

**Needs Assessment on the Role of Generative Artificial Intelligence  
for an Instructional Design Curriculum  
Final Report**

Team 1

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## Executive Summary

Over the past year, there has been an unprecedented surge in the proliferation and development of Generative Artificial Intelligence (GAI) technology. The adoption of GAI has been cross-cutting as it spans diverse sectors, such as information technology, healthcare, education, commerce, entertainment, and beyond. While the experimentation with GAI is ongoing, its role in the education sector for teachers, students, and those who work in Instructional Design (ID) has yet to be fully understood. The following report assesses the need and role of GAI for an ID Curriculum and the education field at large.

The needs assessment team conducted interviews, surveys, and a focus group discussion with Instructional Design and Development (IDD) faculty and graduate students to understand their perspectives and experiences with GAI. The findings revealed an inherent duality in perspectives on GAI, describing it as a powerful educational tool and resource, while simultaneously challenging the ethical values and academic integrity of students on the other. The participants expressed the need for professional development opportunities pertaining to GAI for IDD instructors to utilize the opportunities it presents and harness its potential. Moreover, the findings also suggested the need for proficiency training for faculty members and students on using and navigating GAI tools. The findings also showcased differing levels of understanding, experience, and literacy amongst students and faculty, resulting in varying GAI use and adoption. The results also indicated the need for empirical research and studies on GAI and its potential impact on IDD and education. The findings also underscored the need to remain abreast of ongoing developments and research in the field, as it impacts IDD and education.

The report recommends potential strategic solutions for Phase III of the Needs Assessment process. Enhanced professional development programs (for faculty and students) geared towards improving AI literacy as well as critical thinking skills; research on AI's impact on education; resolving concerns around ethical and academic integrity and the use of GAI; and coming up with AI-specific policies and procedures regarding its use in education are some of the suggestions made by the needs assessment team to better facilitate effective yet responsible ways to integrate GAI within the educational landscape.

## Introduction

According to Altschuld and Kumar (2010), “a need is a measurable gap between two conditions - ‘what is,’ the current state or status, and ‘what should be,’ the desired state or status” (p. 3). The study attempts to gauge the current state of ID curriculum at the University of South Alabama and determine if there is a discernible gap in what it should be given the advent and proliferation of GAI in education.

### Needs Assessment Team

The following study on the role of GAI in the ID curriculum is being carried out as a part of the graduate seminar within the Instructional Design and Development (IDD) program. The team comprises four graduate students enrolled in the ISD 640 Needs Assessment (NA) class. The team conducted a pre-assessment of the given issue, where the team members collected primary and secondary data. The findings warranted an in-depth study and informed the planning and implementation of Phase II.

### Statement of Needs

- Is there a role GAI can play in the ID curriculum? If so, what would that look like?
- Is there a need for the integration of GAI within the field of ID curriculum?

### Scope and Boundaries

The following study was carried out with the students and faculty members at the University of South Alabama. As such, the scope of this study is mainly **Operational**, given that the findings from the assessment have direct implications for the decisions concerning daily operations and implementation at the university level. Faculty members, instructors, and teaching assistants can use the findings and recommendations to inform their use of GAI and define protocols for its use within their ID curriculum and teaching practices. The findings will also inform the use of GAI within the ID processes. The study is also **Tactical** in scope, as its findings can inform policies, procedures, and strategic decisions within the Department of Instructional Design and Development regarding the use of GAI.

### Stakeholders

The study is limited in scope as it primarily pertains to **Level 1** and **Level 2** needs. Level 1 is concerned with the needs of immediate recipients of services or products. Students, clients, customers,

and community members at the receiving end are examples of Level 1 needs. Level 2 is the secondary level, which consists of individuals or entities that provide services or products. For this study, students enrolled in the IDD program are Level 1 stakeholders, whereas the faculty members and teachers within the IDD department are Level 2. The study has vague implications for *Level 3*, the larger system that supports Levels 1 and 2. For the given study, the University of South Alabama is at Level 3 of needs, as the findings can potentially inform the University's plans and strategies for using GAI.

### **Needs Assessment Process**

We carried out the NA study using the following three Phases:

#### ***Phase I: Pre-Assessment***

In the pre-assessment phase, the team conducted preliminary research on the role of GAI in the ID curriculum. The team conducted informal interviews with key stakeholders, such as the faculty members, to assess whether there is a need or role for GAI in ID.

The team also took stock of the existing literature and scholarships on the role of GAI in education and ID. The findings from the Phase I pre-assessment pointed to the prevalence of performance issues, gaps, and unmet needs regarding GAI in the ID curriculum. The Phase I report findings warranted a Phase II and recommended the next steps for Phase II of NA.

#### ***Phase II: Assessment***

Given that the Phase I report suggested unmet needs, Phase II was concerned with identifying areas of concern and defining those unmet needs using appropriate data collection methods. Phase II is where we carried out the NA.

The team collected data from key stakeholders such as faculty members and University of South Alabama students. Team 1 conducted a focus group discussion with five faculty members both within and outside of the IDD department, while Team 2 conducted surveys with students and semi-structured interviews with faculty members on the issues identified in Phase I.

