

Instructional Designers' Learning and Perceived Support for Generative Artificial Intelligence (GenAI) Integration in Higher Education

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The purpose of this exploratory, qualitative research study is to describe how instructional designers (IDs) learn about generative artificial intelligence (GenAI) and what kinds of support they perceive are needed to integrate GenAI in their practice and in teaching and learning processes in higher education. Fifteen professionals serving in the role of instructional designer were interviewed online using a semi-structured interview protocol. Using a systematic process of thematic data analysis, our findings show IDs in higher education learn about GenAI independently using a range of resources (e.g., online videos) and from other IDs (e.g., peers and colleagues) with experience. Formal and informal professional development opportunities for IDs and institutional subscriptions and licenses to relevant tools are necessary for GenAI integration in higher education. IDs expressed a critical need for institutions to adopt guidelines and policies for GenAI use in the teaching and learning process. A discussion and implications for both future research and practice are provided. Keywords: Instructional designers,

higher education, generative artificial intelligence, integration, learning, support.

Introduction

Generative artificial intelligence (GenAI) is one of the key technologies that is increasingly prevalent and expected to have a significant impact on higher education according to the 2024 Educause Horizon Report (Pelletier et al., 2024). AI is already being integrated in higher education for accessibility, assessment, content generation, curriculum development, feedback, and personalized learning (Bozkurt et al., 2023; Kilinç, 2023; Wang & Chen, 2023).

As institutions adopt GenAI in teaching and learning processes, instructional designers (IDs) play a key role in helping faculty implement changes in their courses and integrate GenAI for student learning (Kumar et al., 2024). They collaborate with faculty members to produce, design, and evaluate educational materials and courses in all formats (hybrid, HyFlex, blended, and online) and levels (undergraduate, graduate) across academic disciplines (Anderson et. al, 2019; Kumar & Ritzhaupt, 2017; Park & Luo, 2017). They support faculty in the integration of GenAI in their courses, developing learning resources, facilitate professional development about GenAI in teaching and learning, and wrestle with privacy and authorship concerns when integrating GenAI in their practice (Kumar et al., 2024; Luo et al., 2024).

Although IDs are tasked with the implementation of GenAI and helping various stakeholders integrate these technologies in teaching and learning processes in higher education, little is known about how they learn about technologies and what kinds of support they might need to be successful in their roles. IDs are no strangers to change and the need to learn about new technologies to implement them. However, the rapid and continuing evolution of GenAI at an unprecedented rate, and its accompanying impacts on higher education, pose complex and ethical challenges for IDs. This study is focused on the ways in which IDs learn about GenAI and what kinds of support they perceive as important to facilitate GenAI integration in higher education. The findings from this exploratory study can provide insight into how institutions and administrators can support IDs in their role as educational technology and pedagogical experts and change agents.

Literature Review

A review of prior literature revealed the critical role that IDs in higher education play in supporting curriculum development, technology integration and innovation, and professional development. However, there is little research on ID integration of GenAI and the challenges they face when using GenAI and providing faculty support with GenAI integration.

IDs' Roles and Use of GenAI

Instructional designers (IDs), sometimes called learning designer, learning experience designer, educational technologist, learning specialist, and e-learning developer (Wang et al., 2021), work in all types of institutions of higher education in the United States at various levels within the organizational structure—at an institutional, college, or departmental level. In these roles, they support faculty, staff, administrators, and often perceive their final stakeholder to be students (Kumar & Ritzhaupt, 2017). IDs have a wide range of responsibilities: They collaborate with faculty on curriculum development (e.g., instructional materials, online courses, blended courses); assist them with technology integration and teaching innovations; support them on accessibility, technical concerns, and quality assurance; and collaborate with them on research (Anderson et. al, 2019;

Kumar & Ritzhaupt, 2017; Park & Luo, 2017). Additionally, they develop and provide professional development and also one-on-one consultations for faculty, staff, administrators, and teaching assistants (Ritzhaupt et al., 2021). In their role at the intersection of content, pedagogy, technology, and innovation in their institutions, they have been perceived as change agents (Bond et al., 2023) and problem solvers (Pollard & Kumar, 2022).

Given their role, IDs are also seen as a key player in the application and ethical integration of AI into teaching and learning in higher education (Moore et al., 2024). They integrate GenAI in instructional design processes within online and blended education, use it to create instructional materials and assessments, collaborate with faculty to use GenAI to brainstorm content creation and pedagogical activities in their courses, discuss and guide the appropriate use of AI, and create learning resources and provide professional development about GenAI (Kumar et al., 2024). IDs use GenAI for all phases of the instructional design process, but more for design (e.g., writing objectives, designing instructional content, brainstorming) and low-stake tasks than in the implementation and evaluation phases (Luo et al., 2024). IDs have reported increased productivity and efficiency due to their use of GenAI (Kumar et al., 2024; Luo et al., 2024).

