ImpactingEducation
JOURNAL ON TRANSFORMING PROFESSIONAL PRACTICE

Unlocking the Future:

How are EdD Faculty Using Generative AI in Doctoral Research

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ABSTRACT

This convergent mixed methods research study investigated how a small, non-representative sample of Educational Doctorate (EdD) faculty perceive and use generative AI and how they have leveraged the technology to support EdD students. A cross-sectional survey was used to gather data from 27 EdD faculty members to assess their generative AI perceptions and use as of April 2024. Findings revealed widespread generative AI use among participants, with 89% utilizing the technology for a variety of tasks related to supporting EdD students, including brainstorming, lesson planning, building students' generative AI knowledge, and supporting dissertation research and writing. Generative AI use did not differ significantly based on demographic or background factors, but perceptions varied between users and nonusers, with users holding much more favorable attitudes about the technology. Both groups perceived it to pose a relatively low threat to their career, but nonusers perceived an even lower threat. This study illustrates diverse generative AI use among participants, underscores the need for ongoing exploration into how perceptions about generative AI shape faculty's adoption and use of the technology, and calls for future research into generative AI integration and its impact on faculty and student learning and satisfaction.

KEYWORDS

Artificial Intelligence (AI), generative AI, doctoral research, faculty perceptions, mixed methods research, survey research

Artificial Intelligence (AI) and generative AI are transforming education and the global economic landscape. Unlike other technologies where the integration and usage have been progressive such as with the Internet, Microsoft's operating system, and the smartphone, generative AI has been explosive. In November 2022, OpenAI released Chat Generative Pre-Trained Transformer (ChatGPT), an AI chatbot. Within one year, ChatGPT had more than 1.7 billion users (DeVon, 2023). While ChatGPT and other generative AI tools have been embraced by many sectors globally, higher education in the United States has been slower to adopt generative AI (Ascione, 2023). As generative AI is being increasingly used within the workforce, there is a critical need for higher education institutions to balance caution with keeping pace with AI digital literacy skills needed for faculty and students.

LITERATURE REVIEW

Although AI has been used within higher education for decades (Lodge et al., 2023), generative AI has introduced unprecedented possibilities that seemed all but impossible, outside of science fiction, just a few years ago. Furthermore, it has prompted an abundance of discourse about the opportunities, challenges, concerns, and potential impact of this technology on higher education (Sebesta & Davis, 2023). While the use of generative AI within higher education has been increasing, the adoption has been slower, particularly for faculty. Existing studies suggest that students are using generative AI at vastly higher rates than faculty (Bharadwaj et al., 2023; Shaw et al., 2023) and many students plan to continue such use even if they believe it poses ethical or academic integrity issues (Intelligent, 2023). A 2023 study by Wiley, which included 1,078 instructors in the United States, reported that 58% of instructors shared their students were already using generative AI in their classroom. A 2023 study sponsored by Turnitin, which included 1,600 faculty and 1,000 students, revealed that 49% of students were using generative AI tools while just 22% of faculty members were using them (Bharadwaj et al., 2023). The pace of which higher education is embracing AI and generative AI compared to the employment sector is also raising concerns for recent graduates. According to a 2023 survey of 1,000 recent graduates by Cengage Group (2023), 46% reported they felt threatened by AI and 52% questioned their workforce readiness.

For students to gain the necessary AI digital skills to thrive in the workplace following graduation, faculty must possess competence and literacy in generative AI (Moorhouse et al., 2023; Sun & Hoelscher, 2023). Research from Quinn (2024) suggests that while institutions have attempted to provide training to help develop faculty's generative AI literacy, a significant gap remains. Faculty and

This journal is supported by the Carnegie Project on the Education Doctorate: A Knowledge Forum on the EdD (CPED) cpedinitiative.org

impactinged.pitt.edu
Vol.10 No.1 (2025)

ISSN 2472-5889 (online)
DOI 10.5195/ie.2025.475

staff at over 90% of the institutions represented in Quinn's research have requested additional support and professional development related to the technology. Furthermore, despite a wealth of conversation about the potential opportunities and pitfalls of generative AI, existing research appears to have yet to examine the perceptions and use of generative AI among faculty teaching in educational doctorate (EdD) programs specifically in the United States.