### ***Phase III: Post-Assessment***

While the study was limited in its scope to advance into Post-Assessment, the study does provide recommendations, potential strategies, and solutions for implementation. The study also provides pointers on dissemination and communication strategies to secure relevant stakeholders' buy-in for the implementation phase.

### **Phase I: Pre-Assessment**

For the pre-assessment, the team collected data from informal interviews with five faculty members. The two faculty members were from the University of South Alabama IDD program, whereas the other three were from other universities. The interview questions probed the perceived role of GAI in the ID curriculum and explored potential needs, concerns, opportunities, and threats it presented. The team also collected secondary data on GAI and carried out a brief review of the literature present in GAI and education.

### **Findings from interviews**

The faculty members generally harbored a positive outlook toward GAI. They thought that rather than viewing AI as a threat, IDD practitioners should explore areas where we can expand and work with AI and leverage it. Assessments, grading, task analysis, and creating curriculum, instruction, and instructional materials were some areas where the faculty members saw the potential for AI integration. The faculty member also raised the need for professional development opportunities to learn, grow, and adapt to the changing education landscape with GAI.

One faculty member noted, "The success coaches are beginning to work with students regarding the use of GAI so that if a student comes to them and has used AI to develop portions of a paper," and noted the use of that draft as a starting point to help the students effectively complete the guidelines or criteria of the assignment. "The exercise is to help students understand that the use of AI can be a good starting point but is not a be-all-end-all tool." The faculty raised concerns about academic honesty and integrity with AI's use in education, noting the potential biases and inaccuracies in AI-generated information. They emphasized the need to educate both teachers and students on responsible and ethical

AI usage. Additionally, they highlighted how AI, while useful, can hinder learning due to its lack of social interaction and human connection.

### **Findings from Literature Review**

The team conducted an EBSCOhost OneSearch using the terms “Generative Artificial Intelligence” and “College” and “Curriculum,” yielding fewer than 100 peer-reviewed academic journals. The articles covered diverse themes, including concerns about student use of GAI, technology limitations, and arguments for educational advancements.

Dai et al. 's (2023) article, "Reconceptualizing ChatGPT and GAI as a Student-driven Innovation in Higher Education " explored ChatGPT's role in higher education, and portrayed it as a student-driven innovation, emphasizing personalized learning experiences and the need for AI literacy. The article addressed challenges in academic integrity and urged collaboration for responsible ChatGPT integration.

Mejia and Sargent (2023), in "Leveraging Technology to Develop Student’s Critical Thinking Skills," highlighted AI's role in critical thinking development. They identified helpful instruments and discussed benefits like enhanced critical thinking, collaborative opportunities, and challenges such as confusion and distraction.

The article by Dwiveldi et al. (2023), "So what if ChatGPT wrote it?" delved into GAI opportunities and challenges across multidisciplinary perspectives. The author noted positive industry gains but highlighted risks like data privacy breaches and biases. The authors recommended further research on AI-related issues.

The final article, "Empowering Education through GAI: Innovative Instructional Strategies for Tomorrow’s Learners" (Kadaruddin, 2023), investigated the applications of GAI in education. It outlined benefits like personalized learning experiences and adaptive assessments alongside challenges such as ethical concerns. The article stressed ongoing collaboration for the ethical integration of GAI into education.



## Areas of Concern Identified

A cursory review of the existing literature on the role of GAI in Education coupled with informal interviews with the faculty members resulted in the identification of the following concerns or needs from the preliminary assessment:

- There are many benefits as well as challenges to incorporating AI in education.
- There is a need to equip students and faculty/instructors with tools and resources to improve their competencies in AI literacy and critical thinking to effectively engage with GAI
- Ethical and academic integrity concerns regarding using these tools in education need refinement.
- Need for more evidence-based, empirical research on impacts on education, ID, and curriculum.

## Additional Data for Needs Assessment

The preliminary research/pre-assessment findings point to the need for an in-depth assessment of needs and gaps in identifying and defining the role of GAI in the ID curriculum. The table below provides the rationale behind proceeding with Phase II: Needs Assessment:

**Table 1**

Areas of Need	Level of Need	Concerns, Resources, Solutions	Actions Required /Not Required
<b>Capacity building</b>	<b>Level 1:</b> Enhance student AI literacy. <b>Level 2:</b> Faculty develop seamless GAI curriculum integration.	<b>Level 1:</b> Confirm AI support needs for IDD students. <b>Level 2:</b> Survey faculty for AI experience and identified needs.	Further research is needed to identify and define the nature of the need for capacity building in AI.
<b>Ethics and GAI</b>	<b>Levels 1 &amp; 2:</b> Tackle ethical, integrity, and plagiarism issues in GAI academia.	Academic dishonesty, data privacy, accuracy, algorithm transparency, and biases in GAI.	More research is needed to clarify unmet needs in GAI ethics.
<b>Current use of GAI by students and faculty.</b>	<b>Levels 1 &amp; 2:</b> Explore GAI practices in student and faculty use. Integration in learning, teaching, and ID.	Lack of enough information and research on the issue.	Require evidence-based research for effective solutions and strategies.