Challenges Faced by IDs

IDs face challenges to many aspects of their experiences in higher education, ranging from the understanding of their roles to the workloads they face to the one-on-one interactions with faculty. Their status on campus may be ambiguous, and faculty and administrators may not understand the purpose IDs serve (Chen & Carliner, 2020; Kumar & Ritzhaupt, 2017). In some cases, their credibility, expertise, and value may be questioned (Anderson, Love, & Haggard, 2019; Dykstra, 2020; Ren, 2019; Ritzhaupt & Kumar, 2015). Perhaps in part due to the lack of understanding from faculty and administration about ID roles, the workload, time constraints, and lack of resources to support their work is frequently cited as contributing to day-to-day challenges for IDs (Dykstra, 2020; Hoard et al., 2019). A key factor in the successful outcomes of ID work is the collaborative relationship with a faculty SME (subject matter expert); however, this collaboration may also be challenged by faculty's lack of incentives, time, and/or motivation to collaborate in meaningful or timely ways (Ren, 2019; Richardson et al., 2019).

As IDs increasingly adopt GenAI in their roles, they face new or amplified challenges. While it is typical for IDs to learn and grapple with the ethical use of new technologies, using GenAI for teaching and learning introduces especially complex technical, pedagogical, and ethical questions that complicate its integration. Recent studies (Kumar et al., 2024; Luo et al., 2024) highlight the unreliability, inaccuracy, and even bias within GenAI outputs, which require fact-checking, editing, and correction. Questions of creativity and authenticity in GenAI responses also arose in each study, with IDs noting that outputs can be nonsensical, artificial, and fail to reflect the authorial voice within generated content. IDs noted that to obtain quality outputs, they need skills in 'prompt engineering,' which can be time consuming to acquire. Additional questions about the role of GenAI are also explored, with some finding it useful as "brainstorming partner" (Kumar et al., 2024, p. 216) and others finding it better as "project starter than project finisher" (Luo et al., 2024, n.p.). Concerns also arose regarding the privacy of content submitted to services such as ChatGPT, as well as challenges with understanding appropriate citation and acknowledgement of GenAI output, for which standard practices have not yet been established. Finally, IDs mentioned their overall concerns with GenAI technologies relative to impacts on the environment, risks to jobs, and the cost of GenAI, as well as ethical and copyright concerns involving the training of GenAI models.

ID Learning and Support

In many ways, IDs serve as their own best forms of support for professional development through their adaptability, love of learning, and willingness to acquire new skills on demand (Dykstra, 2020; Hoard et al., 2019; Pollard & Kumar, 2022; Schwier et al., 2004). As self-regulatory learners, they identify their needs, seek out just-in-time support and collaboration, and apply their knowledge before reflecting on the outcomes and adapting their strategies (Muljana & Luo, 2023). This approach to their work adds value to their contributions, as IDs can be relied on to learn and share what they learn, at the forefront of educational innovation. It is not unusual for educational preparation for ID roles to fall short of the realities of their job responsibilities—

given the wide variety of functions, backgrounds, and expertise that instructional designers possess and enact (McDonald & Mayes, 2007). Updating the curriculum of ID educational programs may be necessary to support these individuals.

While IDs in higher education primarily seem to rely on their own curiosity, flexibility, and initiative, they also frequently find support and professional development through social media, communities of peers, and even by engaging with faculty as collaborative partners (Muljana & Luo, 2023; Rotar & Peller-Semmens, 2021; Xie et al., 2021). Additional forms of support utilized by IDs include academic publications and journals, professional organizations and conferences, and open/online resources (Ritzhaupt et al., 2020; Schwier et al., 2004; Schwier et al., 2007).

Professional Development and Institutional Support

IDs often have the responsibility of providing faculty professional development on GenAI integration in higher education teaching and learning processes (Kumar et al., 2024). As with other educational technologies, instructors need professional development to be able to use GenAI appropriately and leverage its affordances for student learning. The integration of GenAI into teaching and learning processes requires understanding the technological, pedagogical, and content knowledge related to AI (Ng et al., 2021). Furthermore, fully understanding AI technology's "capabilities and limitations, as well as how to effectively use them to supplement or enhance specific learning processes" (Kasneci, 2023, p. 6) is also essential. In an environment where AI in education is projected as potentially leading to the replacement of instructors and causing the loss of human agency in the process of education, professional development can highlight the effort expectancy, influence attitudes, and help to dispel myths or unrealistic expectations with respect to these technologies (Bozkurt, 2023; Chatterjee & Bhattacharjee, 2020). Gillani et al. (2023) state that "demystifying AI is an important first step towards understanding its inner workings and applications" (p. 99). Kasneci (2023) makes several suggestions for professional development in the form of needs-based professional development, case-based guidance, exposure to best practices, participation in faculty communities, and open educational resources.

