Generative AI and the Development of Assignments that Promote Critical Thinking and Ethical Application in Counselor Education

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Abstract

Students have gravitated toward the convenience of artificial intelligence (AI) to generate text, music, and for entertainment. Faculty are also emerging as AI consumers. Given that faculty workloads have become increasingly difficult to manage, AI holds promise for assisting with teaching and research. In this article, a pedagogical case study is presented with findings from two courses where generative AI was implemented to facilitate graduate student learning through assignments created that aligned to course objectives and lessons. Findings and implications are discussed.

Keywords: artificial intelligence; counselor education; counseling ethics; counseling; pedagogy

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The emergence of generative artificial intelligence (AI), including technologies used to create content such as pictures, video, and text (Pavlik, 2023), have begun to shift the educational landscape for students and educators. Examples of such generative AI technologies include ChatGPT, Socratic, AirMath, and OddityAI. Generative AI synergizes information, pulling from countless data sources simultaneously, which makes this technology both an exciting innovation and one of concern (Hughes, 2024), particularly if the technology retrieves data from sources that perpetuate misinformation or that are unreliable. Given the accessibility and ease of use of generative AI, students may not sufficiently balance the information gaps, ethical concerns, and problems of intellectual property (e.g., properly crediting original sources) when using AI for academic assistance.

Beyond student use, faculty have emerged as consumers of generative AI. Given high faculty workloads packed with invisible service (Walker, 2023), generative AI holds promise for

assisting university faculty in many capacities including improving educators' workload manageability while simultaneously customizing students' learning experiences. In an era where colleges and universities are demanding increased student enrollments and university faculty are stretched by decreased resources, AI might enhance faculty members' effectiveness when used judiciously. In this article we examine ways that two-university faculty used generative AI to refresh classroom lessons in one semester to update curricula and engage students.

Generative AI Use by Faculty

Recent literature is replete with information on emerging technologies designed to enhance student learning and promote educational access. However, these technologies are often met with mixed reviews. Qadir (2023) noted that previous technologies, such as Massive Online Open Courses (MOOCs), also entered the fore among enthusiasts and cynics only to have less impact than initially estimated and, in some cases, feared. A study conducted by Aljaraideh (2019) underscored two important findings about MOOCS that may be relevant when applied to the emergence of AI: MOOCs were considered most useful by faculty when they related to a particular student's learning style and when implemented as a tool for bridging the gap between teaching and learning. In other words, the modality itself may not be a more critical focus than effective use of the technology. Prior to using a particular technology, faculty might ask themselves:

1. Who does this technology work best for?
2. When does it work best for them?
3. In what ways does it work best?

When the COVID-19 pandemic occurred, many educators found themselves ill-prepared to face the challenges of online teaching on platforms like Zoom, Google Classroom, and Microsoft Teams. However, as colleges and universities faced these difficulties and faculty gained proficiency in online teaching technologies, hybrid and online distance learning enrollments increased from pre-pandemic levels to post-pandemic levels (United States Department of Education [US DoE], 2022). This shift has likely made learning more accessible for students who do not have transportation or whose work and school schedules conflicted.

Workload Manageability

Faculty workloads have increased considerably from 1987 to 2021 according to a report for the American Association of University Professors (AAUP) authored by Colby (2023). As a greater emphasis on accountability structures, specialized accreditation, and increased student enrollment/fees has transpired, there has been a simultaneous and substantial decrease in full-time, tenure-track faculty positions. Currently, only 24% of university faculty are full-time, tenure-track faculty. Universities have instead opted to focus on hiring contingent faculty (i.e., graduate assistants, adjuncts, and part-time faculty) (Colby, 2023). This leaves the relatively few full-time faculty members responsible for an inordinate and time-consuming workload. This work is often completed without credit for accomplishing tasks as it is often labeled service (e.g., writing letters of recommendation, writing accreditation and accountability reports, advising students, evaluating student workers, serving on committees for the university, college, department, and mentoring students). AI may offset some of these tasks in the future, thus reducing some faculty workload. Indeed, AI has already been used for tutoring and virtual reality training programs with success (Zawacki-Richter et al., 2019). Generative AI has promise for assisting with even more tasks if used with specified prompting (e.g., letters of recommendation, writing handbooks and evaluation reports).

Barrett et al. (2019) maintained that, as AI becomes more sophisticated, future iterations may assist higher education faculty and staff with advisement tasks by prompting students to enroll and register for courses. Further AI refinement could aid students enrolled in advanced courses with research tasks; for example, linking students with library resources and statistics tutorials that meet their distinct needs (Barrett et al., 2019). Universities have purchased AI programs such as Grammarly to assist both faculty and students with editing manuscripts eliminating wait times for editorial support in writing centers on campus and reducing the amount of time faculty spend editing theses and dissertations, although Grammarly does not address content and methods. Moreover, AI may be used for curriculum development, which we address in greater depth in this article.

