, and meaningful human connection in education.

To address these objectives, survey data were collected from students with experience in online learning environments. Participants were asked to evaluate their perceptions regarding AI-generated lecture avatars, acceptable levels of AI-generated instructional content, ethical considerations related to disclosure and authenticity, and the perceived benefits and concerns associated with the use of synthetic instructional media in higher education. Along with the purpose of this study, the following research question is stated:

Research Question

What are the perceptions of students on the use of AI-generated lecture avatars in online higher education?

The findings of this study may assist educators, instructional designers, administrators, and researchers in better understanding student attitudes toward AI-generated instructional technologies and may contribute to ongoing discussions regarding the ethical and pedagogical integration of generative AI within online higher education environments.

Methodology

This study employed a mixed-methods research design to examine perceptions associated with the use of AI-generated avatars in online lectures. The study took place at a public university in the southeastern United States. The study incorporated both quantitative and qualitative approaches.

Participants and Sampling

Participants were undergraduate and graduate students enrolled in fully online asynchronous Information Technology courses at a public university in the southeastern United States. There were a total of 57 participants responding to the questions in the instrument. However, only 49 responses are considered complete (n=49) for the purpose of this study. The majority of them have taken more than 3 online courses in the past 2 years (n=41, 82%). Demographic information can be found in Table 1. All participants were at least 18 years of age. Most respondents were 45 to 54 years old. From the sample, 31% were identified as female (n=15), and 67% as male (n=33). Also, 35% were identified as a student at undergraduate level (n=17) and 65% as a graduate level student (n=32).

Table 1. Demographics

Characteristics	n=49	%
Age		
18-24	11	23%
25-34	6	12%
35-44	9	18%
45-54	16	33%
55-64	5	10%
65+	2	4%
Gender		
Female	15	31%
Male	33	67%
Other	1	2%
Academic Level		
Undergraduate	17	35%
Graduate	32	65%

Procedures

An online survey was administered to participants using a secure web platform. Participation was voluntary. Institutional review board approval was obtained prior to data collection. Prior to distribution, the survey instrument was reviewed by experts in the field to establish content validity. Data were collected through a survey distributed using Survey Monkey, and a reminder was sent after 2 weeks. Quantitative survey responses were analyzed using descriptive statistics to summarize participant perceptions across the major study constructs. Qualitative responses were analyzed using an inductive thematic analysis approach. The researchers independently reviewed participants' responses to the four open-ended questions, identified recurring ideas and preliminary themes, and then met to compare interpretations. Minor differences in thematic interpretation were resolved through discussion until consensus was reached regarding the final themes presented in the Results section. Representative participant quotations were selected to illustrate each theme while preserving participant anonymity. This collaborative review process enhanced the credibility and trustworthiness of the qualitative findings.

Instrumentation

The instrument consisted of 6 demographic questions, 4 open-ended questions, and 10 closed questions using 5-point Likert-scale and multiple-choice options. The qualitative portion of this study was used to identify participants who could provide detailed and meaningful perspectives related to the use of AI- generated avatars for online lectures. Because the purpose of this study was to examine baseline student perceptions of AI-generated lecture avatars, participants were not shown a standardized AI-generated lecture or avatar demonstration prior to completing the survey. Instead, participants responded based on their existing knowledge, prior exposure, and personal understanding of AI-generated instructional avatars. Questions regarding prior awareness and

experience with AI-generated lecture avatars were included to provide context for interpreting participant responses.

The instrument consisted of 5 questions related to perceptions of AI-generated avatar lectures (Table 2), 4 questions on the use of AI-generated avatars (Table 3), and 3 questions related to disclosure and ethical use of AI (Table 4).

Questions on Table 2 utilized a 5-point Likert scale which ranged from (1) “completely disagree” to (5) “completely agree” to measure participants' perceptions on the use of AI-generated avatar lectures. A summary of the weighted average for each question is found in the table.

Table 2. Perceptions of AI Avatar Lectures (5-point Likert scale)

Question	Weighted Average
I would feel comfortable watching AI-generated lectures using an avatar of my professor.	2.98
I would trust AI-generated lecture content if my professor created or approved it.	3.20
I believe I could learn effectively from this format.	3.06
This format would feel similar to viewing the actual professor.	2.59
This format would feel unsettling or creepy.	3.18

Questions on Table 3 were multiple-choice, with “yes”, “no”, and “not sure” as options. Response percentages for each question are presented in the table as well.