## **Phase II: Assessment**

### **Data Analysis**

Each of the three methods was analyzed first, and then the findings were reviewed collectively.

### ***Faculty Interview Method***

Team 2 conducted semi-structured interviews with professors from the College of Educational and Professional Studies Department of Counseling and Instructional Sciences to gather qualitative data on their experiences with GAI in higher education. The teams developed the interview questions in a two-step process, where Team 2 created the protocol, and Team 1 provided feedback that they then integrated into the finalized version.

### ***Research Questions***

1. What GAI tools have you used, and how do you utilize them?
2. How comfortable are you using GAI tools, and what's your perspective on ID benefits?
3. What's your assessment of the current level of GAI literacy among faculty?
4. How familiar do you think students in your class are with GAI?
5. Where do you draw the ethical line around GAI and academic integrity?
6. Have you attended professional development or conferences addressing AI in higher education?
7. Do instructional designers guide faculty with GAI, especially those outside ID?
8. What GAI competencies do you think IDD program graduate students need?
9. Where does GAI instruction fit into the existing ID curriculum?
10. How do you see GAI scholarships expanding in the IDD program in the next few years?
11. Can GAI users develop their thinking, and how do students learn to use it ethically?

### ***Participants***

Team 2 conducted two faculty interviews for this NA. Dr. Yuxin Chen and Dr. Joe Gaston, both from the University of South Alabama's IDD department, were selected for their insights into how faculty at the university address GAI in ID.

## *Analysis*

This interview was conducted online via Zoom, and the conversation was recorded and then transcribed using Zoom for data analysis. The transcript was then organized and summarized for easier coding and analysis to see what themes and patterns emerged in the discussion. The team used no software; this analysis was organized and coded by hand. Overall, there were five themes identified in the interview: i) application of GAI tools, ii) perspective on GAI as an educational aid, iii) GAI literacy and integration, iv) ethical use and future implications, and v) student learning and GAI interaction.

## *Results*

**i. Application of GAI Tools:** When asked what GAI tools he has used, Dr. Chen stated that he uses ChatGPT and ChatVDP for tasks like email writing, information search, and content editing. In academic writing, he highlights the need for clear instructions to ensure accurate content generation. Dr. Chen acknowledges the tool's general language proficiency but cautions against its limitations in specialized or academic contexts, emphasizing a collaborative and iterative approach.

Dr. Gaston has used GAI to create art. He shared that he has used Stable Diffusion, a GAI model that produces unique photorealistic images from text and image prompts.

**ii. Perspective on GAI as an Educational Aid:** Dr. Chen said that he is confident using GAI tools, emphasizing the adaptability of GAI as a valuable assistant in tailoring prompts to individual needs. He drew on his experience developing a 3D multiplayer educational game, highlighting the potential of natural language processing in educational tools. However, he remained vigilant about biases in these tools and considered the profit motives of the companies behind them. This perspective highlighted the dual role of GAI as a powerful educational aid and the need for critical evaluation.

Dr. Gaston mentioned that students have quickly figured out ChatGPT; however, he is still determining if it helped or wrote papers for them. But for the most part, students are unaware of other generative platforms outside of ChatGPT. He also mentioned that he is comfortable using GAI in a sense. He is more open to jumping in and exploring it. Similarly, he is still trying to think through ways that GAI would benefit him and the different aspects of his work.

**iii. GAI Literacy and Integration:** When asked about their assessment of faculty GAI literacy, Dr. Chen explained that he had observed varying levels, with some faculty members having expressed excitement but needing more practical experience. He noted that the growing prominence of tools like ChatGPT was identified as a driving force behind faculty members exploring ways to incorporate it into their teaching methods. The need for ongoing discussions and awareness initiatives among faculty regarding using GAI in educational settings emerged as a critical aspect.

Dr. Gaston stated that he could not imagine their GAI literacy level was not exceptionally high. He says that some faculty members will embrace it and explore it, but others will be more reluctant to use it because they are unaware of GAI's capabilities. Dr. Gaston also addressed some concerns about faculty needing to accept technology and how to utilize it fully.

**iv. Ethical Use and Future Implications:** The interview delved into Dr. Chen's perspective on the ethical use of GAI, particularly in academic settings. He emphasized the importance of establishing clear guidelines and "hard scaffolds" in assignment design to ethically guide students in GAI tools. Additionally, fostering a sense of social contract within the learning community was identified as crucial for promoting responsible and appropriate use of GAI. This theme highlighted the intersection of technology, ethics, and academic integrity.

On an ethical level, Dr. Gaston expresses how GAI concerns him on a level that goes beyond the writing portion. As a musician, he is concerned about what happens when GAI begins creating music or movies. He states that it is "really cool" but frightening for humans because now they will have "stiff competition." Dr. Gaston also explains that the topic of ethics needs to be discussed concerning students' use, especially regarding copyrights.

