

REPAC:

Critical Questions to Inform EdD Programs in an Era of Generative Artificial Intelligence

Elizabeth Langran
Marymount University
elangran@marymount.edu

Paula Cristina R. Azevedo @

Marymount University pazevedo@marymount.edu

Stephanie Smith Budhai

University of Delaware budhai@udel.edu

Millersville University oliver.dreon@millersville.edu

Marymount University chauth@marymount.edu

ABSTRACT

This essay presents a framework of critical questions designed to guide EdD program leaders and faculty in integrating generative artificial intelligence (GenAl) into their curricula and policies. The REPAC framework aids in reflecting, reenvisioning, and redesigning educational practices to better incorporate GenAl, focusing on how candidates learn with and about Al tools. These questions ensure that program transformations are evaluated through equity, ethics, and justice lenses. Moreover, they provide a foundation for revising policies and practices, developing new guidelines, and promoting innovative Al use while upholding academic integrity. Authored by faculty from three institutions, this framework includes scenarios that illustrate the educational potential and impact of GenAl, scaffolding the decision-making process and fostering an understanding of Al tools in EdD programs.

KEYWORDS

generative Artificial Intelligence, AI, education doctorate, technology, program design

In its report, Artificial Intelligence and the Future of Teaching and Learning, the U.S. Office of Educational Technology charges institutions to "design educational settings to situate AI in the right place, where educators and other adults can make effective use of these tools for teaching and learning" (Cardona et al., 2023, p. 23). While many schools have begun this work by considering the students and academic programs they serve, this charge presents unique challenges and opportunities for institutions that offer educational doctorates. Despite the diversity of curricular approaches across the EdD landscape, EdD programs have a shared mission to integrate "practical and research knowledge" and link "theory with systemic and systematic inquiry" (CPED, n.d., para 6). This approach marries theory and research within the larger evolving educational ecosystem, which requires a unique response to the rapidly changing nature of generative artificial intelligence (GenAl) and its impact on all aspects of education and society. The REPAC framework we present here—covering Research Activities, Ethics, Programmatic Considerations, Affordances, and Competencies—is designed to be a flexible and responsive tool for students, faculty, and leadership to address these GenAl changes.

Technology Adoption in EdD Programs

Higher education programs are experiencing a surge of technological innovations. As our capability to rapidly process and share data grows, digital competence becomes crucial for leveraging technology effectively in today's knowledge-driven society (Zhao et al., 2021). GenAl significantly enhances research methodology capabilities by assisting the literature review process, expanding the writing capabilities for academic papers, theses or dissertations, and enhancing data analysis. However, institutions face challenges adapting their programs quickly to these technological advances. Discussions about the development and transformation of doctoral programs must address the ethical and legal implications of GenAl, digital literacy, policies, and the selection of appropriate technologies, as well as addressing concerns for proper attribution, disclosure, transparency, quality control, control measures, and compliance (Tomlinson et al., 2023).

These considerations prompt essential questions and discussions among decision-makers in doctoral programs.



New articles in this journal are licensed under a Creative Commons Attribution 4.0 United States License.



This journal is published by Pitt Open Library Publishing.



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.2025.469



Understanding the impacts of GenAl on educational programs enables leaders to better support and guide student work. Storey (2023) raised additional questions concerning integrating GenAl into educational systems, emphasizing concerns about bias, data privacy, technological dependence, costs, ethical dilemmas, diminished human interaction, and technical challenges. GenAl may effectively assist in various research and writing tasks if these ethical and legal issues are addressed. However, the critical thinking skills and knowledge of doctoral candidates cannot be replaced by GenAl. This situation presents EdD programs with numerous factors to consider when supporting doctoral students.

Faculty must be prepared to teach with and about Artificial Intelligence (AI) technologies and, thus, require the development of competencies that include not just the knowledge and skills to use AI for research and to troubleshoot AI technology issues but also to critically interrogate AI technology (Trust et al., 2024). This will require that EdD programs support the development of these skills among faculty through opportunities to co-explore, share knowledge, and even financially support paid account subscriptions. The rapid pace of AI development means that it is being built into platforms everywhere and learning how to use one tool on one day will only go so far—but having the skillset to critically interrogate and learn how to use these programs is increasingly valuable.