Education and AI

A report by the U.S. Department of Education (2023) lists three reasons for studying and understanding AI in education: (a) to achieve educational priorities at scale with less expense (e.g., providing learning resources for greater numbers of students), (b) to understand the systemic risks and general anxiety concerning AI (e.g., fears that educators will be replaced), and

(c) to anticipate unexpected and unintended consequences of AI use. Central to the U.S. DoE (2023) inclusion of AI in learning is the concept "Always Center Educators" or ACE. ACE means that AI and other technologies are only considered useful if they are positioned as support for educators. In listening sessions with educators, the US DoE found that the greatest future concerns teachers had about AI were algorithmic transparency, user data control, engaging diverse stakeholders, evaluation for bias, diversity of product development teams, and defining what is meant by AI.

Shubham et al. (2021) and Schiff (2021) advocated that AI has great potential for tutoring, instructional differentiation, and student engagement. Schiff (2021) discussed the potential for both positive and negative consequences in future AI technologies. For example, regarding instruction and differentiation, ideally AI would integrate individual information on students so that it would be able to accommodate their best learning styles, motivation, social-emotional development, and cognitive level to support their instructional needs (Schiff, 2021; Shubham et al., 2021). Conversely, because AI uses information that exists on the internet, it may learn about educational and pedagogical paradigms from biased sources and databases (Schiff, 2021). Therefore, a negative AI outcome might be algorithms that display bias for or against groups of students based on demographic factors (Schiff, 2021).

Integrating Generative AI Assignments in Graduate Courses

The authors attended an online webinar on AI provided by their university in Spring 2023. Afterward, in discussions about AI use and students, the authors decided to examine AI and its potential uses (specifically ChatGPT©). The authors examined AI use in the following contexts: (a) working on the program handbook, (b) writing letters of recommendation, and (c) developing assignment rubrics. Qadir (2023) suggested that one new skill for educators to focus on with the emergence of generative AI is incorporating AI tools in lesson plans. So, we took Qadir's suggestion and asked ChatGPT "How can educators incorporate AI tools in lesson plans?" (ChatGPT personal communication, August 3, 2023). ChatGPT generated a list of 13 ways in which AI tools could be integrated in lessons including the use of ChatGPT to stimulate a Q & A session, student debates and discussions with ChatGPT, scenario simulations, ethical and societal discussions, etc. Following is a description of three ways the authors used generative AI within their courses to meet an identified student learning need.

Theoretical Framework

The theoretical foundation for this study was Constructivism. In this section we will review a few basic principles of the Constructivist approach. A key concept is that knowledge is constructed; this means that students are not passive learners, rather, they actively engage in material, reflect on what they are learning, and make sense of learning based on their lived experiences and context (Alt, 2016). Because learning is active and contextual, it is also a social and communal activity, co-occurring in educational spaces with other learners and in relationships with family, colleagues, and individuals known to the learner outside the educational space (Hirtle, 1996); therefore, opportunities for collaboration and discourse are inherent to learning in Constructivist and Social Constructivist models of learning. Knowledge is personal, but culturally laden; thus, language mediates the learning process. Inquiry is considered critical in Constructivism, students are therefore encouraged to ask questions they are motivated to seek answers to (Hirtle, 1996).

The contemporary context of higher education is influenced by technology, social media, and a changing landscape of what is considered current knowledge. Students will need to learn how to access information and use it conscionably in their future careers. A Constructivist approach implies that students must be engaged in the learning process, learning should build on prior learning (i.e., new learning builds on prior understandings to create depth and critical thinking), and students should have the opportunity to build skills that are relevant to the real world (Alt, 2016). Some key characteristics of Constructivist learning environments include having students seek, analyze, and interpret information, then make their own meanings and draw conclusions (Hunter, 2015). Within the Constructivist framework, we followed a similar process in this study.

Research Questions: Our research questions for this pedagogical case study included the following:

1. How might using generative AI help students develop more nuanced lines of inquiry regarding counseling topics?

2. What conclusions will students draw about the strengths and limitations of generative AI inquiry, applied to counseling research, based on a guided, topic driven project?

Method

We chose qualitative methods to explore AI in graduate Counselor Education classrooms. There was a dearth of research on such practices to date. Our design was a pedagogical case study as we wanted to explore more about this technology in the context of current and future curriculum design as it could potentially impact student learning. According to Armour (2014), pedagogical cases are "learning tools… a starting point for generating ideas about ways to link theory, research and practice" (p. 4). The bounds of this case study included the following: (a) data were collected in Fall 2023, (b) all students were graduate students in one graduate program, and (c) all data were collected within a two-week period. Data were collected in the same space/location although different students participated in the courses. Thus, the case was bounded in time, space, and geographic location (Merriam, 1998; Stake, 1995). The data collected included student participants' artifacts (i.e., assignments), recorded classroom discussion, faculty observation, faculty memos, and analytic memos (Merriam, 1998; Stake, 1995; Yin, 1994).