**v. Student Learning and GAI Interaction:** Dr. Chen had not explicitly discussed GAI in his current class. Still, he reflected on his experience, informed students about GAI tools, and provided guidelines for ethical use. He noted the potential pitfall of unnatural language tones in student-generated content, signaling a need for future discussions on proper usage. This theme underscored the importance of integrating discussions on GAI into educational settings to enhance awareness and responsible use.

Dr. Gaston has played around with GAI in his classes. He has incorporated all his classes' modules and activities that look at AI. Even though it is mainly introductory material, he is still trying to expose his students to this. He says, "We're just at the cusp of what's gonna happen." At this point, Dr. Gaston has not started utilizing it to develop things within his classes, but he's opening the doors for his students to explore and wrap their heads around what's coming soon.

### *Discussion*

Dr. Chen's interview highlights GAI's diverse impact on higher education, underscoring the need for tailored professional development for faculty with varying literacy levels. Targeted workshops can empower educators to integrate GAI into disciplines practically while addressing ethical concerns. Dr. Chen advocates for foundational AI knowledge in existing courses, such as statistics, for IDD graduates. He suggests research areas like assessment impact, collaborative learning, and ethical considerations.

Dr. Gaston anticipates GAI's impact on higher education, acknowledging its inevitability and emphasizing the importance of staying ahead. He expresses concerns about AI's potential role in creating music and movies but remains optimistic about its scholarly aspects. Dr. Gaston encourages IDD students to explore AI-related dissertation projects and is excited to learn more about the application of GAI in instructional technology. He compares AI to an asteroid with potential for unprecedented advancements.

### ***Faculty Focus Group***

Team 1 organized a Focus Group discussion with five faculty members from within and outside the IDD department at the University of South Alabama. The Focus Group, a qualitative data collection tool, fosters discussion on specific topics or issues, gathering diverse information and perspectives. Led by a moderator, the systematic and structured format enables simultaneous input from multiple participants. We chose this method to collect information and viewpoints efficiently, fostering synergy in topics, themes, and content through participants' contributions.

Team 1 conducted the focus group online over Zoom and recorded it with participants' consent. The moderator, a member of the NA team, stated the background and purpose of the focus group, including ground rules at the beginning, and set the tone for the discussion. The discussion focused on

five major questions/issues set as the discussion points and used Round Robin, Critical Incident Technique, Brainstorming, and SWOT Analysis to generate discussion.

### *Research Questions*

1. Based on your experience or understanding, how would you evaluate the effectiveness of GAI in education, especially when thinking about course design?
2. Can you give specific examples of how you or your colleagues use GAI as a teaching tool or in their curriculum? If you have yet to use GAI, what keeps you from doing so?
3. What role do you think GAI plays in IDD?
4. How can the IDD department better prepare its department and students to navigate GAI better?
5. [SWOT] Strengths, Weaknesses, Opportunities, Threats you foresee with the use of GAI in education, be it in curriculum development, assessments, ethical concerns or research.

### *Analysis*

We carried out the focus group online via Zoom. The discussion was recorded and then later transcribed for data analysis. We coded, segmented, and analyzed the transcript for themes and patterns that emerged in the discussion. Altogether, we identified four themes in the transcripts: i) overall experience with GAI, ii) perceived effectiveness of GAI, iii) role of GAI in IDD, iv) instances of its use, v) possible approaches, vi) perceived benefits, vii) weaknesses of GAI.

### *Results*

**i. Experience with GAI:** The participants generally expressed having limited knowledge and experience with GAI. One of the faculty members felt responsible for educating students about AI, its advantages and disadvantages, and its ethical use. Participants also expressed their interest in exploring and learning about the use of GAI and how they, as faculty, can navigate that with students. Another participant described having some experience teaching students how to use AI as it seemed unavoidable, particularly in media production. So, they learned how to use it effectively and safely.

**ii. Perceived Effectiveness of GAI:** Participants mentioned needing more research, degree of practice, and experimentation to gauge the effectiveness of GAI. They said that more time is required before we can evaluate the effectiveness. To accomplish such an evaluation, we need a plan and figure out a research track. Another participant mentioned how education is so varied that people have different levels of understanding about the applications of GAI and its effectiveness.

When considering GAI's application and effectiveness for education and instruction, organizing content, chunking, sequencing, and generating content on a topic were mentioned. One participant found AI effective for generating content and streamlining processes such as sequencing academic calendars. While the participants agreed on GAI's usefulness, they also expressed concern over plagiarism issues as it generates content sourced from numerous other places without citing or giving due credit to the authors.

**iii. Specific Examples of GAI Use as a Teaching or Curriculum Tool:** One of the participants mentioned using GAI for citation mining. The GAI tool (Research Rabbit) expedites finding content to support writing and identifying articles so one does not miss seminal articles or noteworthy work within a given research field or topic. Another participant mentioned another GAI tool that is useful when reorganizing pre-written content for an academic conference proposal.

Another faculty member said they encouraged students to use GAI to explore topics for a thesis paper instead of prohibiting them from using it. This way, students could use GAI constructively, where they eventually come up with their thoughts and ideas as they progress in the write-up process.