The conversation on integrating generative AI in doctoral programs could easily be confined to technology enthusiasts among the faculty. However, recognizing how users accept and use technology and understanding the various perspectives, including late adopters, develops a more inclusive, effective, and ethically grounded strategy. The Technology Acceptance Model (TAM) examines key components of perceived ease of use and perceived usefulness, while the Diffusion of Innovations (DOI) theory offers a broader sociological perspective, categorizing adopters into groups such as innovators, early adopters, early majority, late majority, and laggards based on their readiness and speed of adoption (Davis, 1989; Rogers, 1962). The DOI theory emphasizes the role of social systems and communication channels in influencing the adoption rate of new technologies. The adoption of AI tools is influenced more by their compatibilities with existing workflows than by the technology's innovativeness or perceived usefulness. This points to a necessity for tools that can seamlessly integrate into diverse academic settings, enhancing educational outcomes across various TAM levels, not just those early adopters who are typically quick to adopt new technologies. These patterns challenge traditional acceptance theories, suggesting a broader potential for AI in higher education beyond initial adopters (Russo, 2023).

CONCEPTUAL FRAMEWORK

We were inspired by Zabala's (2020) SETT Framework for K-12 teachers selecting assistive technology. Zabala (2020) describes the framework as "a flexible tool that makes concerns-identification and solution-seeking processes accessible to all and is useful in all phases of decision-making and service delivery" (p. 8). The framework places the student at the center of the decision process and considers the student's strengths, interests, and challenges. The second aspect of the framework educators consider is the environment in which the students live, learn, and develop. In addition, Zabala (2020) challenges educators using the framework to examine the tasks students will need to complete to reach the educators' and caregivers' expectations of the student. Finally,

educators must evaluate the best tools, including technological devices, applications, strategies, services, and other accommodations that will support the student, teachers, and caregivers to ensure the student can complete the tasks successfully.

Though the SETT framework supports K-12 inclusive learning environments and can be applied in other contexts, it has limitations in higher education institutions, particularly doctoral programs. Additionally, Zabala's (2020) framework may not be as helpful in analyzing the best use of Al. Though generative artificial systems can be assistive, they can also augment human capabilities. They are more than just another technological tool that has one task and consistently and accurately completes what it has been programmed to do. Al is multimodal, can mimic human intelligence and creativity, and even provide inaccurate, fictitious, or biased responses. As a result of the complexity of the system, we propose a divergent approach to reimagining and redesigning doctoral programs through an intentional, responsive, and co-creative process of embedding Al programmatically. The proposed framework, REPAC, addresses Research Activities. Ethics. Programmatic Considerations. Affordances, and Competencies. Rather than being prescriptive, rigid, or a one-time process, it is meant to be flexible, forwardthinking, and open-ended, allowing the program to shift and modify as AI, students, and faculty change. In the following paragraphs, we will describe each aspect of our REPAC framework and illustrate opportunities for students, faculty, and leadership to participate in the dialogue and development of a humanistic doctoral program with the support of Al.

It is imperative to understand that when redesigning an EdD program with AI components, it is fundamental to not only understand how the redesign and incorporation of AI will impact different stakeholders but also to involve students, faculty, doctoral committee members, and leaders from the program, school, and college level. Including a diversity of people will provide a thoughtful response to AI and redesign an academic program that remains human-centered, ethical, and with high esteem for doctoral degrees. Once a small group has been assembled, the hard work of REPAC begins.