Counseling Couples Course

The first author has taught Couples Counseling for eight years and Family Counseling for 12 years. Throughout this time, he has found issues of couple and marital discontent related to infidelity are always stressful for new marriage, family, and couples' counselors. Learning how to address these concerns, and how to identify and work through these difficulties with couples and families, is essential. In addition, understanding ways that social media (e.g., Facebook) and online services (e.g., Tinder) intersect with couples' infidelity are important for future counselors, as well as ways to navigate discussions about these sites with clients.

Indeed, since the onset of social media, couples, marriage, and family counselors have learned that infidelity is more than physical, and that far more often emotional infidelity is the predominant extra-relationship intimacy concern presented in counseling (Adam, 2019; McDaniel et al., 2017; Nelson & Salawu, 2017). Working through client infidelity is often anxiety provoking for novice counselors (Gottman & Gottman, 2015). The first author used ChatGPT to construct an assignment that integrated components of this unit: a group case study activity with ethics, social media, and infidelity components to build counseling students' knowledge and integration of these concepts (see Table 1). The prompt given to ChatGPT by the first author was, "Write a couples counseling assignment that addresses infidelity, social media, and ethics" (ChatGPT, personal communication, August 3, 2023).

The assignment was situated within a larger unit on applying ethical codes in couples counseling. The purpose of creating this assignment was to assist pre-service counselors in combining and applying elements of the American Counseling Association's (2014) *Code of Ethics*, the American Association of Marriage and Family Therapy's *Code of Ethics* (2015), and an understanding of social media, forms of infidelity, ethical dilemmas, and counselor integrity. Examples of potential ethical dilemmas might include cultural and religious differences between the counselor and clients, the counselor blaming or perpetuating guilt for the infidelity, the counselor favoring one client in the couple over the other, the counselor disclosing an infidelity they have experienced, the counselor placing a value judgment on the clients, or the counselor struggling with confidentiality. The goal of this assignment was to increase pre-service counselors' awareness of AI's benefits and limits for assisting practitioners with understanding the nuances of client case issues.

Table 1.

An AI Generated Couples Counseling Assignment Using ChatGPT

Couples Counseling Group Assignment:
Addressing Infidelity, Social Media, and Ethics

Assignment Overview: In this assignment, your group will explore the complex dynamics of infidelity within couples, the role of social media in relationship issues, and the ethical considerations that arise in the context of counseling couples facing these challenges. Your group will analyze the impact of social media on relationships, discuss the ethical principles relevant to couples counseling, and propose strategies for addressing infidelity while maintaining ethical integrity.

Part 1: Understanding Infidelity and Social Media (40%)

1. **Infidelity and Its Impact:** Define infidelity within the context of romantic relationships and explain its potential emotional and psychological impact on individuals and couples. Discuss how infidelity can lead to breakdowns in trust, communication, and overall relationship dynamics.

2. **Role of Social Media:** Explore the role of social media in modern relationships, both positive and negative. Discuss at least three ways in which social media can contribute to relationship issues, including the potential for reconnecting with past partners, facilitating emotional affairs, and the impact of online interactions on jealousy and trust.

3. **Case Study Analysis**: Present a case study involving a couple dealing with infidelity-related issues that are influenced by social media interactions. Analyze how social media played a role in the development of the issue and discuss potential underlying factors contributing to the situation.

Part 2: Ethical Considerations in Couples Counseling (30%)

1. **Ethical principles in Couples Counseling:** Identify and explain three ethical principles that are particularly relevant to providing couples counseling. Examples could include confidentiality, competence, and non-discrimination. Discuss why these principles are essential for maintaining ethical integrity in counseling relationships. You may use ACA or AAMFT ethical codes for this part of the assignment.

2. **Ethical Dilemma**: Introduce an ethical dilemma that a couple's counselor might face when dealing with issues of infidelity and social media. Describe how the ethical principles mentioned earlier might be in conflict and propose a course of action that aligns with ethical guidelines.

Part 3: Strategies for Addressing Infidelity and Social Media (30%)

1. **Communication and Transparency:** Propose strategies for couples to effectively address issues related to infidelity and social media within their relationships. Emphasize the importance of open communication, establishing boundaries, and fostering transparency.

2. **Rebuilding Trust:** Discuss techniques for rebuilding trust after infidelity, considering the unique challenges posed by social media. Highlight the significance of empathy, accountability, and the gradual process of rebuilding trust.

3. **Ethical Counseling Approaches:** Outline ethical approaches that couples counselors should adopt when dealing with infidelity-related issues. Address the importance of neutrality, avoiding taking sides, and ensuring that both partners' perspectives are respected and heard.

Submission Instructions: Present findings that address each part of the assignment. Provide insightful analysis, practical recommendations, and relevant examples to support your points. You are encouraged to integrate real-life cases and scholarly sources to enhance the quality of your assignment. You may use AI for this assignment, but you have to give credit to any AI source you use.