Table 3. Use of an avatar

Question	Response	%
Before today, had you heard of AI-generated instructor avatar lectures?	Yes	53.06
	No	36.73
	Not sure	10.20
Have you knowingly watched an AI-generated lecture video before?	Yes	20.41
	No	61.22
	Not sure	18.37
I am comfortable with my instructor creating content using AI.	Yes	57.14
	No	30.61
	Not sure	12.24
Have you created a realistic or other style of avatar of yourself before?	Yes	42.86
	No	57.14

Questions on Table 4 utilized a 5-point Likert scale which ranged from (1) “completely disagree” to (5) “completely agree” to measure participants' perceptions related to disclosure and ethical use of AI. A summary of the weighted average for each question is found in the table.

Table 4. Perceptions related to disclosure and ethical use of AI (5-point Likert scale)

Question	Weighted Average
Students should be clearly informed when lectures are AI-generated.	4.77
Not disclosing AI use would feel deceptive.	4.48
It matters whether the avatar uses the professor’s real face and voice.	3.46

Four additional questions were asked in the survey. These questions addressed acceptable and unacceptable uses of AI in online courses, as well as comfort using AI-generated content for learning purposes. These questions are:

- How comfortable are you with learning from video lectures?
- Which uses would you consider acceptable?
- Which uses would you consider unacceptable?
- What percentage of AI-generated content would you be comfortable with?

Finally, four open-ended questions were presented to participants to collect their impressions about benefits and concerns of the use of AI. These questions are:

- What concerns do you have?
- What benefits do you see?
- Do you think realistic avatars will become more popular in the future?
- If permitted in your class, would you like to use AI in your own projects? Why or why not?

Results

A total of 57 survey responses were collected, with 49 complete responses included in the final analysis. Participants represented both undergraduate and graduate students enrolled in online courses at a public university in the southeastern United States. Most respondents reported substantial prior experience with online learning, with 82% indicating they had completed more than three fully online courses during the previous two years.

Descriptive statistics were used to analyze quantitative survey responses related to comfort, trust, instructional effectiveness, disclosure expectations, and acceptable uses of AI-generated lecture avatars. Qualitative responses were analyzed using thematic narrative analysis to identify recurring themes related to participant concerns, perceived benefits, ethical considerations, and future expectations regarding AI-generated instructional media.

Qualitative coding was independently reviewed by multiple researchers to improve consistency and trustworthiness of interpretation. Emerging themes demonstrated substantial overlap across coders, and any differences in interpretation were resolved collaboratively through discussion and consensus.

Quantitative Findings

Participants reported mixed but generally moderate perceptions regarding AI-generated lecture avatars. Respondents indicated near-neutral comfort levels with viewing AI-generated lectures using an avatar of their professor (M = 2.98). Trust increased slightly when participants believed the content had been created or approved by the professor (M = 3.20). Participants also moderately agreed that they could learn effectively from AI-generated lecture formats (M = 3.06). However, respondents were less likely to perceive AI-generated avatars as equivalent to interacting with the actual professor (M = 2.59). Additionally, participants moderately agreed that AI-generated lecture avatars could feel unsettling or "creepy" (M = 3.18).

Familiarity with AI-Generated Avatars

Slightly more than half of participants (53.06%) reported that they had previously heard of AI-generated instructor avatar lectures, although only 20.41% indicated they had knowingly viewed one prior to the survey. Most participants (57.14%) stated they were comfortable with instructors using AI to create educational content, while 42.86% reported having previously created an avatar of themselves.

Acceptable Uses of AI-Generated Lectures

Participants generally viewed AI-generated avatars as more acceptable for announcements and short lectures than for fully AI-generated courses. Several respondents emphasized that AI should function as a supplemental instructional tool rather than a replacement for faculty instruction.

Acceptable Levels of AI-Generated Content

Participants reported moderate tolerance for AI-generated instructional content overall. When asked what percentage of AI-generated lecture content they would feel comfortable with, responses ranged from 0% to 100%, with a mean response of 36.60% and a median of 33%. These findings suggest that while many students are open to partial AI integration, substantial hesitation remains regarding fully synthetic instructional delivery.

Ethical Transparency and Disclosure

Disclosure and transparency emerged as some of the strongest findings in the study. Participants strongly agreed that students should be clearly informed when lectures are AI-generated (M = 4.77) and that failing to disclose AI use would feel deceptive (M = 4.48). Participants also reported moderate agreement that it mattered whether an avatar used the professor's real face and voice (M = 3.46).

Qualitative Findings

Qualitative responses from the open-ended survey questions (Q20-Q23) were analyzed using an inductive thematic analysis approach. The researchers independently reviewed participant responses to identify recurring themes related to concerns, benefits, future expectations, and acceptable uses of AI-generated lecture avatars. The researchers then compared their

interpretations and discussed minor differences until consensus was reached regarding the final thematic categories presented below.