Research Activities

One of the many objectives of a doctoral program is to teach, mentor, and support doctoral students' learning and practice of conducting research, especially original research. As we write this, there are impressive AI systems designed for research to find, summarize, and synthesize literature. Al can transcribe interviews and even analyze qualitative data, provide researchers with themes, and quickly visualize data. What would take a human researcher days and weeks to do now takes seconds for AI to complete. Such systems can increase the quantity of research and even improve the quality of research by discovering new insights that elude the human researcher; such examples are being witnessed in healthcare, biopharmaceutical, chemistry, and environmental sciences. And yet, even with the assistance of AI, the human researcher is accountable for the accuracy, ethical oversights, protection, and privacy of human subjects, and much more. Therefore, faculty, chairs, and committee members need to continue to teach and guide students in the research process by understanding the depth of the literature, the richness and wisdom of research methodology, and the reasoning behind data collection and analysis procedures. As programs include



Al in their research courses, coursework, and dissertation in practice process, stakeholders are advised to reflect on when students are introduced to research Al assistant systems, how they are asked to use Al in their research, the role of faculty in encouraging and educating students, and what leadership will endorse and invest in to ensure faculty and students all have equitable access to Al technologies.

Considerations of when and how doctoral students engage with Al research assistive technologies are encouraged not only due to the ethical concerns raised earlier but also to ensure the creative process of research is not stymied. As Felin and Holweg (2024) explain, there are limitations to Al's data and prediction model, and it cannot be compared to human cognition. Humans have the capacity to directly engage in the physical world, engage in experimentation. and problem solve in ways that are divergent from the stagnant data set the Al has. Therefore, "heterogeneous beliefs and theories enable the generation of new data (for example, through experimentation), rather than merely being reliant on prediction based on past data" (Felin & Holweg, 2024, p. 37). Felin and Holweg's paper provides faculty and leadership insight into the creative genius of humans to predict and theorize beyond the given set of data, which has implications on how and when instructors approach Al-assisted research activities with our students.

Ethics

As Al advancements continue to evolve beyond mimicking human writing and thinking, the slow erosion of ethics is a real threat. Therefore, the field needs to constantly reflect on the ethics of AI in higher education and research. Beginning with the consideration of what ethical norms already exist in academia and research and critically evaluate if what already exists encompasses Al capabilities and, if not, what revisions and additional ethical codes need to be revised to ensure that human autonomy, dignity, intellectual property, and authenticity remain intact and protected. For instance, questions about Al transcription platforms, inputting research data into OpenAl's ChatGPT or other open-source services to analyze data, using AI to visualize data, and other interesting future use cases. In addition to updating the ethical codes, universities and doctoral programs, in particular, need to provide students and faculty a responsive, open line of communication to ethical boards (which in most higher education institutions would be the Institutional Review Board) when they encounter new use cases and ethical questions. This will be especially important as AI systems become more advanced and ubiquitous and researchers become more sophisticated in using Al. Leadership and faculty need to remain current in AI advancements and have a strong ethical backbone while remaining flexible in a technologically evolving academic and research landscape.

Programmatic Considerations

Some programs may face an existential crisis about the purpose and meaning of an EdD. As discussed earlier, at the heart of the education doctorate is leadership and research, which includes having a deep understanding of how to critically consume, ethically create, and effectively communicate research to various audiences, particularly practitioners, to effectively lead. Once again, programs need to consider the appropriate timing, use, and andragogical impacts the embedding of Al throughout doctoral students' programs of study will have. With an already distrustful

view of higher education by the public and especially by popular media, higher education cannot inadvertently create an epistemological crisis by not being transparent in its use of AI throughout the program. The need to make difficult decisions about AI makes it a moral obligation for EdD programs to openly discuss the impact AI may have on the education of emerging and advanced leaders. Whether it is the use of chatbots in the admissions process or including AI in learning management systems, programs must consider the transparent use of AI and its impact on every aspect of students' educational experience, including the potential long-term impacts the intentional inclusion of AI in students' leadership and research may have.

Affordances

Affordance is a term first coined by Gibson (1979), who defined the term as "The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill. ... It implies the complementarity of the animal and the environment" (p. 127). Norman (2013) would later apply this concept to the everyday objects (natural and artificial) humans use, such as a door handle, which can have various designs and placements on a door, signaling to the person whether to pull, push or turn the handle. He further extends Gibson's definition, stating, "An affordance is a relationship between the properties of an object and the capabilities of the agent that determine just how the object could possibly be used" (Norman, 2013, p.11). This term has been adopted by many fields, such as the design of smart homes, information and communication technology, and robotics.