PURPOSE OF THE STUDY

The purpose of this mixed methods research study was to investigate EdD faculty's perceptions and use of generative AI. The study also examined the ways in which EdD faculty are using generative AI to support EdD students with their coursework and dissertation. Using data collected through a cross-sectional survey of higher education faculty in the United States, this study addressed the following research questions:

1. How do faculty perceive and use generative AI to support EdD students?
2. How are faculty using generative AI to support EdD students in their course work and dissertation writing?
3. Is there a significant difference in faculty's use of generative AI based on background or demographic factors?

Findings from this study shed light on the current landscape of generative AI among faculty teaching in EdD programs and the ways in which they are leveraging this technology to support student learning, engagement, and career preparation.The recommendations from this study provide critical insight educators can leverage to support doctoral student research within EdD programs and prepare graduates to successfully navigate a dynamic and evolving digital global workforce.

METHODS

This study employed a convergent mixed methods design with equal weight given to the quantitative and qualitative approaches, and an online cross-sectional survey was used to efficiently gather the data from a range of EdD faculty members at a single point in time. In line with the convergent mixed methods design, the quantitative and qualitative data were collected at the same time and analyzed separately before being integrated in the results stage (Creswell & Plano Clark, 2018, Fetters et al., 2013; Zhang & Creswell, 2013). This design provided the quantitative data needed to explore perceptions and differences in generative AI use across various demographics while also capturing qualitative insights into how faculty are using the technology. The mixed methods approach offered a more comprehensive understanding of current trends and attitudes towards generative AI among these faculty members, providing a comprehensive and timely snapshot of their perceptions about and use of the technology. The following subsections detail the survey design, population and sample selection, data collection and preparation procedures, and the data analysis techniques employed.

Survey

The survey included 49 main questions related to participant's background and demographic information and their perceptions about and use of generative AI. The first portion of the survey asked participants to self-report various demographic factors (e.g., gender and highest degree earned), institutional factors (e.g., university type and university focus), and professional background factors (e.g., primary discipline). The remainder of the survey employed three instruments to assess faculty's perceptions about and use of generative AI. Table 1 summarized the details of these instruments.

Table 1. Description of Survey Instruments

Instrument	Purpose	Number of Items	Scale Adaptation
AI Attitude Scale (Grassini, 2023)	Assess perceptions about generative AI's impact on humanity and individual's life and work	4	Adapted from 10-point to 5-point scale
STARA Awareness Scale (Brougham & Haar, 2018)	Measure perceptions about the threat generative AI poses to faculty's work	4	Adapted to focus on generative AI
Generative AI Use Score (Developed for the larger study)	Assess the frequency of and purposes for faculty's generative AI use	8	n/a

Perceptions about the technology were assessed using modified versions of the AI Attitude Scale (Grassini, 2023) and the STARA Awareness Scale (Brougham & Haar, 2018). Grassini's (2023) AI Attitude Scale consists of four items that assess an individual's perceptions about the technology's impact on their life and work and on humanity overall. The items were adapted from the original 10-point scale to a 5-point one to prevent convergence toward scale midpoints and employ a consistent 5-point scale throughout the survey. Brougham and Haar's (2018) 4-item STARA Awareness scale examines the extent to which employees feel their job could be replaced by smart technology, artificial intelligence, robotics, and algorithms. In the current study, the scale was adapted to focus on generative AI specifically and used to measure faculty's perceptions about the threat generative AI poses to their work.

Generative AI use was assessed using three main questions developed by the authors, with one being a complex question that included a Likert matrix table to assess the frequency of participants' generative AI use for a variety of general purposes related to their work. Likert options ranged from never to very frequently and the eight general usage purposes assessed were communication tasks, brainstorming, helping students learn about and use the technology, lesson planning, curriculum development, generating feedback for student work, supporting students with dissertations, and creating culturally responsive classes. Responses to this complex question were also totaled to create an overall Generative AI Use score. Additionally, participants who reported using generative AI for any of the eight purposes were asked to provide specific examples.

Population and Sample

The population included faculty in EdD programs across the United States. The criteria for inclusion required participants to be currently teaching or have taught in an EdD program during the past 12 months and to have earned a master's degree or higher. Convenience and purposive snowball sampling were utilized to recruit as many qualified participants as possible. Specifically, email invitations were sent to faculty from a variety of backgrounds to help the survey reach a broad and diverse audience. Email invitations included general information about the study, a link to the online survey, and a request that participants share the opportunity with

others meeting the inclusion criteria. The study call was also posted on LinkedIn and shared on Carnegie Project on the Education Doctorate's (CPED) social media page to further target a broad and diverse pool of participants.