Assessment Criteria: Your assignment will be evaluated based on your understanding of infidelity and social media's impact on relationships, your ability to articulate relevant ethical principles, your proposed strategies for addressing infidelity, and your consideration of ethical guidelines in couples counseling. Clear communication, effective problem-solving, and well-reasoned ethical analyses will also be assessed.

Counseling Across the Lifespan

The second author has taught Counseling Across the Lifespan (Lifespan Development Counseling) for counseling graduate students for approximately 20 years. She wanted to address two issues with AI in her course and therefore integrated two assignments. Here we address the assignments separately.

Lifespan AI Assignment One

The first assignment was designed because the second author has noticed that graduate students are often reticent to work with elderly clients when they get to field-based courses in the program (i.e., practicum and internship). This is problematic as, according to Caplan (2023) reporting U.S. Census Bureau data, the U.S. has an aging population with 16.8% (over 55 million) of U.S. citizens aged 65 or older as of May 2021. Within a 20-year period from 2000 to 2020, the number of children in the U.S. also has sharply decreased from 25.8% of the population to 19.1%. These numbers reflect the aging of the Baby Boomer generation and the low birth rates among Millennial and Gen Z women (Blakeslee et al., 2023). Further,

Carpenter et al. (2022) contended that ageism and poor health care access, coupled with poor economic conditions, global health crises, and civil unrest, will tax the growing mental health concerns of the elderly in the U.S. Having limited mental health resource access with increasing needs for the elderly is a growing trend.

By exposing students to elderly clients through curricular experiences throughout the program, it is hoped that they will gain greater familiarity with older clients as a diverse population and more students will choose to work with this age group. Therefore, the second author used ChatGPT to develop a case study involving an older client. The discussion prompt given to ChatGPT for assignment one was "Develop an assignment for a Lifespan Development Counseling Course that combines ethical decision making, lifespan theories, and is focused on elderly populations" (ChatGPT, personal communication, August 3, 2023). This assignment was given in-class, students worked in groups, and the project involved developing a presentation to address theory, research, and ethics based on the case of "Margaret."

Noteworthily, the author allowed students to use generative AI as a resource for this assignment with conditions. You will see how she integrated the elements for using AI in Table 2 under Assignment Guidelines. The conditions included: (a) citing the AI source, (b) comparing the theories and ethics used in the case analysis by AI to the textbook and American Counseling Association (2014) Ethical Codes, and (c) disclosing the AI discussions through an Appendix. In so doing, students choosing to use AI sources can compare information gleaned from AI to source texts written by experts in the field to determine AI accuracy. This allows students to develop a skill of critical review when using AI applications for researching client issues, rather than passively accepting that AI generates correct knowledge. Findings from this assignment are presented in the following section of this article.

Table 2.

Lifespan Development Counseling AI Generated Assignment One

Case Scenario: Exploring Ethical Considerations and Lifespan Development Theories in Counseling with the Elderly

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Background: You are a counselor who specializes in geriatrics at a community mental health center. Your client, Margaret, is an 82-year-old widow who recently moved into an assisted living facility as she has begun to experience the onset of dementia. Margaret has been struggling with feelings of loneliness, grief over the loss of her spouse, and a sense of loss of independence. She often expresses frustration and anger at her family for placing her in the facility, although she understands that it was for her safety due to dementia.

Part 1: Case Scenario Analysis

1. Identify potential ethical dilemmas present in Margaret's situation.
2. Discuss the potential consequences of unethical decision making in the context of counseling an elderly client like Margaret.

Part 2: Ethical Decision Making

1. Select two ethical principles from the ACA 2014 Code of Ethics that are particularly applicable to working with elderly populations.
2. Apply each selected ethical principle to Margaret's case, explaining how it should guide your counseling approach.
3. Analyze the challenges that might arise when applying these principles to counseling elderly clients like Margaret.

Part 3: Lifespan Development Theories Integration

1. Choose two lifespan development theories that can help you understand Margaret's current stage of life and challenges (e.g., Erikson's ego integrity vs. despair, Peck's tasks of late adulthood, etc.).
2. Explain how each theory characterizes the developmental stage of late adulthood and its associated psychological tasks.
3. Discuss how the chosen theories inform your understanding of Margaret's feelings, behaviors, and thoughts.
4. Analyze how applying these theories can contribute to ethical decision making in your counseling approach with Margaret.

Part 4: Integration and Reflection

1. Summarize the insights you gained from the ethical decision-making analysis and the integration of lifespan development theories.

2. Reflect on how integrating ethical principles and developmental theories can enhance your ability to provide effective and ethical counseling to elderly clients.

3. Discuss the importance of cultural sensitivity and adapting interventions to meet the unique needs of elderly clients from diverse backgrounds.

Assignment Guidelines:

- Discuss in your group. Address the questions above. Be prepared to present your conclusions to the class.

- Incorporate a minimum of three scholarly or professional sources related to ethical considerations and lifespan development theories in geriatric counseling.