With fierce competition and a flood of investment in AI, the advancements of the models are quickly evolving, making it challenging for business, education, and the average consumer to keep up. However, Norman's (2013) seven-stage action cycle model still applies to AI and can be a practical checklist for students, faculty, and leadership when considering the affordance of specific AI systems for specific tasks. Norman (2013) posits that there are seven design themes, each with its own question that a user should be able to answer:

- 1. "What do I want to accomplish?
- 2. What are the alternative action sequences?
- 3. What action can I do now?
- 4. How do I do it?
- 5. What happened?
- 6. What does it mean?
- 7. Is this okay? Have I accomplished my goal?" (p. 71)

However, in order for stakeholders in EdD programs to know the answers to the seven questions and the affordance of the Al systems, stakeholders will need to be provided with the time and tools to use and experiment with to see if the Al model truly accomplishes the specific tasks and in order to avoid "false affordance," or a product that has an apparent affordance but does not fulfill its function, as Gaver (1991) warned.

Competencies

There are various competencies that those earning a professional doctorate in education can meet. According to the Carnegie Project on the Education Doctorate (CPED), "The professional doctorate in education prepares educators for the



application of appropriate and specific practices, the generation of new knowledge, and for the stewardship of the profession" (CPED, n.d., para 4). To transform the EdD by applying scholarly practice to improve individuals and communities, CPED has provided programs with six guiding principles for the development and design of programs, which include (1) using equity, ethics, and social justice frameworks to solve problems, (2) advance the practice and knowledge of organizations and communities, (3) build effective collaborative and communication skills, (4) create opportunities to be in the field, (5) incorporates research, theory with professional knowledge, and (6) supports students in producing transformative

knowledge and practice. In addition, doctoral programs should consider stakeholders' Al which refers to "a set of competencies that enables individuals to evaluate AI technologies critically; communicate and collaborate effectively with AI; and use AI as a tool online, at home, and in the workplace" (Long & Magerko, 2020, p. 598). From the CPED principles and emergent AI literacies, EdD programs can glean competencies that doctoral students should have, such as transformational leadership, communication, and research skills, but also understand data literacy, and critically analyze and interpret data.

Figure 1. The REPAC Framework



Co-Constructing a Redesign of a Doctoral Program: A Reflective REPAC Framework to Support Reenvisioning an Al **Higher Education Landscape**

REPAC	Student	Faculty (Includes Committee Members and Chairs)	Leadership
R Research Activities	How can students effectively use AI in their research activities, including consuming research critically, creating original research, and communicating their research effectively to practitioners and researchers? When and where is it appropriate for students to use AI in the research process, which includes the consumption of research, creation, and communication?	How can faculty encourage, educate, and engage students with AI research assistant systems in the research process? Who is accountable for students' research when AI is used?	How can leadership equitability support students and faculty access and use of AI systems that can improve the quality of research, which includes the consumption, creation, and communication phases of research?
E Ethics	What critical concerns about AI do practitioners, leaders, researchers, and students need to consider while using AI in its different forms and evolution? How will students actively practice the ethical use of AI in academic work and research? Where can students go for additional resources and support on the ethical use of AI in research?	What critical concerns about AI do educators, researchers, and students need to consider while using AI in its different forms and evolution? How will the faculty teach and model the ethical use of AI in academic work?	What critical concerns about AI do leadership, educators, researchers, and students need to consider while using AI in its different forms and evolution? What policies already exist that can apply to the ethical use of AI in academia? What new policies need to be established to maintain ethical research and human accountability? How will researchers remain accountable for the ethical use of AI in research?
P Programmatic Considerations	By the end of the doctoral program, what knowledge and skills should students have that will support them in their career trajectory as leaders? By the end of the doctoral program, how will students demonstrate their knowledge and skill in order to obtain the EdD degree?	When are AI systems introduced to students in the program? How are such systems released across the program? How do faculty, chairs, and committee members teach and support students' use of AI in their doctoral classwork and research?	What conversations are leaders having internally and with stakeholders about Al and its possible use across the EdD program? What conversations are leaders having with counterparts in other programs and universities about programmatic changes due to Al? How will programmatic policies need to evolve with the incorporation of Al? What programmatic and university resources (e.g. library resources) and support will be needed? What supports can GenAl provide to help meet the diverse abilities and academic needs of doctoral students?
A Affordances	How will students know the quality and properties of the Al systems that effectively support their work and scholarship? Will resources and time be given for students to engage and deeply understand various Al systems in order to best discern which system will support their scholarship better?	How will the faculty know the quality and properties of the Al systems that effectively support their work with doctoral students and scholarship? Will resources and time be given for faculty to engage and deeply understand various Al systems? How will faculty discuss the affordances of Al with students?	What Al properties will support faculty and students' work and scholarship? What investments in Al will university, college, school, and program-level leadership support? What professional development and support will leadership provide and/or cocreate for and with faculty and students?
C Competencies	What are the core competencies that students earning an EdD degree need to demonstrate with and without AI assistance?	What are the core competencies that students earning an EdD degree need to demonstrate with and without Al assistance? What are the core competencies faculty need related to incorporating Al in their work and scholarship? How will faculty embed Al competencies in their courses and advising work with students?	What are the core competencies that students earning an EdD degree need to demonstrate with and without Al assistance? What are core competencies leaders, faculty and students need related to incorporating Al in their work and scholarship? What supports can GenAl provide to help meet the diverse abilities and academic needs of doctoral students to meet the core competencies?