Conversely, another participant mentioned their creative use of GAI by having students upload their resumes to the GAI tool and asking it to generate introductions for the students. The students then read the GAI-generated introductions aloud to the class before having it fact-checked. This exercise helped students understand the risks of blindly relying on GAI as the tool took liberties with students' introductions by embellishing it with false information about them based on their respective resumes. The participant uses this exercise to kick off the discussion on using GAI in class.

**iv. Role of GAI in IDD:** When asked about GAI's role in IDD, apart from its use in academia and research, participants highlighted its potential for multimedia production, adhering to Clark and Mayer's multimedia principles. Storyline, Adobe, and Canva use integrated AI that helps generate pretty much anything you need. They noted the role GAI plays in expediting production. The participants also mentioned using GAI in writing and fixing codes and stated the 'instantaneous' nature of GAI's ability to generate something.

Moreover, the participants also shared the need to keep up with the rapidly changing landscape and capabilities of GAI as educators and instructional designers if one chooses to be in this field. The participants also noted that building expertise, determining which is best for what use, when to use or not, etc. will be critical. Furthermore, the participants highlighted the need for a class or a workshop to build a uniform understanding of ethics and GAI.

**v. Possible approaches to prepare faculty/students to navigate GAI:** Faculty training was deemed vital for a consistent understanding of AI, enabling the adoption of GAI. Addressing diverse faculty attitudes is crucial for equitable knowledge distribution and promoting a unified approach, allowing faculty to convey a consistent stance to students. Enhancing students' information literacy while educating them on using GAI appropriately was also considered essential. The university could enhance literacy by offering programs, webinars, and information sessions on do's and don'ts regarding GAI. The participants echoed the need to establish clear and consistent policies on GAI use for student conduct and academic purposes.

**vi. GAI's Perceived Advantages:** Faculty members highlight several advantages of GAI. It offers quick access to vast information and synthesizes it to generate new knowledge and ideas, streamlining processes and improving time efficiency. GAI levels the playing field, especially for disabled people, by enhancing access to information and creative tools. It aids in conducting efficient, systematic reviews assessing the efficacy of various approaches to speed up research. GAI also breaks language barriers, increasing global accessibility to information. Notably, its contributions to the healthcare industry, such as imaging and diagnosis, are significant.



**vii. GAI's Perceived Weaknesses:** When asked about AI's weaknesses, participants mentioned how ethical challenges arise due to ongoing experimentation with GAI, making it challenging to establish clear ethical perspectives. Inherent biases within GAIs stem from the language and data models they are trained on, leading to biased and misleading information. Participants also noted how the digital divide widens, creating a greater separation between the privileged and disadvantaged regarding access to GAI. Potential misuse, plagiarism, impersonation, data breaches, and privacy concerns highlight the risk of exploiting GAI opportunities. There's a risk of overreliance on AI for creating media and written content.

### *Discussion*

The focus group highlighted uncertainties and the rapid evolution of GAI, emphasizing the need for evidence-based practices in IDD and education. The participants recognized GAI's research benefits but raised concerns about ethics, plagiarism, and data privacy. Furthermore, the participants unanimously stressed the training needed for faculty and students to understand general AI use and policies. Additionally, the participants called for consistent classroom policies and interdisciplinary collaboration for organizing informational sessions and webinars.

### ***Student Questionnaire***

Team 2 distributed a questionnaire to all graduate students enrolled in the IDD program via the IDD Graduate Association (IDDGA) Canvas course site and the IDDGA Facebook group. The survey featured a mix of quantitative and qualitative questions but leaned mostly toward quantitative data. It was completed by 21 students, either fully or partially. All responses contributed to data collection. The 15-question survey included true/false, Likert scale, and open-ended questions, culminating in a prompt for participants to describe their intended use of GAI for IDD purposes.

### *Research Questions*

1. I can confidently provide a definition of GAI.
2. I can confidently articulate how GAI can be integrated into instructional design.
3. I understand the general operating principles of GAI.
4. Below is a list of Generative AI tools. Please identify which tools you have used.

5. If you selected other above in Question 5, please identify the tools below.
6. Have you used GAI tools to complete assignments for any of your IDD courses?
7. Please list GAI tools that you have used.
8. I have ethical concerns about the use of GAI in education.
9. Rank what you perceive to be the most important ethical concerns from highest to least important.
10. How familiar are you with research examining the pedagogical applications of GAI?
11. In the past 6 months, how many empirical studies on GAI have you consulted?
12. Are you currently or are you interested in pursuing an AI-related research project?
13. I believe that learning about GAI will increase my effectiveness as an instructional designer.
14. I am excited about the application of GAI in education.
15. Articulate how you plan to use Generative AI for instructional design purposes.

### *Analysis*

Qualtrics provided graphs and charts, created from student questionnaire responses, which were used for analysis. The charts provided information on percentages relating to the responses, while the graphs provided a visual perspective to the data. The questions about the four recurring themes were grouped and analyzed. Table 2 shows the four themes compared with the percentage of participants who agreed (to whatever extent) disagreed (to whatever extent), or were neutral.