- NOTE: You may use generative AI for this assignment (e.g., ChatGPT). However, there are two conditions of using generative AI:

    1. You must acknowledge AI use through referencing.

    2. Compare AI's understanding of theories to the textbook and lecture definitions. Compare AI's understanding of ethical principles to the course explanations for ACA Code of Ethics and ethical principles. Decide if AI has correctly applied ethics and theories to this case if you use AI.

    3. Please include AI's responses as an Appendix (along with your discussion prompts) with your assignment.

Grading Criteria: Your assignment will be evaluated based on:

- Depth of analysis in identifying ethical dilemmas and potential consequences in working with elderly clients.

- Application and explanation of selected ethical principles relevant to geriatric counseling.

- Insightful integration of relevant lifespan development theories.

- Coherence and organization of your writing.
- Clear reflection on the value of integrating ethics and developmental theories in counseling elderly populations.

Lifespan AI Assignment Two

The second assignment involved allowing students to develop their own set of AI questions to explore regarding development. The assignment was a homework assignment based on assignment one to prompt students to utilize skills learned. Students were asked to bring their written reports to class where we discussed the homework, noted common conclusions and themes, and ethical concerns. Findings from this assignment are presented in the following section of this article.

Table 3.

Lifespan Development Counseling AI Generated Assignment Two

ChatGBT and Lifespan Development

Assignment Description: The goal of this assignment is to integrate cutting-edge technology, such as the ChatGPT language model, with the study of lifespan development. Students will engage in conversations with ChatGPT to explore and discuss various aspects of lifespan development across different stages of life. This assignment aims to encourage critical thinking, creativity, and the application of theoretical knowledge in a practical context.

Instructions:

1. Select a Topic: Each person will select a specific topic related to lifespan development. For example, "*How does the personal fable impact student career development?"* Topics could include cognitive, social, emotional, and physical development, as well as key milestones and challenges associated with different age groups (e.g., infancy, adolescence, adulthood, late adulthood).
2. Conversation and Exploration:

- Students may have multiple interactions with the ChatGPT model, where they will act as both the "user" and the "researcher."
- As the "user," students will initiate conversations with ChatGPT, asking questions and discussing aspects related to their chosen topic. For example, with the question above, multiple questions might be:
  1. *How can career counselors help students overcome the personal fable when making a career choice?*
  2. *How can career counselors explain the personal fable to parents and teachers?*
  3. *What theories support the personal fable?*
- As the "researcher," students will critically evaluate the responses provided by ChatGPT. They should consider the accuracy, depth, and appropriateness of the information provided by the model.

3. Integrate Theory (one to two sentences): Students should determine if AI integrated relevant theories and concepts from their lifespan development course into the conversations. They can reference key theorists, developmental stages, and empirical research findings to enrich their discussions. For example, cognitive theories will best describe the personal fable (note that I asked Chat GPT and it accurately pointed to Elkind who coined the term personal fable, and Piaget, a lead Cognitive theorist). A further, deeper analysis by Chat GPT might have included Vygotsky.

4. Analysis and Reflection (one paragraph): Students will analyze the information provided by the model. Did ChatGPT accurately capture the nuances of the topic? Did it miss any important points?
- Students should reflect on the strengths and limitations of using AI for discussing lifespan development. How might AI be a valuable tool in this context? What are the potential drawbacks?

5. **Conclusions:**
- Students will present a bulleted summary of their findings.
- Please include a list of questions asked of AI and the answers.
- Ethical Considerations: Students will discuss any ethical concerns related to AI's role in discussing sensitive developmental topics. How should AI-

generated information be used responsibly in the context of research and counseling?

Students generated their own questions for ChatGPT discussions as a homework assignment follow up to the in-class project listed in Lifespan Development Assignment One. The follow up assignment description is in Table 3. Three samples of students' questions are listed in Table 4.

Table 4.

Original and subsequent questions generated by students for ChatGPT discussions.

Student Generated Questions for ChatGPT Discussions

Student A: How does puberty affect attachment style? Are there any theorists that have researched attachment style in puberty? How can counselors help adolescents with attachment style during puberty? How can parents be supportive and nurturing of their children's attachment styles during puberty?

Student B: How can school counselors help prevent students from experiencing the quarter life crisis? How can career counselors help clients experiencing a quarter life crisis? What theories support quarter life crises actually occurring?

Student C: How is childhood trauma demonstrated in emerging adulthood? What theories are important to understand how childhood trauma impacts emerging adulthood? How can counselors help emerging adults work through trauma and establish stability?

Findings

For all three assignments, students' work was coded. Codes were collapsed into themes. Data included the written assignments as well as recordings of in-class discussions. Data were analyzed by both researchers (side by side) and coded. Codes were collapsed into themes. Themes included: (a) A Great Place to Start, (b) This is Not the Whole Enchilada, and (c) AI Ethics.

