

The New Age of Artificial Intelligence in Psychological Practices

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Introduction

Artificial Intelligence (AI) and ChatBots are increasingly integral to the realm of school psychology. These technological advancements, particularly tools such as ChatGPT, are reshaping the landscape of educational support services. This paper examines the integration of artificial intelligence (AI) within the field of school psychology, detailing both the enhancements it offers to practice efficiency and the ethical challenges it presents. It aims to equip school psychologists and Licensed Educational Psychologists (SP/LEPs) with a thorough understanding of AI capabilities, particularly in the context of ChatBots like ChatGPT, and to delineate the professional and ethical responsibilities associated with their use.

What is Artificial Intelligence?

Artificial Intelligence (AI) describes the use of intelligent machines that contain vast amounts of data. These systems learn from past experiences and can perform human-like tasks effectively, working to enhance the speed, precision, and effectiveness previously done through human effort. This is accomplished through complex algorithms and methods that allow machines to make decisions on their own. AI ranges from things we currently use to purely hypothetical in nature. SP/LEPs have already experienced forms of AI through things like report writing software. There are three defined types of AI based capabilities that include Narrow (limited in scope such as Siri), General (understand and learn any human task to apply in skills and knowledge in different tasks), and Super (performance of a task better than a human). Under the three types there are four functionalities that include Reactive Machines (utilization of present data), Limited Memory (short lived training from past experiences), Theory of Mind (understanding of people and things within an environment with the ability to alter feelings and behaviors), and Self-Awareness (understanding of internal human traits, states and emotions) (Biswal, 2023).

AI and ChatBots in Modern Usage

For those who are unaware of this new technological phenomenon, a chatterbot or ChatBot is software that can converse with people through the use of artificial intelligence. Generally, ChatBots are characterized by four elements: they simulate human speech, communicate either written or spoken, have no physical image, and

do not represent a human being in a virtual world (Černý, 2023). They are essentially conversation tools that allow people to complete routine tasks efficiently (Oracle, n.d.). The most predominant and well-known type is Chat Generative Pre-Trained Transformer, also known as ChatGPT. It was created by OpenAI, an artificial intelligence research company, in November 2022. It utilizes natural language processing to create humanlike conversational dialogue and can respond to questions and compose various written content, including articles, social media posts, essays, code, and emails (Hetler, 2023). It is capable of generating text and summaries based on the prompts that it is provided. ChatBots allow for task completion to be finished quickly and efficiently allowing more focus on other priorities that cannot be completed by machines. Access to its ChatBot features tends to be free, with an option to upgrade for faster response times along with unlimited availability, especially during high-demand periods (Hetler, 2023).

Options

Since the popularity of ChatGPT other tech companies have created their own versions or have implemented the feature into their systems. eWeek has rated the following as the ten best AI ChatBots this year: Bing Chat, ChatGPT, OpenAI Playground, Perplexity.ai, YouChat, Chatsonic, Google Bard, Socrates.ai, Hugging Chat, and Jasper (eWeek, 2023).

AI has long been available to private sectors. In 2016, Hanson Robotics unveiled their innovation in AI, Sophia, a human-like robot who is able to intelligently converse with people due to her unlimited access to the internet (Hanson Robotics, n.d.). Bluewave-ai is a company that uses AI to make clean energy more sustainable and limit wasted energy (Bluewave, n.d.). Liveperson allows companies to use AI for customer service, reducing the number of customer service representatives the company needs to hire (Liveperson, n.d.).

Publicly accessible AI systems have greatly increased over the last two years. These new AI systems are easy to use, usually only requiring a simple, written prompt. There are two main types of publicly available AI systems, image generators and chatbots. Image generators create images based on artwork that can be found online. Some image generators include OpenAI's Dalle-3, Midjourney, Stable Diffusion AI, and Canva's Text to Image. Chatbots, on the other hand, are capable of answering questions, writing stories, and even writing reports based on the user's input (Canva, n.d.; Midjourney, n.d.; OpenAI, n.d.; Stablediffusion, n.d.). Chatbots include OpenAI's ChatGPT, Google's Bard, Microsoft Bing Chat, and Writesonic's Chatsonic (Bard, n.d.; Bing, n.d.; OpenAI, n.d.; Writesonic, n.d.). Additionally, Dr. Byron McClure recently introduced an AI system specifically for School Psychologists aimed at enhancing their efficiency and effectiveness in report writing and interpretation. This AI system, named School Psych AI, offers tools and resources designed to assist school psychologists in tasks such as interpreting complex data sets, summarizing evaluations, and providing

evidence-based recommendations (School Psych AI, n.d.). While this is a sample of the publicly available AI systems, there are more being introduced everyday as the popularity and demand for AI continues to rise.

