

## ChatGPT: The game changer for higher education institutions

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**Abstract:** ChatGPT is a technological solution with the potential to cause significant interference, disruptions, and modification in the higher education sector, by affording customizable and individualized learning with instant feedback, elevating accessibility, and amplifying student interactions. The employment of said technology necessitates acknowledgment and resolution of academic dishonesty, plagiarism, and ethical and privacy considerations. This study examines the disruption caused by ChatGPT within the context of higher education and presents suggestions for its efficient incorporation. The utilization of ChatGPT has significant potential to revolutionize higher education institutions by augmenting the quality of learning that is accessible to students, while concurrently augmenting the teaching experience for lecturers (educators). It is crucial to meticulously deliberate upon the ramifications of ChatGPT and proactively tackle academic dishonesty, and ethical and privacy apprehensions in order to guarantee the prudent usage of this innovation.

**Keywords:** ChatGPT, Chatbots, Disruption, Game changer, Higher education, Higher education institutions

### 1. Introduction

The ChatGPT technology stands at the forefront of innovative advancements, showcasing the significant potential for revolutionizing higher education establishments through the provision of individualized and prompt responses to students and lecturers (educators). The implementation of this technology offers notable benefits such as increased accessibility and augmented student participation. Educause, an entity committed to endorsing the integration of technology in tertiary education, has issued a recent report where they posit that ChatGPT could potentially enact a revolutionary effect as a "game changer" or disrupter, engendering a significant metamorphosis in both the pedagogical strategies employed by instructors and the learning methodologies of students (Veletsianos, Kimmons & Bondah, 2023). Studies have demonstrated that personalized educational approaches yield a noteworthy influence on the academic performance and fulfillment of students concerning their educational journey. According to Yang and Evans (2019), chatbots have the potential to furnish students with an interactive and customized learning experience by delivering feedback and suggestions that are tailored to their distinct learning requirements. Implemented measures can enhance students' active participation and inclination, consequently resulting in an improvement in their academic achievements through ChatGPT.

The deployment of ChatGPT has the potential to augment the quality of the pedagogical experience by lessening the burden on lecturers (instructors or educators) and affording them greater opportunities to allocate their efforts toward other dimensions of instruction, such as fostering engagement and cooperation among students (Kim, Merrill, Xu & Sellnow, 2020). The implementation of such a measure holds the potential to enhance the standard of instruction and consequentially yield superior academic achievements for students. Nonetheless, the utilization of ChatGPT in higher education gives rise to numerous ethical and privacy quandaries, among which are the compilation, academic dishonesty, and handling of student information. It is imperative that institutions take active measures to acknowledge and respond to these apprehensions by developing and enforcing appropriate protocols and directives, thereby affirming the conscionable utilization of Chatbots (Hew, Huang, Du & Jia, 2023; Zeide, 2019). The platform known as ChatGPT possesses the capability to revolutionize the landscape of higher education establishments through

the enhancement of students' learning experiences and the facilitation of educators' teaching experiences. It is imperative for institutions to give careful consideration to the ramifications of ChatGPT and proactively tackle moral and confidentiality issues, thereby ensuring the conscientious deployment of this technological advancement.

## **2. Technological advancements in higher education institutions**

In recent years, substantial transformations have been noted among higher education institutions, primarily triggered by technological progressions and the amplified imperative of students and lecturers toward more utilitarian and skill-set-oriented education. The dynamic landscape of education has required institutions to adapt and engage in innovative measures to cater to the changing demands. The incorporation of technology in pedagogical practices has been instrumental in transforming the landscape of higher education. Technological advancements have afforded institutions novel possibilities for engaging with students and providing education through inventive means. For an instance, the adoption of online learning has witnessed a notable upsurge, providing students with the opportunity to study at their own pace, irrespective of their global location (Allen & Seaman, 2017).