In total, 27 EdD faculty members from a diverse array of demographic and professional backgrounds participated in the study. Just over half of all participants (n = 14) held clinical or fixed-term faculty positions and over 75% of participants reported currently working at a research university. Approximately half of all participants had been teaching in higher education for over 10 years. There was a fairly even distribution between public (48%) and private (51%) institutions. While all participants were teaching in an EdD program and the majority (74%) reported teaching in education as their primary discipline, 26% noted the humanities, social sciences, or natural and applied sciences as the primary discipline they teach. Notably, 11% of participants identified as American Indian or Alaska Native, making this the second most represented racial group in the study after White (67%). Participants in Pennsylvania were the most represented (n = 11) followed by two participants in each of the following states: Florida, Maryland, New York, Virginia, and Washington. The remaining six participants were from Alaska, Louisiana, Minnesota, New Mexico, South Carolina, and Washington, DC. Table 2 provides a detailed breakdown of the sample's distribution. While the sample included faculty from a diverse array of backgrounds, it is important to note that it is not representative of the broader EdD faculty population in the United States due to the small sample size, limited geographic representation, and varied professional and demographic factors represented.

Data Collection

We gathered data for this study from a larger project. After receiving IRB approval in March 2024, we sent email invitations to faculty and publicized the opportunity on LinkedIn. Those who accessed the link to participate provided their informed consent on the first page of the online Qualtrics survey before advancing to the survey questions. The online survey was open for three and a half weeks. We did not ask study participants for their names, phone numbers, institutions, or other personal information, but those interested in entering the incentive entry (a drawing to win a $25 Amazon gift card) were required to submit an email address.

Data Preparation

Following the close of data collection, we cleaned and prepared the data for analysis. All 27 survey responders who reported teaching EdD students also met all other inclusion criteria. While four of these participants did not complete survey questions related to their perceptions about the technology, we decided to include them in the sample to showcase their generative AI adoption and use. Any other missing values were incredibly rare, comprising less than 3% of the overall sample, and thus were not imputed. Cases with missing data were included in the analyses wherever possible. To ensure the reliability of the survey instrument, Cronbach's alpha was calculated for each of the instrument's subscales. Internal consistency was found to be excellent, with Cronbach's alpha of .91 on the AI Attitude Scale, .95 on the STARA Awareness Scale, and .92 for the Generative AI Use score.

Table 2. Distribution of Sample by Demographic Factors (n = 27)

Factor	*n*	Valid Percent
Role		
Tenured Faculty	2	7
Tenure-Track Faculty	8	30
Clinical or Fixed Term Faculty	14	52
Adjunct Faculty	3	11
Primary Focus in Role		
Research	6	22
Teaching	19	70
Other	2	7
Discipline		
Humanities	3	11
Education	20	74
Social Sciences	3	11
Natural & Applied Sciences	1	4
Institution Type		
4-year public	13	48
4-year private	14	52
Institution Focus		
Research University	20	77
Teaching University	6	23
Institution Size		
Small	1	4
Medium	3	11
Large	2	85
Highest Degree Earned		
Masters	3	11
Doctorate	24	89
PhD	8	30
EdD	10	37
DNP	1	4
MD	2	7
JD	2	7
More than one terminal degree	1	4
Years Teaching		
Less than 12 months	1	4
1-4 years	2	7
5-10 years	10	37
11-15 years	8	30
16-20 years	2	7
More than 20 years	4	15
Age		
25-39 years old	7	26
40-59 years old	14	52
60 years old or older	6	22
Gender		
Male	11	41
Female	15	55
Prefer not to say	1	4
Race		
American Indian or Alaska Native	3	11
Asian	0	0
Black or African American	2	7
Hispanic/Latino	1	4
Native Hawaiian or Other Pacific Islander	2	7
White	18	67
Prefer not to say	1	4