Practical Benefits of AI in School Psychology

AI's most immediate benefit is its ability to automate routine tasks. For example, AI can assist in the initial stages of data collection, such as gathering and organizing responses from behavioral or emotional screening questionnaires. It can also draft preliminary reports based on this data, freeing up time for school psychologists to engage in interpretation and personalized intervention planning. Beyond task automation, AI has the potential to revolutionize data analysis in the field. Machine learning algorithms can sift through standardized test scores, attendance records, and behavioral reports to identify students who may be at risk. By flagging students who show sudden declines in academic performance along with increased absences, AI enables school psychologists to initiate timely interventions. These could range from counseling and family consultation to academic support and referral to special education services.

One of the most promising applications of AI is its ability to develop personalized intervention plans. By analyzing a student's academic performance, social interactions, and emotional well-being, AI can recommend strategies such as targeted social skills training. AI can also assist in the ongoing monitoring and adjustment of individualized educational plans (IEPs) or behavioral intervention plans (BIPs). In addition to these capabilities, AI can significantly enhance various other aspects of school psychology. As discussed on the School Psyched Podcast, AI can be instrumental in developing evidence-based interventions (School Psyched Podcast, 2023). It can help write effective goals, develop Cognitive Behavioral Therapy (CBT) counseling strategies, and even create tables from behavior or academic intervention data. Furthermore, AI can facilitate multidisciplinary collaboration by centralizing and making student data easily accessible to a student's team. This centralization allows for more effective and efficient collaboration, leading to more cohesive and comprehensive intervention strategies. Lastly, AI contributes to the professional development of school psychologists by analyzing the effectiveness of various intervention strategies. It can offer insights into best practices and emerging trends, such as identifying which types of interventions are most effective for students with specific profiles like ADHD or anxiety.

Ethical Considerations

There are several ethical considerations SP/LEPs must consider when working with AI. First is to acknowledge that the field of AI is continuously evolving, with new capabilities being discovered seemingly daily. As such, rigid ethical rules or prescriptions are likely to be inadequate and quickly outdated. Thus, practitioners must be able to flexibly apply an ethical problem-solving model aligned with the [California](#)

[Association of School Psychologist's Code of Ethics](#) (CASP, 2020) and [Code of Ethics for Licensed Educational Psychologists](#) (CASP, 2015) to help guide themselves and their teams on the ethical use of AI.

Below we discuss several domains of professional ethics that may be impacted by AI, and offer considerations for practitioners in determining how they can ethically integrate AI into their practices.

There are multiple domains of professional ethics that may be impacted by AI. The first being professional competency. While AI may provide sophisticated information regarding school psychological practice, practitioners would be wise to remember that AI is a tool. The expertise and knowledge rests with the SP/LEP based on their extensive training, experience, and clinical judgment, not with the tool itself (CASP, 2020). Although AI programs may be helpful, the SP/LEP should also review, adjust, and verify all information being utilized. SP/LEPs should also continue to engage in professional development to hone their skills versus relying solely on the interpretation provided by AI programs, which have been shown to be unreliable or misleading in their responses (Bender et al., 2021). Further, as a function of AI's rapid pace of advancement, SP/LEPs should continue to seek training on the advantages and disadvantages to the utilization of AI programs. AI systems may also include a variety of interventions and recommendations, but SP/LEPs have a responsibility to ensure that they are evidence-based in nature. In addition, when used to provide recommendations or writing assistance on reports, SP/LEPs should also consider disclosing its usage within their reports (CASP, 2020).

The second ethical consideration relates to confidentiality and safeguarding personally identifiable information (CASP, 2020). AI can be an effective tool to assess student performance, behaviors, and learning outcomes to identify potential areas of need (Akgun & Greenhow, 2021). In addition, in the realm of report writing, AI systems can provide competent formatting, interpretation, and reporting of psychoeducational data. However, this information does not remain in the control of the practitioner, as many popular generative AI platforms, such as ChatGPT utilize the data inputted by users to train the AI model or the data is reviewed by human reviewers for adherence to the platform's usage policies (OpenAI, 2022). Practitioners need to understand how this data is collected, stored and used to ensure that student privacy is protected (CASP, 2020). At this time, AI platforms are not considered FERPA/HIPAA compliant in the exchange of information. SP/LEPs should avoid using personally identifiable information, including names, IDs, addresses, etc. on AI platforms. AI systems may also track student data in order to create personalized experiences (Akgun & Greenhow, 2021). This creates risk for students unintentionally disclosing their own sensitive or personally identifiable information. Consent and assent for usage with AI systems should be considered and students should not be required to share unwanted data. As technology advances, SP/LEPs may consider an ethical

responsibility to foster digital citizenship. This may include teaching students about the ethical considerations of AI, including bias and privacy concerns so that students can make informed decisions about their technology use (CASP, 2020).