In addition, technological advancements have facilitated educational institutions in offering a highly customized and individualized learning environment for their students. The implementation of adaptive learning technology is capable of evaluating the academic performance of students and subsequently furnishing constructive feedback that can significantly enhance their comprehension of the subject matter (Dede, 2010). The aforementioned phenomenon has the potential to foster heightened levels of interaction and incentive, thereby yielding improved scholastic achievements. The shift towards competency-based education has emerged as a significant disruptor in the realm of higher education, representing a pivotal paradigm shift in the pedagogical landscape. Competency-based education prioritizes the acquisition of targeted skills and knowledge over the attainment of credits or degrees within the United States educational framework. In accordance with the guidelines set forth by the Department of Education (2016). The aforementioned methodology has garnered widespread recognition, as lecturers (educators) have underscored the significance of equipping graduates with pragmatic capabilities that hold relevance in the professional realm.

The ascendancy of non-traditional certifications has brought about a profound transformation within the realm of tertiary education. The utilization of alternative credentials, which encompass digital badges and micro-credentials, presents a viable avenue for individuals to exhibit their competencies and expertise to prospective employers (LaMagna, 2017). The aforementioned approach may confer noteworthy advantages to those individuals who have not accomplished a conventional degree program but have acquired pertinent proficiencies by means of work experience or alternative channels. In response to the evolving educational milieu, institutions of higher learning have implemented adaptations. The incorporation of technological tools such as ChatGPT, skill-based learning approach, and innovative certifications have drastically transformed the landscape of education delivery and reception. Innovations of diverse orientations have opened up fresh prospects for educational institutions to interact with students and bestow upon them a personalized and pragmatic mode of learning, alongside ensuring that the beneficiaries attain the necessary competencies and erudition requisite for professional success.

## **3. The disruption of ChatGPT in higher education institutions**

The ChatGPT platform exhibits the capability to cause a significant perturbation to establishments of higher education across various aspects. The present language model exhibits the capacity to effectively analyze copious quantities of data, furnish individualized feedback, as well as facilitate interactivity with students in real-time. The present discourse endeavors to shed light on several potential avenues whereby ChatGPT may pose significant challenges to traditional structures of higher education. However, ChatGPT can show the following disruptions in higher education institutions:

- **Redefining the role of lecturers (educators):** The redefinition of the educators' role necessitates a shift towards more intricate areas of instruction. ChatGPT presents a viable solution that enables educators to concentrate on curriculum development, research, mentorship, and the cultivation of critical thinking abilities. In contrast, the chatbot assumes responsibility for elementary administrative functions, such as grading, responding to routine inquiries, and furnishing feedback.

- **Enhancing student engagement:** The augmentation of student engagement is made possible through ChatGPT wherein personalized feedback is provided resulting in a highly interactive and engaging learning milieu for students. By means of real-time response, ChatGPT facilitates the establishment of an illusion of immediacy, thereby enhancing students' motivation levels and promoting their inclination towards being more participative.
- **Improving accessibility:** One potential enhancement to consider is improving accessibility through the integration of ChatGPT. By incorporating functionalities such as real-time translation and speech recognition, ChatGPT has the potential to facilitate the participation of diverse student populations who face linguistic or physical barriers to accessing course material or engaging fully in the learning process. Such groups may include individuals with disabilities, as well as non-native speakers of the language of instruction.
- **Reducing costs:** ChatGPT has the potential to assist institutions in mitigating the expenses related to grading, feedback provision, and answering routine queries, which could result in substantial cost reduction.

Nevertheless, the utilization of ChatGPT within higher education establishments also elicits certain apprehensions. The employment of ChatGPT, a conversational artificial intelligence system, might result in a depreciation of the standard of education in the event that educators rely excessively on the mechanism, according to some contentions. The potential implications pertaining to privacy and data protection may arise concomitantly with ChatGPT since its optimal functioning necessitates commanding access to copious amounts of student data. At present, ChatGPT harbors the possibility of causing significant disruptions to institutions of higher education across several avenues. Despite the potential apprehension regarding the usage of ChatGPT, its advantages encompassing the augmentation of student engagement, facilitation of accessibility, mitigation of financial expenses, and reformulation of the role of educators are consequential and warrant recognition. Institutions are required to engage in a deliberate assessment of the effects ensuing from the utilization of ChatGPT in order to establish and enforce pertinent procedures and directives that foster judicious handling.