IDs perform these responsibilities within an institutional context and its facilitating conditions that influence AI adoption in higher education (Bozkurt, 2023; Chatterjee & Bhattacharjee, 2020). At a minimum, institutions should ensure the availability and maintenance of hardware that supports the high computational demands of Large Language Models (LLMs), the "implementation of robust data privacy and security policies," as well as the collection, storage, and use of data in a regulatory and ethically compliant manner (Kasneci, 2023, p. 8). Additionally, strategic planning at an institutional level, as well as institutional support, are needed to ensure an AI-literate student body and to make AI integration in the curriculum a reality (Southworth et al., 2023). Institutional support for curriculum development, AI integration in existing curriculum, incentives for educators, and the creation of guidelines can facilitate the appropriate and ethical integration of AI in higher education (Kasneci, 2023; Southworth et al., 2023).

Purpose and Research Questions

The purpose of this study was to explore how IDs learn about GenAI and what kinds of support they perceive are needed to integrate GenAI in their practice and in teaching and learning processes in higher education. The following research questions guided this study:

1. How are instructional designers learning about GenAI?
2. What kinds of support do instructional designers need to integrate GenAI in their institutions?

Methodology

A general qualitative approach was adopted in this study to investigate IDs' experiences learning about GenAI and to understand what types of support they need (Merriam & Tisdell, 2016). We conducted semi-structured interviews with open-ended questions that allowed us to explore and ask questions (Patton, 2002) to further clarify participants' responses.

Participants

We invited approximately 80 instructional designers through a network listserv at a large public university, including educational technologists, learning designers, or others holding similar titles, to participate in the study. They were invited to fill out a short survey that began with institutional review board (IRB) and informed consent information, followed by the question, "Do you use generative AI (e.g., ChatGPT) or are you involved in the use of generative AI?" If participants answered "yes" or "I'm not sure" about their use of GenAI, they were routed to an open-ended question asking them to briefly describe how they use GenAI. This was followed by demographic survey items (e.g., title, role, department, highest educational degree) and a question about their interest in interview participation. Twenty-two participants completed the survey, of which 15 agreed to participate in interviews. Of these 15, one indicated "I'm not sure" but described their concrete use of GenAI in the open-ended question, so they were invited to an interview. Eight participants were male (53%) and seven female (47%). Twelve held instructional designer positions, and three were educational technologists or education and training specialists. All the participants held master's (87%) degrees or doctoral (13%) degrees. Sixty percent were employed in central units that supported academic technologies, online programs, and human resources, and 40% worked in college-specific units. Fourteen of the 15 participants worked at the same university, which has strategic goals for AI adoption across the curriculum and has invested considerable resources in AI.

Data Collection

The semi-structured interview guide was created and then refined with feedback from two IDs who did not participate in this study for feedback. This refinement process resulted in changes to the sequence of questions. The final interview guide included questions about participants' roles, use of GenAI in curriculum development and with faculty, how they learned about GenAI, and what kinds of support they perceived were necessary to integrate GenAI successfully in teaching and learning. We asked probing questions to further understand or clarify participants' responses. The focus of this paper is participants' learning, their professional development efforts and their perceptions of support needed.

The online Zoom interviews lasted between 35 and 50 minutes each, were conducted by one and often two researchers, and were recorded with participant permission. We also took brief field notes to document the nature of the interactions. We first checked each automated Zoom transcript for accuracy and then shared it with the interviewee to make changes, edits, or deletions. Due to the inconsistent automated Zoom transcript formatting, some participants requested or made formatting and syntax edits but requested no content changes. Each transcript was assigned an identification number beginning with "ID" regardless of participants' job titles and all identifying information was deleted (e.g., course names or numbers).

Data Analysis

Braun and Clark (2006)'s six phases of thematic analysis were used to analyze the data. Three researchers engaged in data familiarization and one researcher generated the initial codes and categories based on all the transcripts. Following a meeting to discuss the initial codes and categories, the two other researchers independently engaged in a second round of detailed coding. During a second meeting, all three researchers reviewed and discussed the codes to identify themes. They then engaged in an independent review of themes against the larger dataset and met a third time to finalize the themes and select examples.