APPLYING THE MODEL

Faculty hold diverse beliefs and opinions regarding the benefits and concerns related to GenAl in education (Yusuf et al., 2024). On its own, the REPAC framework can serve as a reflection tool for individuals to consider the integration and impacts of GenAl based on their perspectives and beliefs. To foster programmatic revision, however, broader conversations need to occur. We offer two fictional scenarios where GenAl has been used to support these conversations. These scenarios are designed to move the discourse from individuals' beliefs and opinions and situate the conversation in more curricular and programmatic ways. These conversations work best when a diverse group of stakeholders (students, faculty, alumni, and leaders) discuss the scenario and proactively inform the evolution of programmatic policies and curricular practices. The identified REPAC questions are not intended to be exclusive. Instead, they can act as a springboard for related questions that may be more program-specific or unique to the student population who an institution serves.

One critical aspect of using the REPAC framework to foster programmatic revision is recognizing that all stakeholders must understand GenAl and its capabilities before engaging in these conversations. Understanding that social systems and communication channels influence the adoption rate of new technologies, offering professional development for programmatic stakeholders can build the foundational understandings needed for this type of discourse.

Scenario 1

Alex is a doctoral student in an educational leadership program. In one of their courses, they have been tasked with collecting relevant peer-reviewed research articles for a topic of their choice and writing a comprehensive literature review. While they start their research by using the online repository provided through the university library, they also use several GenAl tools to identify research articles. After downloading the articles as PDFs, Alex

uploads each article into a GenAl tool and prompts the tool to write a summary of the article and identify five important findings. Alex organizes these summaries and findings into a spreadsheet.

To support their writing, Alex uploads all of the articles into a GenAl tool and prompts the tool to synthesize the articles into themes. They also ask the tool to create an outline of a literature review they can use to write their own. While they haven't read the research articles in their entirety, Alex draws on the GenAl-created outline and summaries to craft their literature review. When they've completed their writing, Alex uses a GenAl tool to proofread their review and to check their citations, references, and formatting.

Unpacking Scenario 1

This student scenario is provided to foster programmatic conversations around using GenAl to support students' ability to consume, create, and communicate academic research. The REPAC framework can serve as a guide to approach the scenario from different perspectives and allow stakeholders to consider the broader implications of GenAl use. In this scenario, Alex's use presents a comprehensive integration of GenAl use across common activities in which a doctoral student may engage. Rather than focus on whether Alex's use could be considered academic dishonesty or not, we have identified several questions pulled from the REPAC framework presented in Figure 1 to those items that apply to this particular scenario and can guide the conversation. For example, by focusing on the core competencies within a program, stakeholders can discuss whether competencies should evolve and be informed by technological advancements like GenAl. Additionally, stakeholders need to consider the potential inequalities present in the access and use of GenAl tools and how programs can best support students. In this scenario, REPAC can support Alex and the course instructor in thinking critically about using AI and its impact on the student's learning, writing, and academic integrity. Additionally, REPAC can be a proactive tool for faculty who want to engage in open and honest coaching conversations with students about best practices with Al.