#### 4. The application of ChatGPT in higher education institutions

In contemporary times, the utilization of Artificial Intelligence (AI) technologies has witnessed a substantial escalation across numerous domains, encompassing the realm of education. The employment of AI technology manifests in various applications, notably Chatbots - software programs designed to emulate human dialogue. ChatGPT, a chatbot that employs Generative Pre-trained Transformer technology, stands out as an exceedingly sophisticated and influential artificial conversational agent. This manuscript pertains to the utilization of ChatGPT within the context of tertiary educational institutions. According to a research endeavor conducted by Li, Chen, Yu, Davidson, Hou, Yuan and Yu (2022), the study was conducted to investigate the efficacy of implementing chatbots as a pedagogical tool in the context of language learning courses. Results from the investigation reveal that the utilization of chatbots has yielded a discernible enhancement in both student engagement and satisfaction. The utilization of Chatbots in an internet-based mathematical course was analyzed by Chen, Vicki Widarso and Sutrisno (2020), revealing significant enhancements in student performance and satisfaction levels. The online platform, ChatGPT, may present an opportunity for a groundbreaking overhaul in the pedagogical approach of higher education establishments. Equipped with its state-of-the-art natural language processing abilities, it is capable of actively engaging with learners and offering them individually-tailored aid, direction, and scholastic aid. The platform known as ChatGPT has the potential to offer valuable solutions to student inquiries, furnish constructive evaluations of academic works, and enhance the educational progress of students. This feature holds particular utility in contexts of larger classes wherein it is arduous to afford individualized attention.

The capability of offering tailored educational encounters to learners is regarded as one of the foremost advantages of ChatGPT. Through the analysis of student data, ChatGPT is capable of discerning the individualized requirements of each student and rendering customized recommendations and support. One illustrative instance of the integration of personalized teaching elements within a learning platform is seen in ChatGPT, which has demonstrated the capacity to offer tailor-made study plans according to the unique learning style, academic track record, and course prerequisites of the students. The implementation of this method has the potential to enhance the level of student engagement and augment overall academic achievement. Additional utilization of ChatGPT within institutions of higher learning pertains to the

process of evaluating and assigning grades. ChatGPT has the capability to assess academic assignments submitted by students and offer expeditious feedback. The implementation of this strategy may lead to optimized utilization of instructors' time and resources, whilst simultaneously offering expedient and constructive feedback to students. ChatGPT has the capability to identify occurrences of plagiarism and furnish recommendations for originality. The implementation of this practice can potentially uphold the fundamental principles of academic integrity while fostering ethical conduct among students.

In addition, ChatGPT may be utilized to provide assistance to students who possess disabilities or encounter difficulties with learning. ChatGPT possesses the capacity for natural language processing, rendering it capable of offering instantaneous aid to students who are visually or audibly challenged. The provisioning of audio feedback, assistive technology, and personalized learning has the potential to positively impact students who experience dyslexia. Aside from furnishing individualized assistance to learners, ChatGPT can also enhance the communication and cooperation within the student body, as well as between students and educators. The ChatGPT platform has the ability to enable and support interactive group discourse, while also serving as a channel for communal knowledge exchange among peers. The utilization of this approach can facilitate the enhancement of students' critical thinking abilities and foster the dissemination of knowledge. Nevertheless, the implementation of ChatGPT within the realm of higher education institutions prompts apprehensions concerning the safeguarding of sensitive data and maintenance of adequate levels of security. It is imperative for educational establishments to safeguard student information and ensure that ChatGPT adheres to pertinent data protection statutes.