Trustworthiness in this study was ensured by having the initial survey and interview guide reviewed by IDs, conducting member checking, using multiple coders, and maintaining an audit trail and field notes (Lincoln & Guba, 1986).

Results

In this section, we briefly describe the roles and responsibilities of the IDs who participated in this study, followed by two large sections on how IDs are learning about AI and what support they perceive as valuable for their integration of GenAI in higher education.

Notwithstanding their titles of learning specialist, educational technologist, instructional designer, etc., all the participants in this study were engaged in the design, development, or delivery of content for online or blended undergraduate or graduate curriculum or for training and professional development. They worked closely with faculty to create course content, learning activities and assessments; provided support to faculty and students for technologies, innovations, and accessibility; and assisted with course quality by conducting course reviews. Several IDs also provided professional development related to teaching, including that focused on GenAI; one-on-one consultations on curriculum development and teaching; and held conversations about academic integrity, student use of GenAI and assignment or syllabus policies related to GenAI.

How IDs are Learning about AI

Our first research question centers on how IDs learn about AI tools for the application to teaching and learning in higher education. The themes show IDs are learning independently using a range of resources, and from the support and guidance of their colleagues and peers. However, IDs also expressed challenges with learning about AI tools and responsible uses.

IDs Learn on Their Own Through Various Resources

Twelve of the 15 participants in this study shared that they learned to use GenAI on their own using various resources. IDs felt a responsibility to learn about GenAI to be able to explain it or use it with faculty, so they experimented with new technologies as they encountered them, heard about them, or were asked about them. ID15 felt that they had to “be like an advocate” to also enable faculty “to adopt innovation and try and new things.” IDs used verbs such as “play,” “experiment,” “try,” “test,” “jump in,” “hop in,” “check it out,” “figure it out,” “taught myself how to” and “trial and error” to describe how they learned about GenAI. ID1 stated that they “go and look for information,” while ID2 acknowledged, “of course I don’t know everything. So, when folks reach out and they’re like, ‘Hey, do you know about this? Can you help me with this?’ I’m like, ‘Nope, but I can get back to you in a day.’”

In trying to learn on their own, IDs in this study used various resources. They searched and found a lot of information online, through social media such as Twitter and LinkedIn (e.g., by following educators and researchers), through blogs, and on YouTube. ID2 explained how they use YouTube to find videos about whatever they wanted to learn or what they didn’t know how to do. ID4 shared how they learned,

Through the people that I follow on Twitter, on LinkedIn...I’m seeing people say, ‘Wow, check out this tool,’ or someone sends me a link that’s like, ‘Check this out. I saw this on’ whatever. That’s how I’m finding out about tools primarily.

IDs learned by reading books, technical publications, manuals, guides, online magazines (e.g., Wired magazine) and newsletters, and from resources they received through subscribed listservs and emails. They emphasized the importance of research to learn how AI is being applied in various contexts, to understand the “discussion around it,” and to “be educated.” The importance of learning about new technologies to the ID role was highlighted by ID14 who said,

when a new tool comes out as an instructional designer, I feel like I have to know the tools, affordances, challenges, concerns. I feel like, if I don’t research that I’m not a good ID. And even though for the moment I have to do it outside work, I still feel that it contributes to my growth professionally. So, I do research. I read a lot.

Other resources used by IDs were online discussion forums within professional organizations, resources offered by their own university, university LibGuides, and GenAI itself (e.g., researching machine learning or generative AI using an LLM). In addition to resources, IDs also learned from training, conferences, and webinars offered both within their university and elsewhere. LinkedIn Learning and Coursera courses were mentioned by two IDs, while others shared that they had attended university workshops, research webinars, and trainings. One ID had attended conferences on the topic while another was learning more about AI in their graduate program. Two IDs also explained that they had collaborated with faculty members who worked with AI and had learned about AI while developing their courses and materials.

IDs Learn From and With Other IDs

Although the IDs in this study primarily learned about GenAI technologies by trying them out, they also narrated how they shared these resources with other IDs and learned from other IDs. Participants discussed GenAI with their colleagues, shared their resources that they gleaned from their networks, and asked for assistance and consulted other IDs. Three IDs described participating in groups that met regularly, read about, and discussed AI technologies or AI research. Almost all the IDs in this study described a collaborative environment within their teams or institution. ID4 described learning “through people that I know on my team, who are also plugged in who have their own networks,” while ID6 described the sharing of GenAI capabilities, stating, “we’re constantly messaging each other on MS Teams like, Hey, did you see you could do this?” One ID was able to engage student interns in their team and shared how they were able to learn from how their interns integrated GenAI in their work.