Figure 2. Applying the REPAC Framework to Scenario 1

REPAC	Student	Faculty (Includes Committee Members and Chairs)	Leadership
R Research Activities	How can students effectively use AI in their research activities, including consuming research critically, creating original research, and communicating their research effectively to practitioners and researchers?	Who is accountable for students' research when Al is used?	How can leadership equitability support students and faculty access and use of Al systems that can improve the quality of research, which includes the consumption, creation, and communication phases of research?
E Ethics	What critical concerns about AI do practitioners, leaders, researchers, and students need to consider while using AI in its different forms and evolution?	How will the faculty teach and model the ethical use of AI in academic work?	What critical concerns about AI do leadership, educators, researchers, and students need to consider while using AI in its different forms and evolution? What policies already exist that can apply to the ethical use of AI in academia?
P Programmatic Considerations		How do faculty, chairs, and committee members teach and support students' use of AI in their doctoral classwork and research?	
A Affordances	How will students know the quality and properties of the AI systems that effectively support their work and scholarship?	How will faculty discuss the affordances of AI with students?	What Al properties will support faculty and students' work and scholarship?
C Competencies	What are the core competencies that students earning an EdD degree need to demonstrate with and without AI assistance?	How will faculty embed AI competencies in their courses and advising work with students?	

Scenario 2

The EdD program team wants to address GenAl applications within the redesign of their three-year online program. Specifically, the faculty wanted to integrate discussions, tools, and ethical considerations into their decision-making process for the literature review, methods, and data analysis courses. Several faculty members are against using GenAl, and they have major concerns about students' critical thinking skills and authentic writing products. Others are adamant that aspects of GenAl be integrated into all of the courses. One faculty member is extremely concerned about ethical considerations that impact the students who span the program's various demographics, including diverse ethnicity, varied socioeconomic status, age spans from 25 to 75, and professional roles from entry-level to CEOs.

Unpacking Scenario 2

In this scenario, there are varied and alternative viewpoints on including GenAl in an online EdD program. To further the discussion, these REPAC questions can facilitate the conversation and allow for concerns and recommendations regarding programmatic structures needed for an EdD program revising and enhancing their program with GenAl constructs. For example, conversations around Affordances—the "A" of REPAC—challenge stakeholders to consider both resources and time needed for both faculty and students to engage and deeply understand various Al systems. Through these REPAC guiding questions, university leaders are tasked to uncover their own biases regarding GenAl and address student and faculty needs for the successful integration of tools and competencies. In this case, all stakeholders at the programmatic level would be included in the REPAC discussion. Faculty can and should invite student voices to the table, possibly through focus groups and subsequent pilot courses with GenAl integrations adopted by the leadership team based on stakeholder feedback. Recognizing that change, when implemented with fidelity, can bring new and

innovative structures into online programs is an exciting aspect of the REPAC model.

While the REPAC framework offers a lens for approaching both of these scenarios, different institutions may make different decisions regarding how this will inform their programmatic competencies, coursework, assessments, and guidelines. Some programs may develop additional competencies that reflect using GenAl for scholarly research and writing as Alex's story represents in Scenario 1. These programs may choose to integrate these competencies throughout their coursework. Another program, however, may choose to limit the use of GenAl tools early in the program but introduce the tools after critical research skills have been developed. With the diversity of EdD programs, diverse approaches and solutions are anticipated.

PRACTICAL IMPLICATIONS FOR EDD PROGRAMS

Faculty and administrators charged with making decisions regarding their respective EdD programs have quite the task ahead of them during this consequential time of generative Al. In support of this, there are practical implications of using such a critical questions framework, as described in this essay, for reflecting, reenvisioning, and redesigning EdD programs accordingly.