**Table 2**

<b>Theme</b>	<b>Ave. % of Participants positive response</b>	<b>Ave. % of Participants negative response</b>	<b>Ave. % of Participants Neutral</b>
Use of Tools (Question 6)	4.76%	95.24%	N/A
Understanding of AI (Questions 1&2)	58%	32%	5%
Increase Effectiveness (Questions 13 & 14)	64%	10%	21%
Ethical Concerns (Question 8)	71.43%	28.57%	N/A

## Results

Looking over the data from the questionnaire four themes emerged, including i) a low level of experience working with GAI, ii) basic understanding of GAI, iii) belief that gaining an understanding and mastering the application of GAI would enhance their performance as an instructor, and iv) most of the participants had ethical concerns surrounding using GAI in education.

**i. Experience Level:** The questionnaire responses recorded a low confidence rate among the respondents for using AI tools (Questions 4, 6, and 14). For example, Question 4 which lists the GAI Tools and asked the participants which tools they had used, ChatGPT was the only one that had been used by more than half of the respondents (66.67%). The tool that had the second highest usage rate was Scribe with only 33.10% reporting that they had used it. However, in contrast, when asked about their excitement level in using GAI, 47% responded positively.

**ii. Understanding of GAI:** For the first question, “I can confidently define GAI,” half of the respondents (75%) recorded that they somewhat agreed (50%) or strongly agreed (25%) with this statement. As well, the majority (50%) agreed with the statement in question 2 that they could explain how GAI could be used in instructional design. However, only 39% of the respondents said they had an understanding of the general operating principles of GAI.

**iii. Understanding Benefits:** Another interesting finding from the questionnaire, although most of the participants had not really used GAI, is that the majority responded that they agree or somewhat agree with question 13, “I believe that learning about GAI will increase my effectiveness as an instructional designer.” To the same point, almost half of the participants recorded that they are excited about applying GAI by choosing “strongly agree” to the statement in question 14.

**iv. Ethical Concerns:** Most respondents expressed ethical concerns about using GAI in education, with over 71% affirming such concerns. Academic integrity was the primary concern, identified by over 60%. Other issues like copyright, privacy, bias amplification, and data provenance were less prominent, with privacy being the only other concern over 10%.

## Findings

### ***1. NEED: Professional Development Opportunities Pertaining to GAI for IDD Instructors***

The data the team collected from the Surveys, Interviews, and Focus Group points to the need for more educational opportunities for instructional design and development instructors with regard to GAI. As shown in the survey data only about half (58%) responded that they understood AI. The focus group discussion revealed that the faculty emphasized the importance of having a good grasp of GAI in order to work it into the curriculum. The interviews with faculty point to more intentional AI initiatives for IDD faculty. Both Dr. Chen and Dr. Gaston conferred that most faculty had little understanding and therefore had not fully embraced the use of GAI in the educational environment. Specifically, Dr. Chen discussed how targeted AI workshops would be a great addition to the professional development for faculty. These targeted workshops could be focused and address issues like ethical concerns or the use of GAI tools and skills development.

Professional development for faculty needs to include education on the advantages of GAI in educational settings. The focus group offered several advantages for using AI in the curriculum. One such advantage is quicker access to large amounts of information. Dr. Rand, an instructional designer for the Marx Library, added that GAI allows for immense amounts of information to be synthesized which generates new knowledge and ideas. Another example discussed by the focus group was how it can create a more equitable platform for disadvantaged groups, specifically those with language barriers since they can use it for translation purposes.

### ***2. NEED: Education Opportunities Pertaining to the Ethical Concerns for AI***

The focus group reported it is important to address diverse faculty attitudes toward GAI. Since almost all the respondents reported that they have ethical concerns around GAI use in curriculum development, there is a need for faculty education regarding how this tool can be incorporated into curriculum development while still maintaining ethical standards. As well, the focus group collectively reported that if the faculty understood AI better, then they could educate the students on the correct use and application of GAI. As seen in the interviews, questionnaire, and focus group discussions, the

majority of those who participated are excited about GAI and see it as a resource. Most of the questionnaire respondents answered that they felt using GAI would help them to be more effective instructors. Therefore, again this data suggests that there needs to be more emphasis on educating the faculty in regard to how to use this tool ethically.

### **3. *NEED: Proficiency Training for faculty and students on how to use and navigate AI tools***

One of the needs that was identified in Phase 1 was research on the use of AI by faculty and students. From the data collected from all three of the research mediums used it was clear that proficiency training was needed for use of AI by not only students but also faculty of IDD. For example, most of the faculty who participated in the focus group indicated that they had little knowledge and experience with GAI tools. As well, in the faculty interviews both with Dr. Chen and Dr. Gaston, they agreed that most faculty had little understanding and hadn't fully embraced the use of GAI in the educational environment.

From the questionnaire data, there was a definite need for skill training opportunities for faculty and students. Most of the respondents had only ever used ChatBot and were not familiar with the other ten tools that were listed. And even the use of ChatGPT was only a little over half of the respondents (66.67%). From this data, one might suspect that the small percentage of use is due to low proficiency and skills regarding AI use, especially since ChatGPT is now built into many popular browsers like Chrome, Firefox, Opera, Edge, and Safari. Therefore, as mentioned in the focus group discussion, there is a need to help instructors understand these tools as well as how and when to apply them and which tool is the best for different scenarios.