Some IDs described how their teams intentionally decided to learn together. ID1 shared that their team had made a “concerted effort to do professional development together relating to it [GenAI].” In addition to giving themselves “homework” to play with the technology and its capabilities and then share their experiences, they also discussed other issues related to GenAI.

ID13 described learning to use GenAI together with their team during team meetings in the following manner:

We created a strategic plan about the time ChatGPT was released. And we’re like, what does ChatGPT think a mission statement should be, what does ChatGPT think our new branding name should be? So we started asking it to participate with us as a team, and I think that we’ve adapted because we became comfortable with it, and we became more aware of what its strengths and weaknesses were.

Five IDs reflected on the culture of learning at their institution, and the emphasis placed on AI integration by their institutional leadership and on their learning about AI by their unit leadership. They received many emails with resources and opportunities that encouraged them to explore and learn about AI. ID6 described how their director would ask them “to think about AI, think about how you can be using it in your courses, share it with everybody,” while ID13 stated that their director “very much encourages us to be innovative...to grow.” ID5 said,

I guess leadership in our unit is very big on and interested in AI. So they would share resources with us and would encourage us to try things like our director might send an email and be like, ‘Hey, this is a cool new tool, you guys try it out. Let me know how it is.’

Challenges When Learning About AI

IDs mentioned that the challenge with trying to learn about AI was that there was too much information about LLMs since OpenAI became prevalent. They found it overwhelming to keep up with the number of new GenAI tools that were becoming available, the emerging new versions of various LLMs, and the evolving capabilities of these various technologies. ID 11 said, “There’s so many things out there that you don’t know what’s good, what’s not, what’s worth it.” IDs were also receiving a lot of information about webinars or training within their institution and from professional organizations. Along with the information overload, they lacked the time to participate and also pointed out that these offerings were mostly targeted at instructors, not instructional designers. Some IDs found themselves learning about GenAI outside of work hours, with ID15 stating, “I just have

to work overtime, on the weekends” to learn. ID12 had decided “that it’s okay to not learn everything that’s out there in trying to learn all these new tools” because they were still evolving at a fast pace.

Support for IDs’ Integration of AI

When asked what kinds of support they need with respect to their role in integrating AI at their institution, IDs in our study identified two main areas: support for IDs and institutional support. The former comprised of resources that could help IDs and that they could use with faculty, and opportunities for professional development and sharing or connecting with other IDs about GenAI. In terms of institutional support, they proposed subscriptions and licenses for AI tools, opportunities for faculty sharing and the need for clear guidelines, policies, and strategies.

Resources for IDs

The most frequently stated form of support for IDs was the provision of resources for IDs —that they could use to learn about GenAI, to integrate it in their practice, and to work with faculty.

IDs suggested that the creation of a repository at their institution of AI tools, templates, examples, current research, best practices, and other resources would greatly help them with their various responsibilities. ID11 stated that the repository would not just contain the various technologies but include notes about “problems that IDs face or things that IDs can do,” such as “you need to do this to use this tool.” ID3 similarly suggested that the repository should include not only updates and new technologies, but also explanations of the capabilities of the technologies, for example “here’s this new tool for making PowerPoints with AI.” ID5 suggested a resource that would explain which GenAI technologies could be used, and how, for specific instructional design tasks. Likewise, ID14 suggested an updated list of best practices for IDs’ use of GenAI within the repository. Three IDs shared how they used a resource at their university that taught people how to create prompts for various tasks. They believed there was a need for additional resources specifically for IDs that explained how to use prompts for specific purposes.

The need for examples and templates that IDs could use was expressed by several participants. Examples IDs would like to see encompass how other IDs were using GenAI for development and training, as well as how GenAI is being used within courses by faculty. IDs made statements such as “I would like to learn what other people do” (ID10) and “examples of...what other universities are doing” (ID6). ID5 suggested the sharing of examples within their university in an internal place such as Microsoft Teams. They also stated that templates with prompts for ID tasks such as the creation of course pages, rubrics, etc. that they could copy and paste into GenAI interfaces would be helpful. ID10 explained,

...a lot of time you see the final [GenAI] product, right? But you don’t see the process, and the process sometimes is as important, how they come out with that...when people see an image generated by AI, a lot of times people ask, what is the prompt that you use to get that?