The third area of ethical consideration connects to professional relationships and responsibilities (CASP, 2020). AI platforms have been shown to have some inherent bias and discriminatory factors. AI algorithms, as presently developed, are based on, “a set of data that represent society’s historical and systemic biases, which ultimately transform into algorithmic biases. Even though the bias is embedded into the algorithmic model with no explicit intention, we can see various gender and racial biases in different AI-based platforms.” (Akgun & Greenhow, 2021, pg 434). As an example of biased responding, chatbots have been shown to reproduce stereotypical gendered language, such as referring to nurses as “she” and doctors as “he” (Miller et al., 2018). While AI systems offer impressive capability, they are not yet a replacement for service delivery across major domains of school psychological practice, including assessment, psychotherapeutic services, and supervision, and the responsibility for rendering such services rests with the SP/LEP. Test selection should also be driven by the SP/LEP, not solely through recommendations made by AI systems. Interpretation and clinical judgment in all aspects of school psychology continue to rest on SP/LEPs. Finally, SP/LEPs providing supervision should consider their level of reliance on AI systems. AI systems should not be relied upon to provide feedback or guidance to trainees. Feedback provided directly by the supervisor ensures that trainees receive high quality training, and maintains standards of practice within the field (CASP, 2020).

Future of AI Integration in Practice

As discussed in the previous sections, school psychologists are likely to be impacted by AI across practice domains, including the provision of therapeutic, behavioral, assessment, and consultative services. The magnitude of these impacts will be shaped by several factors, including the further advancement of AI, policies on the integration of AI in educational institutions; the adoption of AI by educators, students, families, and communities; and most importantly, the degree to which practitioners choose to integrate AI-based technologies within their own practice. AI is not new within the public domain nor within professional practice. Within the field of medicine for example, expert systems (AI systems that are trained on a specific subject and are designed to provide guidance and advice) have been integrated within healthcare settings since the 1970s and have over time become more accepted as clinical decision-making tools that can facilitate the work of physicians (Zhou & Sordo, 2021). However, while these early expert systems offered impressive capability, their adoption and impact on the public has been limited due to their narrow focus on the subject matter on which they are trained. Generative AI, such as ChatGPT and Bard, have seen widespread adoption due to their more broadly applicable

skill sets and accessibility to non-technical users. Educational institutions are also shaping how AI is integrated within the lives of students, with some districts within California and across the country opting to ban large-language models, whereas others are integrating AI within their coursework (Dusseault & Lee, 2023). AI may also shape the way that teachers plan, teach, assess, differentiate instruction, and the way that students learn. The US Department of Education's Office of Educational Technology (2023) outlines several impacts that AI may have on pedagogy and learning, including using AI to provide individualized tutoring for students, assisting teachers in developing instructional plans, and using AI to derive new insights from student assessment data.

While school psychologists will need to adjust to the impact that AI creates within the broader society, and especially how it will shape how students learn, associate, and behave, its direct impact on school psychological practice will most depend on the degree to which school psychologists choose to integrate AI into their everyday practices. Integration can be conceptualized as occurring within degrees ranging from low to high. Low integration as applied to practitioners is defined as AI used in a manner that does not directly impact educational planning, decision making, treatment or case conceptualization of students. Examples at this level include using AI tools to check grammar on reports, suggest improvements for readability, or making information more concise. High integration is defined as AI used in a manner that directly impacts educational planning, decision making, treatment and/or case conceptualization of students. This includes using AI tools to provide direct intervention to students (e.g. therapy chat bots), directing treatment decisions, automatically analyzing and interpreting data, and acting as expert consultants. As technologies evolve and new regulatory and ethical frameworks are developed, what constitutes low and high integration practices will shift over time. Practitioners will need to assess their own comfort with integrating AI into their practices, while adhering to ethical guidelines established by CASP. These include assessing their own level of competence to use and integrate AI into their practices, and safeguarding personally identifiable information when using AI systems (CASP, 2020). The onus of responsibility for maintaining ethical practice remains with the practitioner. While some AI chatbots can be prompted to “act like an ethical school psychologist” or are trained on school psychology literature, practitioners would be wise to remember that AI in its current state of development is a “stochastic parrot”, being able to find random associations between words to produce convincing sounding responses, but without actually truly understanding what is being said (Bender et al. 2021). These associations can and have led to biased, inaccurate, and unethical responses (Bender et al., 2021). While AI is a transformative and disruptive force, the role and centrality of the practitioner in promoting ethical practices has never been more important.



Conclusion

The integration of AI and ChatBots signifies a pivotal shift in the practice of school psychology, offering significant potential to augment services provided to students. However, these advancements also bring forth intricate challenges that necessitate scrutiny and ethical consideration. School psychologists must employ these technologies with a focus on safeguarding student privacy, ensuring equity, and enhancing educational outcomes. It is essential for school psychologists to engage in continuous and thoughtful discussions on the responsible application of AI, with the goal of preserving a commitment to student-centric practices amidst the fast-paced evolution of technology.

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