In terms of training, the focus group additionally reported the importance of understanding diverse faculty attitudes toward GAI. With this knowledge, training could help unify an approach to its use in the department. A uniform approach to its use would help with proficiency for students since they would then be seeing it used in similar ways in their courses which could lead to a better understanding and mastering of AI.

#### **4. *NEED: Ongoing Research About GAI***

Another need that was identified in both the interviews and the focus group discussion was ongoing research. Dr. Gaston shared that he felt GAI was going to continue to have an impact on curriculum development and therefore it is important to stay updated on its use. The focus group participants spoke of the rapid pace of change in AI and how it is so important for faculty to stay informed not only about how to use it themselves but also about how students are using the tool. The focus group emphasized that research done by the IDD department about GAI is the most important piece for the education of the faculty and students.

#### **Discussion**

Faculty focus groups, interviews, and student questionnaires reveal shared concerns and usage patterns of GAI in education. Both faculty and students recognize the technology's potential: faculty discuss its practical applications and stress the importance of literacy in GAI, while students highlight its educational benefits and relate their personal experiences. This comparison of faculty and student viewpoints offers valuable insights for developing effective GAI integration strategies.

Both faculty and students express ethical concerns, particularly regarding plagiarism and privacy, and exhibit a keen interest in specific tools like ChatGPT. Faculty members emphasize the adaptability and potential benefits of GAI, delving into its broader impacts and underscoring the necessity of literacy and awareness in educational settings. Meanwhile, students' belief in the technology's role in enhancing instructional design is evident in their questionnaire responses, which provide a glimpse into their confidence levels and hands-on experiences with these emerging technologies.

#### **Phase III: Post-Assessment Recommendations**

The recommendations provided by the needs assessment team in Phase III, following the Phase II assessment, offer a comprehensive and responsible approach to integrating artificial intelligence into the educational landscape.

- 1. Enhanced Professional Development:** The committee strongly advocates for the implementation of comprehensive professional development programs. These programs are

designed to effectively educate faculty, staff, and students on navigating the complexities of AI, focusing on the responsible and ethical use of these technologies.

- 2. Augmenting AI Literacy and Critical Thinking:** It is essential to equip both students and faculty with advanced tools and resources. These should be aimed at significantly enhancing their proficiency in AI literacy, coupled with an emphasis on developing robust critical thinking skills, thereby preparing them to adeptly handle AI-related challenges and scenarios.
- 3. Empirical Research on AI's Educational Impact:** The committee underscores the urgent need for more rigorous, evidence-based empirical research. This research should primarily focus on understanding the multifaceted impacts of AI on educational practices, instructional design (ID), and curriculum development, to ensure informed decision-making in these areas.
- 4. Addressing Ethical and Academic Integrity Concerns:** There is a pressing need to confront and resolve ethical and academic integrity issues that arise from the utilization of AI tools in educational contexts. This involves developing a clear framework and guidelines to ensure these tools are used in a manner that upholds academic values and ethical standards.
- 5. Formulating AI-specific Policies and Procedures:** The creation of well-defined policies and procedures specifically tailored to the use of GAI is crucial. These policies should govern student conduct and academic use, ensuring that AI tools are integrated into the educational environment in a responsible and beneficial manner.

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## Appendix A: Logic Model

### Title of Program: Needs Assessment on the Role of GAI for an Instructional Design Curriculum

Situation (Gaps and Priorities)	Inputs (what we invest in the program)	Outputs: Activities	Outcomes (Impact) Short Term Results	Outcomes (Impact) Medium Term Results	Outcomes (Impact) Long Term Results
<b>Gaps:</b> - Lack of evidence and research on the role of GAI within the field of education including ID -Lack of uniform understanding and familiarity with GAI within instructors and students alike to determine its definite role  <b>Priorities:</b> - Build a understanding of GAI amongst instructors and students - Identify the needs or lack thereof for GAI within education and ID Curriculum and establish its role as to what and when it is supposed to help accomplish or play a facilitative role	<b>Resources:</b> -A team of researchers enrolled in graduate-level NA class. -Research/Needs Assessment on the Role of GAI for an ID Curriculum	Number of surveys and interviews conducted with faculty/instructors -Number of studies/literature reviewed (secondary sources)  -Number of focus group discussions carried out.  -Pre Assessment Report  -Final NA Report	Identify the state of GAI and its integration or lack thereof within ID Curriculum  Identify the needs for GAI within ID Curriculum  Analyze and prioritize needs. Identify potential solutions.	Make programmatic and policy level recommendations to address the identified needs.  Design program or policy intervention around those needs.	Implement the program and address the stated needs.  Monitor and evaluate the program outcomes and impact.  Based on the evaluation findings, make necessary changes and improvements to the program to close the gap.