IDs suggested that the repository should also contain templates, examples of GenAI use, tutorials, and cheat sheets that they can use in their work with faculty and that could be available for faculty use. These should be “easy to digest,” not “intimidate people,” provide “key pointers on how to enter a good prompt,” and help faculty learn how to use GenAI. ID8 reflected that varied resources would be needed both for faculty who were just beginning to try GenAI and for “early adopters” who had already begun sharing their ideas. Some IDs also emphasized the need for syllabus templates or “boilerplate language that faculty could use for the syllabus.” ID12 believed faculty would also value student-focused resources on AI literacy. In addition to the resources they could use with faculty, a couple of IDs reflected that the development of presentations that IDs could use or a packaged workshop that IDs could offer to any department that requested it would be helpful. ID12 explained that such a workshop could be delivered “to a smaller group of people that want to have an in-depth discussion about how it affects their particular interest and needs.”

IDs also reflected on their need to keep up to date and learn to use GenAI technologies other than ChatGPT in order to understand their functionalities and help faculty integrate them. ID2 shared how they had collaborated with a professor to use a new AI technology in a class, but it “became a nightmare because it didn’t end up going well, or something didn’t end up functioning as we thought it would.” They thus suggested the provision of a “safe space” where IDs could “play around” and test out other new AI technologies. They described it as an “area to just kind of feel your way through and learn through...Just like a sandbox.”

Formal and Informal Professional Development for IDs

IDs expressed a need for professional development specific to instructional designers that is focused on the use of GenAI and its integration of teaching and learning. They used terms such as “instructional design-focused professional development” (ID2), and training “specifically for instructional designers” (ID9). ID9 explained, “I’m thinking about training that I’ve had and, some of it was generally what is AI, kind of how it works, very general...When it was specific to education, it was ...for faculty and not for instructional designers necessarily.”

In addition to formal professional development, several IDs wished to have opportunities to connect and share with other IDs about how they use GenAI. They provided several suggestions for informal professional development such as online spaces and regular meetings where IDs could share different ways in which they use GenAI and discuss new technologies, research, and strategies. They emphasized that learning with and from IDs who worked differently from them, used other technologies, and worked in other disciplines would be helpful. Three IDs made the following suggestions for a working group, meetings, and a roundtable:

this working group where everyone can have, like virtual roundtables with each other and conversations, and we could share things that we learn. I think that could be really fruitful as a resource. You know that way I’m not just kind of sitting here with my team...there’s like tons of other IDs and educational technologists...maybe Microsoft Teams...with different channels for specific things that we can all collaborate in. I think that would be great. (ID15)

meetings where instructional designers from across campus will come together, and you know, just kinda share. Hey, what are you working on? And just kinda learn about like some of the different technologies that are out there, and some of the different approaches that people take from different departments and also like across disciplines as well...have the opportunity to, you know, have, like diverse perspectives and hear how other people are utilizing the technology in in various ways. (ID2)

just have a round table discussion. So that way, we can all, you know, just talk about what we know and what we don’t know...go and learn things...I think that would be really supportive to me... (ID14)

IDs shared that the above opportunities would be valuable to them because they struggled with their workload and lack of time, especially during work hours, to learn about GenAI and often worked only within their own team. For instance, ID6 stated that these opportunities would ensure they are not “just kind of sitting alone and just kind of feeling my way through like, oh, what is this technology and just kind of learning about it on my own.”

Institutional Support

Institutional support emerged as a large theme when IDs were asked about the types of support that could help them in their role. They mentioned subscriptions/licenses, institution-wide opportunities for sharing about AI, and clarity of guidelines and policies.

Subscriptions and Licenses

IDs highlighted the need for institutional licenses of the latest versions of various Large Language Models and access to software that enabled the creation of chatbots. IDs believed that this was essential for them to be able to learn and use the

capabilities of GenAI. IDs asserted that institutional licenses would alleviate the need for individual subscriptions or payments within course development units or academic departments, and justifications for paid premium versions would not have to be provided by faculty or IDs. Some IDs emphasized that institutional licenses would enable faculty to experiment with GenAI without having to worry about signing up for accounts or paying for licenses, which was a deterrence for some faculty whom they had worked with and for their work with faculty. ID4 stated, “we are limited by free trials to services...often with some of these tools, a lot of the really good functionality is paywalled...And then, on top of that teaching some of these tools becomes challenging because there is a paywall.”

Institution-wide Opportunities for Sharing About AI

Most of the IDs shared that formal professional development opportunities for faculty to learn about GenAI were available at their university, but that additional opportunities for faculty to share with each other and discuss AI use would help not only the faculty but also IDs in supporting faculty. They proposed “meet and greet in-person events where people could both vent and share about their perspectives every once in a while” (ID12) and “some kinds of communities of practice that could kind of grow and develop organically” (ID8). ID11 also suggested that colleges could choose a book or resource about GenAI that everyone in the college could read and discuss.