Data Analysis

Data analysis was conducted using Statistical Package for the Social Sciences (SPSS) version 29, with descriptive and inferential statistics used to answer the guiding research questions. Means, standard deviations, and percentages were used to analyze data related to faculty's perceptions and use of generative AI and to answer the first two research questions. Thematic coding following an inductive data analysis approach was also used to address the

second research question (Miles et al., 2020; Saldaña, 2021). Process, In Vivo, and descriptive codes were used during first cycle coding to label actions, give voice to participants' experiences, and summarize additional noteworthy data, and pattern coding was used during the second cycle to synthesize the data (Saldaña, 2021). Finally, a series of Kruskal-Wallis H tests were used to determine whether there were significant differences in faculty's current level of generative AI use based on background or demographic factors. The selection of this test was due to several dataset-specific characteristics that necessitated a nonparametric approach. Namely, preliminary analyses indicated that categories for several independent variables, such as institution type and focus, gender, teaching experience, and age, were nonnormally distributed. Additionally, the relatively small sample size meant that most groups of independent variables included fewer than 15 participants, further necessitating the use of this approach. All necessary assumptions for Kruskal-Wallis H test were checked and met, confirming the approach's suitability for addressing the final research question.

RESULTS

The vast majority of study participants (89%) reported currently using generative AI in their work, with just three of the 27 total participants (11%) indicating they have not used it. Of those who use the technology (n = 24), the largest percentage (38%) indicated they have used it for more than 12 months, followed by 9–11 months (33.5%), 3–5 months (19%), and 6–8 months (9.5%). Overall, participants held positive attitudes about generative AI and perceived the technology to pose a low level of threat to their job. Table 3 presents descriptive statistics for the 23 participants who responded to the survey items assessing their perceptions about generative AI. A mean score of 3.0 indicates participants were neutral about the item or attribute, with a mean above 3.0 signaling agreement with the factor and a mean below 3.0 signaling disagreement with it. Notably, perceptions differed between faculty who used the technology compared to those who did not. Nonusers held somewhat negative attitudes about generative AI and believed it posed a lower threat to their job compared to generative AI users. Though there were only a few nonusers in the sample, this suggests that, compared to nonusers, generative AI users tended to hold more favorable perceptions about the innovation's impact on their life and work and on humanity overall while simultaneously perceiving the technology to pose more of a threat to their career and position within higher education.

General Generative AI Use

Results revealed that participants had broadly adopted generative AI to support various tasks in their work. Table 4 details the purposes and frequency with which adopters used generative AI in their work. The majority of participants used generative AI *frequently* for most general purposes listed. Brainstorming emerged as the top use, with 71% of participants using the technology *frequently* or *very frequently* for this purpose. Several participants referred to generative AI as "a thought partner" they could utilize for a wide variety of brainstorming tasks. Examples specifically related to supporting EdD students included drafting rubrics for assignments, discovering novel approaches to course content, and sparking creativity in lesson and assignment planning. One participant shared, "I use AI to help draft assignment rubrics. I ask for a "three level rubric" that aligns with an assignment. From there I am able to adjust as needed," while another indicated using the technology to support brainstorming a variety of topics, including "ideas for curriculum content, lessons for class, and alternative strategies for problem solving." Notably, several participants also encouraged students to leverage generative AI in their own work when brainstorming research topics and questions, particularly when they are feeling stuck or "after they have exhausted their own brainstorming."

Another prominent use of generative AI was for lesson planning, with 58% of participants reportedly using the technology *frequently* or *very frequently* for this purpose. Responses indicated that many participants used generative AI to incorporate evidence-based practices and increase lesson effectiveness. For example, one participant noted that they use the technology to "generate new case studies," which they would then integrate into lessons to illustrate concepts and increase engagement. Another mentioned using generative AI to "generate content ideas and interactive activities for math" related topics and courses, noting that the technology often "suggests creative ways to explain the complex concepts," which helps make their lessons more engaging and effective.

Table 3. Perceptions about Generative AI for the Sample and Comparing Users and Nonusers

	Total sample (*n=23*)		Gen AI users (*n=20*)		Gen AI nonusers (*n=3*)	
	Mean	**Standard Deviation**	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**
Generative AI attitudes	3.91	0.99	4.15	0.49	2.17	1.81
1. I believe that generative AI will improve my life.	3.87	1.18	4.15	0.81	2.00	1.73
2. I believe that generative AI will improve my work.	4.00	1.13	4.30	0.66	2.00	1.73
3. I think I will use generative AI technology in the future.	4.26	1.10	4.50	0.69	2.67	2.08
4. I think generative AI is positive for humanity.	3.52	1.08	3.75	0.79	2.00	1.73
Threat of generative AI	2.59	1.24	2.70	1.29	1.83	0.29
1. I think my job could be replaced by generative AI.	2.74	1.42	2.90	1.45	1.67	0.58
2. I am personally worried that what I do now in my job will be able to be replaced by generative AI.	2.61	1.37	2.75	1.41	1.67	0.58
3. I am personally worried about my future in my organization due to generative AI replacing employees.	2.57	1.20	2.60	1.27	2.33	0.58
4. I am personally worried about my future in higher education due to generative AI replacing employees.	2.43	1.31	2.55	1.36	1.67	0.58