**Program Theory:** If the role of GAI within Instructional Design Curriculum is clearly understood and articulated, instructors and students alike can become competent in integrating GAI and harnessing its potential within instructional design and teaching.

#### Assumptions:

- There is buy-in from instructors, teachers, and concerned stakeholders for the research process including decisions and program/policy recommendations stemming from it.
- Instructors/teachers and students are interested in learning about GAI and are open to its integration within learning and education.

**Appendix B:****TEAM CHARTER****Purpose:**

The Team 1 charter lays out the plan and steps needed to complete the goal(s) of the assessment, defines leadership and team roles, and outlines the expectations for team communication and interaction. The plan will also be used to communicate benchmark goals and other pertinent information to the stakeholders and key team members for decision making purposes and to keep them engaged throughout the assessment.

**Background:**

The team is conducting a needs assessment on “the Role of GAI for an Instructional Design Curriculum.” All of the members of the team are students at the University of South Alabama participating in the instructional design graduate program who plan to teach or work in the instructional design field. The assessment is targeted to current students and faculty in instructional design and development to help gain an understanding of AI and identify its use, benefits and drawbacks, as a tool in curriculum development. This needs assessment will not have an estimated cost attached since it is a project for a course. The life span of the assessment will be the fall semester 2023.

**Scope:**

Team 1 aims to conduct a needs assessment for GAI that will provide a working understanding of AI, the current applications of AI in the IDD curriculum, and gaps that exist in its application.

**Team Composition:**

This team comprises four graduate students from the Instructional Design and Development (IDD) program at the University of South Alabama. Each member is considered an essential core member, enrolled in the Fall 2023 section of ISD 640 Needs Assessment course. Their commitments over the 12-weeks of the team's involvement include:

- **Weekly Meetings:** The team will hold weekly meetings on Fridays via Zoom, with each meeting expected to last approximately 30 minutes to an hour.
- **Weekly Assignments:** Members are responsible for completing weekly assignments generated during these meetings. Assignment time varies based on its complexity.
- **Communication:** All team members are added to a group chat for project-related communications and reminders.
- **Additional Meetings:** Other meetings may be scheduled closer to due dates if needed.

### **Membership roles:**

Although specific roles have not been finalized, the team is currently distributing work evenly to develop the initial deliverables, which includes this Team Charter (Jones 1-3, Bosarge 4-6, White 7-9) and the first set of Meeting Logs (Chhetri). Each member possesses similar capabilities in IDD, and bring their own individual expertise. Specific roles have been designated in the project, and everyone will collaborate in each role. Roles and expertise are as follows:

#### **Team Leader**

Name: Sanju Gharti Chhetri

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Expertise: IDD and Project Coordination

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Expertise: IDD and Artificial Intelligence

#### **Reviewer/Editor**

Name: Charity White

Organization: University of South Alabama

Phone: 251-656-4797

Email: charitywhite@southalabama.edu

Expertise: IDD and Higher Ed Academic

**Team Empowerment:**

Each team member holds inherent existing authority derived from their expertise in Instructional Design and related fields, providing a strong foundation for effective contributions to the project.

**Additional Authority Needed:** While unspecified in the document, the team may require expanded access to resources, institutional support, and decision-making authority beyond their individual qualifications to fully realize the project's objectives.

**Level of Empowerment Requested:** The team seeks a substantial level of empowerment, enabling them to coordinate tasks, monitor progress, conduct in-depth research, analyze data, and make critical decisions within their respective roles. This empowerment is essential to effectively fulfill their responsibilities and contribute to the project's overall success.

**Team Operations:**

When it comes to our team's decision making process, we have a group chat setup, where we will text each other for quick responses. We have also made arrangements to meet on Fridays @4 pm via Zoom to touch bases with each other and discuss what progress we have made throughout the week. If there is ever a time where we may have a question or need to consult with our instructor, Dr. Rogers, we will send an email.

**Team Performance Assessment:**

Our group set deadlines to make sure that our group remains on a set schedule. We have also created a shared folder in Google Docs that houses all of our research and communication documentation. Related, we have created a group chat where we can exchange messages and keep our lines of communication open. During our weekly Zoom meetings we are able to go over each other's work and provide feedback and support. Not to mention, reviewing our meeting logs from previous meetings to make sure we are making progress on this project.

**Acquisition milestones and schedules**

#### Week 2 - 09/01/23

- Initial meeting, divvied up Team Charter task, set deadlines for next meeting, created group chat

#### Week 3 - 09/09/23

- Discuss Team Charter
- Start Pre Assessment Phase 1

#### Week 4 - 09/15/23

- Discuss literature review articles and research
- Discuss collected informal data
- Identify what we already know and what we need to know.

#### Week 5 - 09/22/23

- Begin working on Preliminary Report
  - Assign sections amongst group members
- Discuss interview/survey results

#### **Signature Page**

- Cathi Jones
- Charity White
- Erin Bosarge
- Sanju Gharti Chhetri

#### **Approval**

(Individual[s] authorized to approve the team charter, including granting the authorities requested above, signs with their approval.)

- Cathi Jones
- Charity White
- Erin Bosarge
- Sanju Gharti Chhetri