IDs stated that discussions focused on the ethics of AI use for research, grant-writing, tenure and promotion applications were also needed, and ID6 proposed incentives for creating courses that integrated AI. They said,

I would like to see some sort of financial support that like, if you want to rethink your course, we’ll give you a stipend to think about it and implement some of these tools and be our pilot...I would love to see some like AI pilot courses where, like, they really push the limits, and then we could see what worked and what didn’t and then sort of disseminate it.

Finally, IDs reflected that a needs-based approach would also be helpful to them, where they could have a forum to learn about whether faculty want to try using GenAI and for what purpose they want to use it. ID10 also suggested holding a roundtable discussion to “talk about what kind of needs they [faculty] have in teaching and learning and like, and most of them at this point know about generative AI, and just sort of asking them like, you know, what are your questions about it?”

Clarity of Guidelines and Policies

In a context where university strategic goals included an emphasis on adopting AI in teaching and learning, IDs shared that guidance and policies from the institution on where and how AI was allowed to be used were needed. Many IDs used phrases such as “clear policy” and “clarity about policy and guidelines.” They provided several examples for areas where guidance was needed, such as GenAI use in the course development process, creation and use of images within online courses, student GenAI use in assignments, and AI use in research. Faculty often approached IDs with questions about the use of GenAI in these areas, but IDs found there was no university-level policy or guidance available, and both IDs and faculty had to make their own decisions. While acknowledging that there is not a “one-size-fits-all answer,” ID12 stated that “people have wanted policies or statements,” while ID2 expressed the need for clear guidelines on “things that we will accept” and “these are things that no, you shouldn’t do when utilizing AI.” Likewise, ID3 stated that “consistent messaging” could ensure that IDs were not doing anything that was not appropriate. ID4 also reflected on the fact that AI was “still so new” and changing rapidly, so the “implication of all these tools” made the creation of policies challenging. The ethics of using GenAI for various purposes had been a focus of discussion in several college and department level meetings, according to some IDs.

Discussion

Our findings from this exploratory, qualitative research study highlight several key concepts related to how IDs learn about and integrate GenAI into their work in higher education institutions. However, before discussing the findings, we should address the

limitations of this research study. First, our small convenience sample includes 15 IDs, 14 of whom are employed at the same institution that strongly encourages AI use across disciplines and may have influenced these participants' use of AI. As such, this sample may not be representative of IDs in similar roles at institutions in which the integration of GenAI may differ. Specifically, the institutional context may have led our participants, and the faculty with whom they collaborate, to be more engaged in the integration of GenAI in teaching and learning than in other contexts. Furthermore, IDs' perceptions of support at their institution are shaped by their experiences and institutional context. Finally, while we sought to ensure the trustworthiness of our study using various methods such as member checking and peer coding, data was collected solely through semi-structured online interviews. Including additional data sources for triangulation may have strengthened our findings.

Despite these limitations, this study provides useful insights into the inner workings of IDs in higher education as they integrate GenAI. Several IDs were overwhelmed by the number of GenAI tools and choices available and often have uncertainty about when, where, how, and which GenAI tools are ethically responsible applications to support teaching and learning in higher education. Time to learn about the tools and their appropriate uses was a major challenge. While IDs clearly face challenges to learning and integrating GenAI, they learn about the tools both independently using a range of resources (e.g., social media) and from other IDs who serve as their colleagues and peers; this is similar to how they have learned technologies prior to GenAI (Dykstra, 2020; Pollard & Kumar, 2022). Independent learning about GenAI by IDs included following topics and people with expertise on social media, webinars and online discussions from professional associations, online resources in Coursera and LinkedIn Learning, and even internal resources like library guides. Consistent with previous findings (Muljana & Luo, 2023), IDs in our study reported learning about GenAI from their fellow IDs, who are colleagues and peers. They formed learning communities in their units to "learn together" and support each other as they explored the possible applications of GenAI to teaching and learning. These results are consistent with prior research that emphasizes the necessity of lifelong learning and professional development for IDs to grow and continuously adapt and evolve in the profession (Ritzhaupt & Kumar, 2015; Kumar & Ritzhaupt, 2017).

IDs noted that organizations and individual units must have leadership and a culture of learning that supports the adoption and integration of GenAI. Institutions of higher education with a strategic goal to integrate GenAI into the teaching and learning process can facilitate the adoption and integration by providing support structures and resources to both IDs and faculty at their institution. Establishing an institutional repository of AI tools, templates, examples, current research, best practices and other resources, as suggested by IDs in this study, would greatly help them with successful GenAI integration in the teaching and learning processes. An institutional repository is a form of knowledge management, which is a common best practice among IDs (Spector, 2002). IDs, like any professional, can also greatly benefit from formal and informal professional development opportunities to stay abreast in the field. They should be provided incentives and financial resources to pursue their professional learning about emerging tools and topics like GenAI. Attending a professional conference (e.g., EDUCAUSE, POD, OLC) to network with other IDs can be an effective way to motivate and develop IDs supporting faculty in higher education (Ritzhaupt et al., 2020).

