ChatGPT and artificial intelligence in higher education in Jamaica: Opportunity or threat? Reviewing stakeholders' perceptions

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Opportunity or threat? Reviewing stakeholders' perceptions

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Abstract

Stakeholders in academia, including in Higher Education Institutions (HEIs), have questioned the impact of generative Artificial Intelligence (AI), including ChatGPT, on education, whether it poses a threat or brings opportunities to the sector. To date, the debates and conversations are ongoing through various fora organised by different interest groups. While many studies have been published internationally, not much empirical data has been gathered in the Jamaican and wider Anglophone Caribbean contexts. Therefore, this research sought to ascertain perceptions from students and academic faculty about ChatGPT at the tertiary level in Jamaica. Stakeholders from different HEIs responded to a survey with both open- and closed-ended questions, as well as structured interviews. The study adopts the exploratory qualitative content analysis method to analyse the data collected. Preliminary findings suggest that ChatGPT makes academic tasks easier, as it provides quick responses, simplifies explanations, and gives prompts. It is also less time consuming. Conversely, AI makes students lazy/dependent and it limits their critical thinking development. Moreover, the absence of clear AI policies deepens academic faculty's concerns with respect to the validity of students' work, raising concerns about academic integrity.

Keywords: *ChatGPT; generative artificial intelligence; policy; higher education; Jamaica.*

1. Introduction

In November 2022, United States-based company OpenAI released *ChatGPT*, a generative Artificial Intelligence (AI) chatbot – a programme that draws upon a large language database to generate responses from text-based inputs entered by human beings. While AI is not a new phenomenon, the emergence of *ChatGPT* – whose latest version is *ChatGPT* 4.0 – has created a blizzard on the internet and has sparked major conversations in areas such as entertainment, mass media, and education, among many others. The discussions in education surround the quality and sophistication of the outputs of *ChatGPT* and the concerns about ethics and academic integrity as students within Higher Education Institutions (HEIs) may use these tools inappropriately to complete graded university tasks. Madden (2024, p. 12) notes that in prior years "students would rely on the more competent other (a human being) for explanations, ideas, or for proofreading," but *ChatGPT* and other AI tools – which are "disruptive enhancers in the education sector" – have now become the "more competent non-

biological other," as they 'think' quickly beyond the speed of the average individual and generate responses to prompts instantly.

During the 2023 spring semester, several academic faculty and administrators across colleges and universities in Jamaica and other Caribbean Community (CARICOM) islands expressed concerns regarding the difficulty in grading certain tasks, as it is at times hard to detect whether students have used AI platforms to help them complete take-home assignments. While local HEIs seek to further understand the impact of *ChatGPT*, the University of Technology[1] (UTech), Jamaica decided to control access to the use of the platform on their campus while the institution reviews its systems to guarantee academic integrity and develop policies regarding examinations and plagiarism (Gyles, cited in the *Jamaica Gleaner*, 2023). As for the University of the West Indies[2] (UWI), Mona, the institution had not yet settled on a position, although it acknowledged that the advent of the platform continued to exercise the minds of administrators and professors (Stanberry, cited in the *Jamaica Gleaner*, 2023). These stances and caution taken by both UTech and UWI suggest that, at least during the early stages of its accessibility to the public, ChatGPT was perceived to be a threat to Jamaican universities.

To date, several academic faculty and administrators have shared mixed views through departmental meetings, research conferences, and newspaper columns on whether *ChatGPT* is a threat or an opportunity to HEIs. Some have raised concerns about ethical practices, while others have called for stakeholders to be more open-minded and conduct empirical research to determine how *ChatGPT*, and generative AI in general, could be employed to the advantage of both educators and students. Samuels-Waite (2023, p. 14) – a lecturer in the Faculty of Education at the Mico University College[3] – underscores that while the default posture of academics may be to become strict in their punishment of students who use *ChatGPT* to plagiarise, "*ChatGPT* presents us with a unique opportunity to think creatively about how we design and administer assessments [coursework assignments and tests/exams] at this level."