Theme A: A Great Place to Start

Within this theme, students noted that AI was a sound venue for starting a line of inquiry. Many of the students claimed that they had never used AI before, and these activities gave them a reason to try this technology within a guided structure. Abigail mentioned, "I have wanted to use AI, and I am sure I would have at some point, I just haven't yet. It's good to see what all the hype is about." For students who had not investigated AI previously, some were impressed with the quality and quantity of information generated. Marissa stated, *"I really enjoyed using it and I am fascinated by how quickly it produces the answers to the questions that you ask."* Both authors demonstrated AI and gave a structured outline for expectations of how to navigate the assignments, which seemed to help students who had not used AI previously.

Through course discussions and reflection papers students shared that they found AI to be helpful as a place to initiate research. Another use that was discussed included learning about new topics, reviewing course information (such as reviewing theories), or gaining an overview of a topic (e.g., what is a treatment plan?). A few students thought it might even be helpful in explaining certain medical or psychological conditions to clients (e.g., What is bipolar disorder?). Tristen wrote, "It can be a good tool to use as a starting point. It may inspire the user to consider different avenues to research within a topic that the user can then explore in more depth." Lisa wrote:

> Chat GPT mostly summarizes and does not go into the depth needed when considering these development theories… it does not allow for autonomy and creativity when finding answers for these topics. I do not believe that AI should be used as a primary source or a singular source but rather as a helping hand… to get quick and summarized information.

Similarly, Chelsea noted that generative AI is best for lower levels of learning such as recall and application, but would not be helpful for the type of higher order thinking needed for research or counseling clients (e.g., synthesis and application levels).

Overall, students seemed to find the best use for ChatGPT was as a starting point for research or for learning about a new topic which they were less familiar with. They noted that asking questions and reading the discussion responses prompted new questions and ideas. This exchange sparked progressively more creative thinking regarding overall inquiry and puzzlements about a given topic and helped students consider where to seek information next. For example, if the name of a theorist or theory was given, students then had information that they could ask more questions about or search in the library catalog. As noted by Imelda, some

of the best uses for AI according to students in this case study appear to be "…if one needs help with a project… brainstorming… or to help boost creativity." In sum, starting research on a given topic was the main reason for using AI according to these students.

Theme B: This is Not the Whole Enchilada

Tristen summed up this theme: "The main thing I have learned about AI is that it can't be your only source of research… This is not the whole enchilada." The idea within this theme is that students found that AI covered basic information but did not provide comprehensive information on a given topic. Marissa affirmed, "If you are only getting your information [from AI], you may not be getting the whole picture. You probably need to do a deeper dive." This sentiment was agreed on by most students in the case study. This theme included two subthemes: (a) Know the Limits of AI, and (b) Hit or Miss Theoretical Integration.

Theme B: Subtheme 1: Know the Limits of AI

Students communicated multiple concerns about AI in this subtheme and how these concerns limited AI's applicability as a research tool. Imelda wrote, *"While AI is good for brainstorming, it's lack of citations need to make researchers and students wary."* Other students asserted that AI was absent of cultural nuance and therefore was likely based on perspectives from mainstream and majority groups. As such, some students hypothesized that this limited the application of information gained from AI to broad counseling populations. Erika described this problem, "[ChatGPT] possibly perpetuates White, Educated, Industrialized, Rich, Democratic (WEIRD) perspectives, which developmental approaches actively try to dismantle." Other students disagreed and advocated that ChatGPT might be a useful tool for exploring culture if the correct prompts were used, for example to gain information about a specific cultural or religious background. However, the critical issue still seemed to resonate: users of ChatGPT for counseling research purposes need to be aware that culture is not inherently present in the theoretical analysis and must be included by the user.

A final limit explored in class and throughout the assignment papers was that ChatGPT was a tool, thereby lacking human qualities. Although this limitation may seem obvious, for students in our study this limitation was insurmountable and decreased the overall usefulness of AI. Students found the lack of empathy, compassion, emotional intelligence, and understanding of the human condition the greatest limitation of AI by far. They noted that AI had no capacity for recognizing humans' feelings, trauma, or ethical dilemmas. For students in this case study,

this limit was insurmountable to AI ever replacing human researchers of counseling. Kris summed up this concern,

> Chat GPT did consider poverty and its impact on the developing brain… but it did not consider the effect of toxic and prolonged stress… This is essentially relevant when we consider the biological redirection of energy toward survival functions and away from developmental process… I see this as a major gap in Chat GPTs findings.

Students appeared to weight the benefits and limits of AI as a tool for research. Although acknowledging advantages of AI use, these students appeared to have healthy skepticism regarding AI and counseling research.

Theme B: Subtheme 2: Hit or Miss Theoretical Integration

Although ChatGPT did have limits, the groups generally supported that ChatGPT was still useful for providing refreshers broadly on theory concepts, therapy methods and techniques, and proper diagnostic tools. However, information was hit or miss when it came to specific questions such as those in Table 4.