Other uses included refining assignment instructions for clarity; ensuring alignment between outcomes, activities, and resources; and formulating probing questions to deepen student thinking and understanding. Given the technology's ability to "save time and enhance communication efficiency" as shared by a participant, the use of generative AI for communication-related tasks was also quite common and included creating announcements and reminders and checking assignment feedback for clarity. It has also been leveraged for assistance with verbiage, with one participant explaining that "on occasion I have asked for suggestions on how to phrase something that is particularly challenging."

Additionally, 87% of users reported engaging with generative AI at least occasionally to educate students about the technology. Many of these example uses shared by participants centered on helping students (a) understand the technology's possibilities and limitations and (b) improve their work by using generative AI as a "thought partner" and "another set of eyes." Example activities included having students compare and contrast their data analysis with that of ChatGPT, explore ways to improve weak or underdeveloped areas in a sample lesson plan, practice drafting, revising, and refining articles with generative AI, and identify gaps in their own thinking, writing, or research that they had not considered. One participant reported demoing "ways students can use it, practice providing prompts, and using it to improve weak areas" in their work. Similarly, another participant noted having students "input topics and then revise and refine the output to understand generative AI's application in content creation." Furthermore, generative AI has been leveraged to understand the technology itself and its ethical and legal considerations, with one participant stating, "I have used it to understand its background and current status in higher education and its ethical and legal issues, to identify policies (student use, academic integrity, privacy) at other institutions, and to just learn about potential uses" that can better support students.

Though less common, the use of generative AI for curriculum development, the creation of culturally responsive classes, and the generation of feedback on student work were still significant, with over 70% of users leveraging the technology at least occasionally for these purposes. This included participants' efforts to find or create materials that "span different cultures, backgrounds, and interests" and "incorporate diverse stories and perspectives" to promote diversity, equity, and inclusion, ensure students could learn from experiences that mirror their own, and help students recognize the "importance of positionality and their own lived experiences." Additional uses included leveraging generative AI to find various ways to deliver similar feedback, evaluate faculty's feedback for clarity and wording choice and provide feedback on students' academic writing, including grammar, structure, clarity, and cohesion. One participant noted running their "feedback statement through to check the wording." Another commented that they sometimes are not sure how to most effectively "provide clear and concise feedback that is supportive and coaches the student to think a little differently. So, I'll provide a little section of the student work that I'm stuck on and ask it to provide feedback." Further expanding on this practice, they noted "I don't give specific identifiable information about the student, but I do provide info on the course and the goal of the assessment.

Generative AI Use for Dissertations

Participants use of generative AI to support students with dissertations ranged from *never* to *very frequent*, with notable applications for a variety of dissertation-related tasks and processes. As shown in Table 4, the vast majority of participants (83%) reported using generative AI at least *occasionally* to support students in their dissertation writing. Fifteen faculty provided specific examples of how they have leveraged generative AI when guiding students through dissertations or other culminating projects. Their responses revealed four main themes. The first theme, idea generation and topic development, involved using generative AI to brainstorm ideas and develop a topic. Example uses included generating potential topics of interest and gaining guidance on potential research methods. One participant, for example, encouraged "students to use generative AI to help assist with their brainstorming" and topic development.

The second theme, literature review and proposal writing, referred to the use of generative AI to support the foundational stages of the dissertation process, such as creating outlines, establishing timelines, and broadening literature reviews by gaining suggestions on additional topics to explore. Speaking to this process, one participant mentioned leveraging the technology to help expand "students' perspectives on what literature should be guiding their problem of practice inquiry," while another indicated having students "create outlines or drafts" for their initial proposal. Yet another noted having students "check their literature review and generate research questions aligned with their research."