## **5. Implications of the study**

The ramifications of ChatGPT on higher education establishments hold profound significance. Integrating ChatGPT into these institutions' operations is poised to potentially revolutionize their pedagogical approach by means of affording individualized feedback mechanisms, redefining the pedagogical responsibilities of the educators involved, heightening access to course materials, and boosting levels of student participation. One of the principal implications of ChatGPT lies in its potential to enhance the quality of feedback provided to students. ChatGPT possesses the capacity to scrutinize the reactions of students and subsequently offer prompt, tailored feedback. This mechanism can prove paramount in facilitating the absorption of educational material and thus augmenting academic outcomes. The aforementioned can potentially result in augmented student involvement, contentment, and perseverance.

One of the crucial ramifications of ChatGPT is it possesses the potential to enhance the accessibility of educational opportunities for students who experience disabilities or are non-native speakers of the teaching language. ChatGPT possesses the capability to facilitate immediate translation, speech recognition, and a plethora of other features that can aid students in their access to material and enhance their participation in the learning experience. ChatGPT has the potential to alleviate the burden of tasks assigned to educators, thereby enabling them to channel their energies toward other pedagogical endeavors. These may include, but are not limited to, the creation and refinement of curricula, offering mentorship opportunities, and fostering meaningful student interactions. Through the implementation of automated teaching systems, educators can optimize their time utilization and effectiveness, consequently culminating in enhanced outcomes for both learners and instructors.

Nonetheless, the implementation of ChatGPT engenders ethical and privacy quandaries which demand prompt resolution. Institutions are advised to guarantee the transparency of their policies and guidelines that govern the usage of ChatGPT, while also addressing the aforementioned concerns. However, ChatGPT bears the potential to cause disruption and serve as a transformative factor for higher education institutions by elevating the overall learning experience for students, augmenting the teaching experience for educators, and enhancing accessibility. Institutions are advised to exercise due diligence in contemplating the ramifications of ChatGPT and to proactively address ethical and privacy concerns to guarantee the judicious deployment of this technological innovation.

## **6. Recommendations**

Drawing upon an analysis of the merits and demerits of ChatGPT as a tool for promoting advanced learning, the subsequent guidelines are offered for consideration:

- The incorporation of ChatGPT as an educational tool necessitates that institutions conscientiously deliberate the academic objectives they intend to accomplish, while guaranteeing that the technology corresponds with the established goals.
- It is imperative that institutions take measures to ensure that their policies and guidelines for the utilization of ChatGPT exhibit lucidity and transparency, and comprehensively tackle ethical and privacy concerns.
- It is imperative that educators are appropriately trained and provided with necessary support to effectively incorporate ChatGPT into their pedagogical approaches.
- It is recommended that institutions engage in perpetual evaluations of ChatGPT's efficacy towards enhancing student outcomes, while simultaneously modifying their implementation strategies in response.
- Prospective investigations ought to emphasize the evaluation of the efficacy of ChatGPT in various educational environments and circumstances, while simultaneously tackling the ethical and privacy-related apprehensions linked to its application.

By adhering to these prescribed directives, academic institutions can successfully incorporate ChatGPT into their educational methodologies and optimize its prospective advantages, concomitantly mitigating possible challenges.

## 7. Conclusion

The ChatGPT technology harbors significant potential in revolutionizing higher education establishments by imparting customized and expeditious feedback to students, amplifying accessibility, redefining the educators' function, and augmenting student participation. The possibility of decreasing the burden on lecturers (educators) and allocating additional time for attending to other teaching aspects holds the potential to enhance the quality of education, thereby resulting in more favorable student outcomes. Nonetheless, the implementation of ChatGPT in tertiary education yields ethical and privacy dilemmas that demand resolution. The implementation of ChatGPT requires institutions to diligently deliberate upon the potential implications of this technology and establish pertinent policies and guidelines to guarantee its judicious utilization. Prospective research could center on investigating the efficacy of ChatGPT across various educational environments and circumstances, while also attending to the ethical and privacy apprehensions that may arise from its application. In general, ChatGPT possesses the capacity to cause disruption and significantly alter the landscape of higher education establishments. However, its implementation necessitates careful consideration and prudence to optimize advantages and curtail potential challenges.

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