A great example was provided by Erika whose primary development question in the follow up assignment (see Table 3 for assignment) was, "How is childhood trauma demonstrated in emerging adulthood?" A subsequent question was, "What theories are important to understand how childhood trauma impacts emerging adulthood?" Throughout the ChatGPT discussions, Jeffrey Arnett was never listed as a key theorist. This was surprising given that he is widely considered the seminal theorist of emerging adulthood (see Arnett, 2000). Conversely, several students did have Arnett cited by ChatGPT, so it was seemingly odd that his work was not cited in Erika's case.

During class discussion, students lamented that ChatGPT gave superficial strategies for use with clients from the case studies, but the strategies were often vague, theory and techniques did not align, and it was unclear if the strategies were evidence-based. The lack of theoretical models and evidence-based approaches was amplified in the couples counseling infidelity activity. AI generated couples counseling techniques; however, AI did not generate theorists and strategies that aligned to theoretical models generally cited within the Couples Counseling literature (e.g., see Dattilio, 2010; Gottman & Gottman, 2015; and Johnson, 2019). Tyson wrote:

Chat GPT has the capacity to surmise key words and concepts but cannot identify how they intersect past the fact they are contained within the same theory on paper… ChatGPT struggles with understanding applications in theory and often is unable to list examples of how to follow through with the instructions or steps it provides.

Like Tyson, most students found the theories to only be explained at a superficial level and theoretical constructs to be briefly labeled and explained. The interactions of those constructs were not detailed and, to the untrained eye, this made the theory seem more simplistic than it was. Students saw this limit as a concern given that people from outside the field might believe they have a greater command of psychological and mental health information than they actually do if they obtain information from sources like ChatGPT.

Theme C: Ethics

The final theme concerned the many ethical issues students identified in both discussions and through the assignment papers. Ethical concerns voiced by students included a lack of credit given to original authors by ChatGPT, potential for plagiarism, client confidentiality issues, ethics not aligned to professional standards, and ineffective treatment planning. Summarizing some of these concerns, Janelle wrote, "An ethical consideration when using AI generated information in research is plagiarism and inauthentic ideas and information. If all researchers use AI in their research, the information may not vary, and new conclusions may not be easy to draw." Other students voiced that AI did not credit original research, creative ideas, innovation, or the connection of ideas in research and that this lack of citation was unethical. They were concerned that by using AI it was possible to plagiarize an author or researcher without even realizing they were doing so.

Beyond the ethics of research, students were adamantly concerned about using AI for ethical concerns or treatment planning. Although they could see the utility of AI for refreshing on theories and practices, they worried that AI did not link best practices to specific client concerns and was not designed to assist with diagnostics based on client symptomology or behaviors. This lack of diagnostic capacity, for many students, coupled with the inability to consider cultural factors and individual nuance (e.g., grief, disability, gender) undermined AI as a credible source for treatment plan development. Many students noted that treatment plans should be unique to individual clients and AI only generates generalized plans; therefore, clinicians still need to do individualized client planning. Mai summarized these concerns:

…to keep confidentiality counselors must be very careful in utilizing AI for generating answers for specific cases. We shall not disclose confidential or sensitive information of our clients in the process of enquiry. Also, we shall not completely rely on AI in coming up with answers which means critical thinking and judgment are needed in examining the answers generated by AI.

Finally, students were conscious of the difference between ethical courses of action promoted by ChatGPT and actual codes of conduct as prescribed by the American Counseling Association (2014). They noted that ChatGPT gave vague ethical solutions (general ethical strategies), whereas the ACA Code of Ethics (2014) prescribes in detail counselor behaviors in many circumstances. Students agreed that referencing the actual ACA Code of Ethics (2014) with an ethical dilemma would be a preferred course of action, including using an ethical decision-making model, over referencing ChatGPT with ethical concerns.

Discussion

This article was meant to examine the use of AI in counselor education as a pedagogical tool. Two courses, with three total assignments, were included in a bounded, pedagogical case study during one semester (Couples Counseling, Lifespan Development). Students in both classes participated in this study. Our first research question was: *How might using generative AI help students develop more nuanced lines of inquiry regarding counseling topics?* Throughout this study, students became acutely aware that AI had limitations for both research and practice. However, in both courses, students learned to ask probing questions and follow-up questions, and how to apply AI technology to solving case study problems. Students learned that assistive technology such as generative AI was only helpful when the prompts used for discussion were intentionally culled to the specific research questions desired. Time was spent in class discussing the importance of prompts and keyword quality used in all technologies (e.g., Google, AI, library catalog searches, etc.). Students practiced discussion prompting and appeared to improve but the authors did not measure this specific factor within this study. These authors plan to have a research librarian present keyword searches in a subsequent course because of this study and feedback provided by students.

Further findings regarding the first research question were that participants reported that AI assisted them in developing more creative research questions, refining their topic, and that

AI allowed them to track their search history and results. This afforded students the opportunity to review their previous questions, determine how the results had answered the prompts they entered, and then further refine their queries to answer newly developed questions. According to participants in this study, this process promoted more questions and more critical thinking about the topics queried.