Table 5. Summary of Themes Related to Student Concerns About AI-Generated Lecture Avatars (Q20)

Theme	Description	Representative Student Comment
Loss of Human Connection and Authenticity	Students expressed concern that AI-generated avatars could reduce meaningful interaction, emotional connection, and instructor authenticity.	"I want to know that I'm getting both knowledge and experience directly from the professor."
Replacement of Faculty and Over-Automation	Participants worried institutions could overuse AI for cost savings, potentially reducing the role and value of human instructors.	"If I am paying for these classes, I am paying for the experience of having a professor."
AI Reliability and Educational Quality	Students questioned the accuracy, reliability, and instructional quality of AI-generated lectures, including concerns regarding hallucinations and robotic delivery.	"The AI might make false statements about course material or deadlines."
Ethical Concerns and Need for Human Oversight	Respondents emphasized the importance of ethical boundaries, transparency, and active faculty oversight of AI-generated content.	"If the professor is checking the AI content before uploading, I believe it is fine."

Table 6. Summary of Themes Related to Perceived Benefits of AI-Generated Lecture Avatars (Q21)

Theme	Description	Representative Student Comment
Efficiency and Faster Content Updates	Students recognized AI's potential to accelerate lecture creation and simplify updates to course materials.	"AI could edit the section of the video that is now outdated."
Accessibility, Flexibility, and Personalization	Respondents believed AI-generated lectures could support diverse learning preferences and flexible scheduling.	"Students choose things like accents, speed of speech, and presentation style."
Consistency and Supplemental Learning Support	Participants viewed AI positively when used to supplement instruction and improve consistency in delivery.	"It can be used as a tool to enhance students' learning."
Skepticism Regarding Educational Value	Some participants questioned whether AI-generated avatars provided meaningful educational benefits.	"There are none."

Table 7. Summary of Themes Related to Future Adoption of AI Avatars (Q22)

Theme	Description	Representative Student Comment
Expectation of Increased Adoption	Most participants believed realistic AI avatars would become increasingly common as technology advances.	"As AI technology advances, realistic avatars will inherently become more popular."
Technological Inevitability	Students often viewed broader adoption of AI avatars as unavoidable.	"Yes. Especially once they are consistently 100% indistinguishable from a real person."
Concern Regarding Social and Educational Impact	Many respondents expressed concern that increased realism could reduce authenticity and trust.	"Yes but I don't think that's a good thing."
Skepticism and Resistance	A minority of participants expressed discomfort with or opposition to AI avatar adoption.	"I hope not."

Table 8. Summary of Themes Related to Student AI Use in Coursework (Q23)

Theme	Description	Representative Student Comment
AI as a Supplemental Tool	Students generally supported AI for brainstorming, editing, organization, and productivity enhancement.	"AI should be considered a tool just like a calculator."
Importance of Human Learning and Originality	Participants emphasized maintaining critical thinking, authentic learning, and student-generated work.	"The student should be creating the content."
Need for Ethical Boundaries and Clear Policies	Respondents frequently referenced the need for moderation, guidelines, and responsible use policies.	"We need clear guidelines."
Workforce Preparation and Technological Relevance	Many students believed AI literacy is becoming increasingly important for career readiness.	"In industry we are leveraging it quite a bit."
Strong Opposition to AI Use	Some participants viewed AI as fundamentally harmful to education and learning.	"Absolutely not. It defeats the purpose of learning."

Overall, the qualitative findings revealed nuanced and conditional student perceptions regarding AI-generated lecture avatars and AI-assisted instruction. Participants frequently described AI as a potentially valuable supplemental educational tool capable of improving efficiency, accessibility, personalization, and content maintenance. However, respondents also consistently emphasized the

importance of preserving authentic human interaction, instructor presence, and ethical transparency within online learning environments. Across all four open-ended questions, students generally supported moderated and supervised AI integration while expressing resistance toward fully automated instructional models that diminish meaningful faculty involvement.

Discussion

The findings of this study suggest that students perceive AI-generated lecture avatars through a nuanced and conditional framework rather than simply acceptance or rejection. Participants generally recognized the practical advantages associated with generative AI technologies while simultaneously expressing concern regarding authenticity, instructor presence, and the preservation of meaningful human interaction within online learning environments.

Overall, respondents demonstrated moderate openness toward AI-assisted instruction, particularly when AI-generated avatars were used in supplemental or administrative roles such as announcements, brief instructional modules, or routine course communication. However, student acceptance declined substantially when evaluating scenarios involving fully AI-generated instruction or the replacement of direct faculty involvement. This distinction was further reflected in the finding that participants reported a mean acceptable AI-generated lecture content level of 36.6%, suggesting that students may support limited or blended AI integration while remaining hesitant toward fully synthetic instructional environments.