Competency development can increase by reflecting on how EdD programs consider how candidates learn with and about GenAl tools. EdD programs can build structural opportunities for their students to engage with Al tools as they grow and master course competencies, while maintaining the course instructor as the conduit of learning. Moreover, instead of forming and joining bipartite sides on whether generative Al should be used in EdD programs, moving through the critical questions in the framework allows for the potential of Al use in research activities that can support EdD students who may struggle with the formalities associated with academic writing. Storey (2023) identified several areas within the

Figure 3. Applying the REPAC Framework to Scenario 2

REPAC	Student	Faculty (Includes Committee Members and Chairs)	Leadership
R Research Activities	When and where is it appropriate for students to use Al in the research process, which includes the consumption of research, creation, and communication?	How can faculty encourage, educate, and engage students with Al research assistant systems in the research process?	How can leadership equitability support students and faculty access and use of AI systems that can improve the quality of research, which includes the consumption, creation and communication phases of research?
E		How will the faculty teach and model the ethical use of AI in academic work?	What policies already exist that can apply to the ethical use of Al in academia? What new policies need to be established to maintain ethical
Ethics			research and human accountability? How will researchers remain accountable for the ethical use of Al
			in research?
P Programmatic Considerations		When are AI systems introduced to students in the program?	How will programmatic policies need to evolve with the incorporation of Al?
		How are such systems released across the program?	What programmatic and university resources (e.g. library resources) and support will be needed?
			What supports can GenAl provide to help meet the diverse abilities and academic needs of doctoral students?
A Affordances	Will resources and time be given for students to engage and deeply understand various Al systems in order to best discern which system will support their scholarship better?	Will resources and time be given for faculty to engage and deeply understand various Al systems?	What professional development and support will leadership provide and/or cocreate for and with faculty and students?
C Competencies	What are the core competencies that students earning an EdD degree need to demonstrate with and without Al assistance?	How will faculty embed AI competencies in their courses and advising work with students?	What supports can GenAl provide to help meet the diverse abilities and academic needs of doctoral students to meet the core competencies?



editing and proofreading stages of dissertation writing where EdD students could use AI to reduce stress and maximize limited time. By choosing AI tools intentionally with EdD students to use through this framing, academic outcomes and learning will not be compromised and instead have the potential to flourish.

Through the reenvisioning of policies and practices within EdD programs, the development of thorough and accessible guidelines is at the core and a necessary outcome. When ChatGPT became publicly available in November 2022, most, if not all, EdD programs were without guidelines in place to support the use of Al by their students and faculty. Fast-forward to well into the year 2024, many EdD faculty may be relying on their institutions' general and often vague guidelines of Al use, or they are scrambling to make sense of a path forward. Even at the national level, there are myriad policies by different organizational sectors that must be dissected and interpreted (Schiff, 2022), which can also cause more confusion when trying to use those guides with specificity for EdD programs. Through the framework provided, including attention to guardrails such as ethical and responsible use of AI, EdD programs can enthusiastically boost and advance their innovative use of Al while substantially including programmatic considerations with fidelity and peripheral areas.

To better address the emergence of generative AI, this critical questioning framework can support redesigning EdD programs, curriculum, and assessments through the lens of equity, ethics, and justice. While we have shared some of the tool affordances and opportunities associated with AI use, the framework is grounded in critical questions that must be asked in order to approach Al use in EdD programs in justice-centered and ethical ways that support all EdD students. Going beyond wrestling with the technology gaps and equity issues related to access and affordability of tools, asking critical questions regarding algorithmic bias and racist outputs that may be associated with some of the AI tools in consideration is imperative.

CONCLUSION

In a summary of its report on Artificial Intelligence and the Future of Teaching and Learning, the U.S. Department of Education's Office of Educational Technology charged educational institutions with addressing the benefits and potential risks presented with GenAl. The authors write.

modifications and enhancements to the status quo will be required to address the new capabilities alongside the risks of Al. We call for the involvement of all perspectives in the ecosystem to define a set of guidelines and guardrails so that we can achieve safe and effective AI for education. (2023, p.