The third and most prevalent theme, academic writing assistance, centered around using generative AI to review and improve paragraphs and sections for cohesion, coherence, synthesis, and logical structuring. Numerous participants

Table 4. Number and Valid Percent of Adopter's Generative AI Use by Purpose and Frequency

Purpose	Never		Rarely		Occasionally		Frequently		Very frequently	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Communication tasks	2	8	3	13	6	25	9	38	4	17
Brainstorming	1	4	2	8	4	17	13	54	4	17
Helping students learn about & use it	2	8	1	4	8	33	8	33	5	21
Lesson planning	2	8	1	4	7	29	12	50	2	8
Curriculum development	1	4	5	22	5	22	9	39	3	13
Generating feedback for student work	4	17	3	13	5	22	8	35	3	13
Supporting students with dissertations	2	8	2	8	8	33	7	29	5	21
Creating culturally responsive classes	3	13	3	13	4	17	10	42	4	17

specifically mentioned using the technology as a "writing tutor." Another noted, "I tell students to argue with generative AI to get better results and have it improve their writing by revising sections" of their dissertation to strengthen their academic writing. One participant also reported soliciting first drafts from students, then using "generative AI to provide suggestions on academic writing, such as optimizing the structure and enhancing clarity and the argumentative strength."

The fourth and final theme, refinement and quality enhancement, included numerous examples of using generative AI to gain feedback that would refine and improve the dissertation's overall quality. Specific examples included seeking support related to writing, structure, and overall quality, ensuring alignment between research questions and methods, checking for consistency across chapters, and identifying any gaps in the literature review that needed to be addressed based on the findings and results. Notably, responses included both recommendations that students use generative AI for these purposes as well as reports of faculty themselves using the technology to generate this feedback for students. For example, one participant noted having students "complete all of their own work and then use generative AI as a companion to provide ideas on how to refine their work." Other participants mentioned using the technology themselves to help give students "suggestions on wording refinement and clarity" and to check for alignment between "chapters 2 and 5 to determine where there are gaps in the literature review based on the final results in a study" in order to further enhance the overall quality.

Usage Differences Based on Background and Demographics

No significant differences in level of generative AI use were found among participants based on demographic or professional background factors. Table 5 presents the results from Kruskal-Wallace H tests, which examined differences in generative AI use by demographic factors (e.g., age, gender, highest degree earned), institutional factors (e.g., type, size, focus) and the factors related to faculty's professional background (e.g., current role, primary discipline, number of years teaching in higher education, generative AI knowledge). The analysis did not identify any significant variations in usage between the groups.

Table 5. Kruskal-Wallace Analysis of Generative AI Use by Demographic and Background Factors

Variable	Kruskal-Wallace *H*	df	P-value
Age	2.79	2	.248
Generative AI knowledge	0.49	2	.782
Gender	2.79	1	.248
Highest degree earned	1.76	3	.624
Institution focus	0.90	1	.342
Institution size	0.41	2	.815
Institution type	1.61	1	.204
Level	2.31	2	.315
Primary discipline	4.37	3	.224
Role	5.87	3	.128
Role's focus (research, teaching, other)	4.39	2	.111
Years teaching	0.37	3	.946

Note. *p<.05, **p<0.01, ***p<0.001

DISCUSSION

The results from this study provide significant insights into the perceptions, adoption, and use of generative AI among 27 faculty members working in EdD programs in the United States, with 89% of participants indicating they currently incorporate generative AI into their work to support EdD students. This high adoption rate may be explained by Rogers' (2003) diffusion of innovations theory. This theory suggests that greater visibility of the technology's benefits, coupled with increased communication about the technology within academic communities, played a crucial role in participants' adoption. Additionally, positive testimonials from early adopters and greater access to training, workshops, and generative AI tools, may have also contributed significantly. Collectively, these factors may have helped move generative AI from a niche innovation to a mainstream tool within a remarkably short period of time (Rogers, 2003). However, the high adoption rate must be interpreted with caution due to the small, non-representative sample. Furthermore, the snowball sampling approach employed may have resulted in selection bias, whereby those who were more interested in generative AI opted to participate and share the opportunity with their colleagues, contributing to the high adoption rate found.

While the high adoption is somewhat surprising, it echoes findings from a broader study by Black (2024), which surveyed a larger population that included faculty teaching in doctoral programs. That study found that 86% of higher education faculty from a wide array of disciplines, institutions, and levels currently used generative AI in their work, with 63.5% having used the technology for at least nine months (Black, 2024). In comparison, 71.5% of the EdD faculty in the current study have been using the technology for the same duration. This suggests that the EdD faculty who participated in this study may be early adopters of the technology, further contributing to the high adoption rate found.