The results also reinforce existing research emphasizing the importance of instructor presence and authenticity within online education. Although participants acknowledged that AI-generated avatars could improve efficiency, scalability, accessibility, and content maintenance, many questioned whether synthetic instructional presenters could reproduce the relational depth associated with effective teaching. Concerns regarding emotional connection, spontaneity, mentorship, and credibility appeared consistently throughout the qualitative findings. These concerns were further reflected quantitatively in the relatively low agreement that AI-generated lecture avatars would feel similar to interacting with the actual professor ($M = 2.59$).

Disclosure and ethical transparency emerged as some of the strongest themes in the study. Participants overwhelmingly agreed that students should be clearly informed when lectures are AI-generated ($M = 4.77$) and that failure to disclose AI-generated instructional content would feel deceptive ($M = 4.48$). These findings suggest that student concern may not stem solely from the existence of AI-generated media itself, but from uncertainty regarding authenticity and trust within the educational relationship. Transparency appears to function as a critical condition for student acceptance of synthetic instructional media.

The findings also support growing literature surrounding the “uncanny valley” and social presence in synthetic instructional environments. Participants frequently described AI-generated avatars as potentially unsettling, artificial, or emotionally disconnected. While advances in generative AI continue improving visual realism and speech synthesis, the findings suggest that technical realism alone may not fully address student concerns if relational authenticity remains absent. In this sense,

the challenge of AI-generated instruction may extend beyond visual realism into what could be described as a pedagogical uncanny valley, where instructional delivery appears technically human-like while lacking the social and interpersonal qualities students associate with authentic teaching.

Despite these concerns, respondents also identified substantial benefits associated with AI-assisted instruction. Participants recognized the potential for faster content updates, improved flexibility, personalized learning experiences, multilingual support, accessibility enhancements, and reduced production burdens for instructors. Many respondents viewed AI positively when framed as a supplemental educational tool capable of supporting, rather than replacing, human instruction.

Taken together, the findings suggest that students may be most receptive to a blended or "human-plus-AI" instructional model in higher education. Rather than rejecting generative AI outright, participants generally appeared to support moderated and transparent AI integration that preserves active instructor oversight and meaningful faculty interaction. These findings align with emerging scholarship suggesting that students may accept AI-generated instructional media when it enhances educational delivery while maintaining the central role of the human educator.

Limitations and Future Research

Several limitations should be considered when interpreting the findings of this study. First, the sample primarily consisted of students enrolled in online information technology-related programs at a single public university in the southeastern United States. Because participants may possess higher levels of technical familiarity and AI awareness than the broader student population, the findings may not fully generalize across disciplines or institutional contexts.

Additionally, student perceptions captured in this study reflect a rapidly evolving technological environment. As generative AI platforms continue improving and becoming more normalized within education, media, and professional environments, student attitudes toward AI-generated instructional avatars may continue to shift over time.

Future research should examine these perceptions longitudinally to better understand how acceptance changes as exposure to generative AI increases. Additional studies involving students from diverse academic disciplines and institutional types may help identify cultural, disciplinary, or demographic differences influencing perceptions of synthetic instructional media. Experimental research comparing student engagement, satisfaction, and learning outcomes between human-led and AI-generated instruction may also provide valuable insight into whether perceived differences in authenticity correspond to measurable differences in educational effectiveness.

The relatively small sample size ($n = 49$) and the predominance of graduate students and older adult learners should also be considered when interpreting the findings. Additionally, because participants were not shown a standardized AI-generated lecture prior to completing the survey, responses reflected their prior experiences and perceptions rather than reactions to a common instructional stimulus.

Future studies may additionally benefit from more formalized measures of thematic reliability and expanded mixed-methods designs incorporating interviews, focus groups, or experimental instructional interventions involving AI-generated avatars in authentic classroom settings. Future research should also examine faculty perceptions of AI-generated lecture avatars and compare instructor attitudes with those of students regarding appropriate instructional uses of this technology.

Conclusion

This study suggests that students maintain a cautious but generally pragmatic openness toward the use of AI-generated lecture avatars in higher education. Participants did not reject the use of generative AI technologies outright; rather, they consistently emphasized the importance of preserving authenticity, transparency, instructor oversight, and meaningful human interaction within online learning environments.

Overall, students appeared most supportive of instructional models in which AI functions as a supplemental educational tool rather than as a replacement for faculty presence. While respondents acknowledged the efficiency, scalability, and accessibility benefits associated with AI-generated instructional media, they also expressed concern regarding over-automation, diminished authenticity, and the potential erosion of instructor-student relationships.

As higher education institutions continue exploring the integration of generative AI into teaching and learning environments, the findings of this study suggest that successful implementation will likely depend on maintaining clear disclosure practices, preserving active human oversight, and thoughtfully balancing technological innovation with the relational and human-centered dimensions of education.

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