While this charge is clear, the complexity and diversity of educational programs and institutions require that stakeholders (faculty, students, leaders, etc.) within the programs develop the policies and practices that apply best to the curriculum being taught and the students being served. The REPAC framework offers a scaffold to assist in this process. By focusing on the research activities, ethics, programmatic

aspects, affordances, and competencies, the REPAC framework can guide stakeholders in identifying the ways that GenAl can support students and inform programmatic evolution.

REFERENCES

- Cardona, M. A., Rodríguez, R. J., & Ishmael, K. (2023). Artificial intelligence and the future of teaching and learning. U.S. Department of Education, Office of Educational Technology. https://tech.ed.gov/files/2023/05/aifuture-of-teaching-and-learning-report.pdf
- The Carnegie Project on the Education Doctorate (CPED). (n.d.). The CPED framework. https://www.cpedinitiative.org/the-framework
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319-340. https://doi.org/10.2307/249008
- Felin, T. & Holweg, M. (2024). Theory is all you need: Al, human cognition, and decision making. SSRN. http://dx.doi.org/10.2139/ssrn.4737265
- Gaver, W. W. (1991). Technology affordances. Proceedings of the SIGCHI conference on Human factors in computing systems Reaching through technology - CHI '91. pp. 79-84. https://dl.acm.org/doi/10.1145/108844.108856
- Gibson, J. J. (1979). The ecological approach to visual perception. Houghton
- Long, D. & Magerko, B. (2020, April). What is Al literacy? Competencies and design considerations. [Conference presentation]. CHI Conference on Human Factors in Computing Systems p. 1–16. https://doi.org/10.1145/3313831.3376727
- Norman, D. (2013). The design of everyday things (Rev. ed.). Basic Books.
- Rogers, E. M. (1962). Diffusion of Innovations. Free Press.
- Russo, D. (2023). Navigating the complexity of generative AI adoption in software engineering. ArXiv, abs/2307.06081. https://doi.org/10.48550/arXiv.2307.06081.
- Schiff, D. (2022). Education for AI, not AI for education: The role of education and ethics in national Al policy strategies. International Journal of Artificial Intelligence in Education, 32(3), 527-563. https://doi.org/10.1007/s40593-021-00270-2
- Storey, V. A. (2023). Al technology and academic writing: Knowing and mastering the "craft skills." International Journal of Adult Education and Technology, 14(1), 1-15. http://doi.org/10.4018/IJAET.325795
- Tomlinson, B., Torrance, A. W., & Black, R. W. (2023). ChatGPT and works scholarly: Best practices and legal pitfalls in writing with Al. ArXiv. https://doi.org/10.48550/arXiv.2305.03722
- Trust, T., Maloy, R.W., & Hilmatullah, N. (2024). Integrating AI in teacher education using the teacher educator technology competencies. In M. Searson, E. Langran, & J. Trumble (Eds.), Exploring new horizons: Generative artificial intelligence and teacher education (pp. 26-38) Association for the Advancement of Computing in Education (AACE).
- U.S. Department of Education. (2023). Handout: Al and the future of teaching and learning. Office of Educational Technology. https://tech.ed.gov/files/2023/05/ai-report-core-messaging-handout.pdf
- Yusuf, A., Pervin, N. & Román-González, M. (2024), Generative Al and the future of higher education: a threat to academic integrity or reformation? Evidence from multicultural perspectives. *International Journal of* Educational Technology in Higher Education, 21. https://doi.org/10.1186/s41239-024-00453-6
- Zabala, J. S. (2020), The SETT framework: A model for selection and use of assistive technology tools and more. In D. Chambers (Ed.), Assistive technology to support inclusive education (pp. 17–36). Emerald Publishing. https://doi.org/10.1108/S1479-363620200000014005
- Zhao, Y., Llorente, A. M. P., & Gómez, M. C. S. (2021). Digital competence in higher education research: A systematic literature review. Computer Education, 168. https://doi.org/10.1016/j.compedu.2021.104212