Generative AI was shown to be frequently used by participants for a variety of tasks related to supporting EdD students with findings revealing concrete examples of how these faculty members have leveraged the technology in alignment with the possibilities outlined by Sebesta and Davis (2023), such as supporting equity and access to knowledge, improving instruction and student learning, and increasing faculty efficiency. Participants frequently embraced the technology for lesson planning and creating culturally responsive classes as well as leveraged it to help students learn about the technology and to support students through the dissertation research process. Several participants regarded generative AI as a "thought partner" in brainstorming tasks, a use that was not only incredibly popular but may also enhance creativity and student success. According to recent findings by Joosten et al. (2024), ideas generated by AI during brainstorming sessions were comparable to human-generated ideas in terms of feasibility but scored higher in client benefit and novelty. The varied uses demonstrated by participants highlight the potential of generative AI to significantly aid faculty in supporting EdD students in their coursework and dissertation, though the findings should be interpreted with caution due to the study's sampling limitations.

Interestingly, perceptions about generative AI differed significantly between users and nonusers. While those who use the technology reported strong positive perceptions about its impact on their life and work, nonusers held somewhat negative views. Notably, while both users and nonusers perceived generative AI to pose a relatively low level of threat to their job and future in higher

education, nonusers perceived even lower levels of threat. This suggests a potential positive correlation between perceived threat of generative AI and its adoption. That said, the overwhelmingly positive attitudes towards generative AI among EdD faculty in the study and its sustained use, as indicated by the high percentage of participants using the technology for at least nine months, suggest that participants viewed generative AI as a valuable tool that can be leveraged in an array of tasks aimed at supporting EdD students. Though this finding cannot be generalizable to the broader EdD faculty population, the lack of significant differences in generative AI usage based on demographic and background factors suggests that, within this sample, generative AI adoption was not significantly influenced by these factors.

LIMITATIONS AND FUTURE RESEARCH

While this study provided significant insights into participants' perceptions about and use of generative AI and revealed concrete examples of how they are leveraging the technology to support EdD students, there are several limitations that highlight opportunities for future exploration. Given the purposive snowball sampling approach employed, it is not possible to ascertain exactly who participated in the study, making it challenging to know the representativeness of the sample to the broader EdD faculty population. Another significant limitation was the small, nonrepresentative sample, which significantly limits the generalizability of the findings. Moreover, the significant imbalance between users and nonusers may indicate selection bias. This disparity further constrained the statistical analysis and potentially led to an oversimplified or incomplete depiction of the broader landscape. These limitations underscore the need for future research with a more representative and balanced sample of users and nonusers.

Future studies should aim to address these limitations by employing more robust sampling techniques and ensuring a larger, more representative sample size. Such research is essential in gaining a more generalizable understanding of EdD faculty's perceptions about and use of generative AI and how they are leveraging the technology to support students. Furthermore, since generative AI is still relatively new in educational settings, longitudinal research is needed to assess the long-term impacts of generative AI on educational outcomes, faculty development, and programmatic and institutional practices. This would help in understanding not only early adopters' perceptions and use but also the evolving adoption and use of generative AI among EdD faculty broadly.

CONCLUSIONS AND RECOMMENDATIONS

Given the study's limitations, particularly the small, non-representative sample and potential selection bias, conclusions should be drawn carefully. A high adoption rate and variety of uses were reported by participants, including supporting dissertation research and writing, lesson planning, enhancing culturally responsive classes, and engaging in brainstorming sessions. These applications highlight generative AI's potential utility in improving instructional quality and student learning and contributing to a more inclusive, equitable, and engaging learning environment. However, these findings should not be taken as indicative of widespread adoption among all EdD faculty and instead suggest study participants were early adopters or held a particular affinity for generative AI.

Building on insights gained from this research, several recommendations are proposed to further enhance the integration and effectiveness of generative AI among EdD faculty. First, future research should employ more robust sampling techniques to ensure a large, representative sample and thereby provide a clearer picture of generative AI adoption and use across the broader EdD faculty population. Additionally, future studies must monitor the long-term use and impacts of generative AI integration on faculty and student application, learning, and satisfaction to better understand the full scope of its influence. Additionally, it is essential for faculty and administrators to enhance their generative AI literacy to ensure its ethical and equitable use. To this end, continued training and support related to generative AI should be provided to higher education faculty broadly. These measures will ensure that the benefits of generative AI are fully harnessed and the technology positively contributes to the higher education landscape.

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