Administrators in institutions of higher education must consider providing faculty and IDs institutional subscriptions and licenses to GenAI tools coupled with a culture of learning and strategic focus on GenAI adoption, all of which are a prerequisite for integration. Beyond the appropriate tools and resources, institutions can also provide intentional and systematic opportunities for IDs and faculty to share their experiences and expertise about different use cases and teaching and learning situations in which GenAI was either successfully or unsuccessfully used. These opportunities are usually regularly available to faculty, but opening them to include IDs as valuable stakeholders is an important step to encourage widespread integration of GenAI. IDs in institutions of higher education are value-adding professionals who, like any other professional, require the right tools and opportunities to learn and grow within their organizations.

There is also a critical need for higher education institutions to adopt guidelines and policies for the responsible use of GenAI in teaching and learning, and to communicate these clearly and frequently to both IDs and faculty (Jin et al., 2025). Since the use of GenAI in teaching and learning has the potential to violate an institution's values and academic integrity guidelines

(Yusuf et al., 2024), clarity is required for faculty, IDs, administrators, and even students on the responsible and ethical applications of GenAI tools to the teaching and learning process. For example, while some uses of GenAI are clearly inappropriate (e.g., plagiarism), other situations are less clear and often have varying interpretations about responsible use (e.g., using GenAI to assist in the creation of various learning or assessment resources or integrating it into the instructional design processes to streamline IDs production efforts). IDs increasingly find themselves in a precarious position of teaching faculty and peers how to use this technology while navigating ethical questions without the benefit of clear expectations or guardrails to govern its usage (Kumar et al., 2024). To address these challenges, institutions and administrators must engage in collaborative policymaking with all stakeholders about the use of GenAI. Given their expertise in pedagogy and technology integration, IDs should be seen as key partners—and even leaders—in this policy-making process. This collaboration should focus on defining responsible and ethical use, developing comprehensive guidelines for integration into teaching and learning, and creating opportunities for ongoing conversations to ensure the guidelines remain current as the technology evolves.

Implications for Practice

This research has clear implications for IDs and administrators serving at institutions of higher education. If an institution strategically focuses on the adoption and integration of GenAI tools in their context as an imperative, then several pieces of a complex puzzle should be considered. As with the adoption of any innovation, the end-users must have access to the technologies, opportunities to practice with them, have clear benefits to their use versus the status quo, and find the tools relatively easy to use. Further, to encourage early adoption and integration of GenAI into teaching and learning, institutions must nurture a culture of learning, offer formal professional development opportunities, provide opportunities for peer sharing and learning, and facilitate the knowledge management within the institution. Meanwhile, IDs must embrace lifelong learning and their own professional development, swiftly adapt and evolve as technologies change and mature, and support one another in the sharing of best practices. While GenAI is not a panacea, it offers IDs affordances unavailable in previous generations of information and communication technologies, potentially improving efficiency, work productivity, and student learning experiences. Institutional support can help IDs stay on top of new developments and make informed decisions for implementation in practice.

Implications for Future Research

The use of GenAI in instructional design presents research opportunities to further improve outcomes in teaching and learning and stimulate the work productivity and quality of IDs. However, we currently know very little about the best applications and uses of GenAI in IDs' work within higher education. One obvious possibility for future research is the need to collect a larger, more diverse sample of IDs working in higher education across geographical boundaries to gauge GenAI integration and needs and potentially generalize findings to the larger population of IDs in higher education. Future efforts might also solicit work examples where GenAI has been applied and test these learning solutions for their efficacy with students in their disciplines or programs. Additionally, longitudinal studies following IDs' evolving use of GenAI technologies across different contexts could provide insights into how the technologies impact ID workflows and teaching and learning outcomes.

Another critical area for research is exploring IDs' motivations for integrating GenAI—external factors such as institutional goals or industry trends or internal factor such as desire for professional growth—which can guide the development of professional development and inform institutional strategies. Future studies can also explore how integration of GenAI impacts the professional identities of IDs, including how it impacts their roles and perception of their craft. Finally, documenting the collaborative design and development processes between faculty and IDs could help fully account for GenAI applications in teaching and learning. The advent of GenAI in the work of an ID offers fruitful research opportunities to further advance the craft of instructional design and our knowledge of teaching and learning across disciplines.

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