Our second research question was: *What conclusions will students draw about the strengths and limitations of generative AI inquiry, applied to counseling research, based on a guided, topic driven project?* Students drew conclusions that fell into our three main theme categories. These themes included: (a) A Great Place to Start, (b) This is Not the Whole Enchilada, and (c) AI Ethics.

For students in this study, AI offered a great place to start research. Many of the students reported never having used AI before and feeling curious about AI and what the technology meant for counseling practice. Students reported that AI aided in creativity, the generation of ideas, and a general topical overview (Theme (a) A Great Place to Start). Students found that AI could be helpful for generating ideas about research, reviewing theories and strategies, and basic treatment plan designs. However, students quickly recognized that AI had limits (Theme (b) This is Not the Whole Enchilada). Within this theme, students reported that it is important to recognize the limits of AI when using it as a resource. Major limitations of AI identified by students in this study were the lack of cultural integration, lack of human understanding (no empathy, compassion, or ability to understand trauma), and the "hit or miss" nature of theory integration. The theoretical information was generally seen as surface level basics lacking depth, nuance, and synergy among the various conceptual components. A report by MIT Technology Review (2024) cited the need for more focused approaches to large language models of AI, thus generating more outputs based on more reliable data and information sources. Currently, LLMs pull from all existing sources, eliminating the user's assurance of accuracy in the information produced. Students in this study understood that information was not always reliable.

Finally, students in this study noted numerous ethical issues with AI applied to counseling research and practice. The ethical problems included the lack of research citations and potential problems with intellectual property. In addition, for counseling practice, students mentioned concerns about confidentiality, treatment planning that is not unique to the client,

and theoretical models that do not necessarily align to best practice strategies. These issues were problematic based on the ACA Code of Ethics (2014) and students often cited specific ethical codes that may be violated if AI was misused by a counselor. Students agreed that ethical dilemmas and ethical questions were best referenced by counselors through the ACA Code of Ethics (2014) and not AI.

The findings relative to both research questions demonstrated that students had gained knowledge related to AI, its practical uses, and its limitations in counseling research and practice. As there is a dearth of research in Counselor Education on these topics, a pedagogical case study was an ideal design for this study. However, further research is warranted on ways to integrate AI in graduate classrooms to promote students' critical thinking, conscionable use of technology, and understanding of such applications to practice beyond the classroom.

Implications

Faculty must balance research, service, and teaching. A major component of teaching is the development of assignments that require problem solving, communication, creativity, and complex thinking that challenges students. Many students have been trained through their K–12 education to assume there is always a correct or "right" answer. Students may experience frustration in higher education as they are asked to delve into complicated tasks with many potential answers and no specific correct answer (Pence, 2019). AI presents an opportunity to introduce greater abstract and synergistic thinking exercises where students apply new strategies to their learning experiences.

Research on AI in higher education—whether it is longitudinal, quantitative, qualitative, topical, or exploratory—is largely recent and emerging. Therefore, implementing innovative strategies and seeking outcomes is a necessary and vital step toward understanding how AI will impact and shape student learning in the unfolding horizon of post-COVID higher education. As noted by Zawacki-Richter (2019) the full scale of AI in the current context cannot be known. However, strategies for using AI now can lay the groundwork for future teaching and research.

As with these two authors, implementing pieces of generative AI within lessons to provide students with directed and engaging assignments that produce thought provoking critical analysis can save time and meet faculty objectives. However, using AI with intentionality and knowing when it has produced what is needed is also important. Our pedagogical case study was

exploratory. We learned that students did see the limitations of using AI for research and practice. The case study, assignment prompts, and activities created by AI were useful in helping these authors discern how AI could be used in the classroom and what students knew or did not know about AI use. However, there is a lot more to learn.

We would still like to know how using AI to create case studies to increase student access to learning about specific populations or incidents (e.g., elderly clients, infidelity), increases students' efficacy for facing these challenges in practice. A future research study will include measuring students' perceived counseling efficacy after implementing such technology assisted cases through multiple classes in the program and measuring efficacy and interest for working with these populations (e.g., elderly clients, couples).

Conclusions

AI has many uses to assist faculty from writing emails, letters of recommendation, assisting with the development of writing handbooks and policies, writing syllabi and rubrics, and much more. However, it is up to faculty to understand the limitations of AI use, and that AI is not a total answer to any of these projects. Even when AI does produce such works, faculty will likely need to revise and refine the materials to meet their users' final needs. Yet, even with revisions, in all likelihood, the faculty using generative AI will save considerable time if discussion prompts are well suited to the task at hand. In addition, faculty need to cite AI sources ethically whether in course syllabi, course materials, or other products given to students (e.g., power points, handouts).

In this article, the authors reviewed a pedagogical case study with three generative AI lesson integrations. These assignments were meant to promote students critical thinking about AI, its uses for counseling research and counseling practice. Class discussions and students' assignments were analyzed as data for this study. As AI advancements occur, it is anticipated that more opportunities for including AI in future course preparation, teaching, and student engagement will evolve.

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