Despite its increased usage in Jamaica and the Caribbean, the region falls short on empirical data regarding the inclusion of *ChatGPT* for academic purposes in HEIs. Many varied opinions have been voiced, but not many scientific studies have been conducted to achieve a wider scope of usage and perceptions of the chatbot. Consequently, this paper sought to examine the points of views of different stakeholders within HEIs concerning *ChatGPT* and AI and their implication for policy implementation. To achieve this, the study is guided by the following research questions:

1. What are Jamaican higher education institutions' stakeholders' perceptions on the use of *ChatGPT* and artificial intelligence for academic purposes?

2. What implications do *ChatGPT* and artificial intelligence have on policy implementation in higher education institutions in Jamaica?

It is hoped that the findings from this study will add insights to the international body of literature on *ChatGPT* and AI in higher education, as well as serve as an initial source document to guide ongoing discussions, practices, and usages of generative AI in HEIs, primarily in Jamaica and the Caribbean/CARICOM region.

2. Literature Review

Despite being on the market for only two years, *ChatGPT* has gained prominence as an innovative AI service that caters to humanity's quest for information, delivering answers, and proposing solutions online with notably performance (Macdonald et al., 2023). As established in the literature, *ChatGPT* has been used widely globally in

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[1] UTech is the oldest public university in Jamaica.

[2] UWI is an internationally ranked regional university with campuses in Jamaica, Barbados, and Trinidad, and centres in other Caribbean islands.

[3] The Mico University College is the oldest public teacher-training tertiary institution in the Anglophone Caribbean.

the education sector, especially at the secondary and tertiary levels. Mogavi et al. (2023) note that concerning the chatbot, productivity, efficiency, and ethics are among the most commonly discussed aspects on social media platforms. Zhai (2022) points out that the usage of *ChatGPT* has the potential, in academic contexts, to generate systematic, cohesive, mostly accurate, and useful publications. Thus far, *ChatGPT* has: successfully produced literary works, such as poems, songs, and essays; write, suggest improvements to, or troubleshoot errors in computer code; translate texts from one language to another, including being able to translate into Jamaica Creole (Patwa); and produce lesson plans, as well as design curricula for educators (Dilmegani, 2023).

Sulisworo and Dahlan (2023) reveal that academic faculty utilise *ChatGPT* for different aspects of their teaching, including generating ideas, gathering information for lectures, translating writings, and creating questions for deeper understanding of the topic. Notwithstanding, academic faculty opine that one should be critical and cautious when using the chatbot. Concerning students, Hasanein and Sobaih (2023) indicate that they use ChatGPT to complete take-home assignments, function as a writing assistant, solve problems, prepare and revise for tests, analyse data, obtain conceptual clarification, support research, and provide additional learning materials. However, many academic faculty members are not in favour of the platform, citing that it leads to plagiarism and increases cheating (Bin-Nashwan et al., 2023; Ahmed et al., 2022). In fact, Banovac (2023) highlights that different experiments show that many students who use ChatGPT to write essays have received lower scores compared to those who write their papers manually. This shows that by solely relying on ChatGPT, students are incapable of writing authentic, quality content. However, studies also show that students primarily use ChatGPT for academic content construction, obtaining information, uniqueness, and expediency (Jishnu et al., 2023).

Advantages and Limitations of ChatGPT in Higher Education

According to Das and J.V. (2024), students have a high level of comfort and acceptance of new technologies, and their consistent usage of ChatGPT has helped them to develop new habits. Strzelecki (2023) notes that students welcome ChatGPT's multilingual user-friendly interface, which operates effectively with minimal prompts. Athanassopoulos et al. (2023) underscore the chatbot's potential as a learning tool to improve foreign language learning and writing in a multilingual and multicultural context. ChatGPT also presents the opportunity for educators to customise and appropriate their teaching content, foster increased student involvement, motivation, and academic achievement (Guo et al., 2023). Additionally, the chatbot offers teachers the means to quickly evaluate students' assignments and provide personalised and constructive feedback, as revealed by a study conducted by Javaid et al. (2023) and Kostka and Toncelli (2023). Furthermore, using ChatGPT helps to alleviate teachers' burden in terms of lesson planning, as it plays the role of a research assistant and generates content in response to prompts. However, limitations include its inability to understand like a human, replace human knowledge and capacity, and the insufficiency of its data (Khan et al., 2023; Shidiq et al., 2023 and Zhai, 2023).

3. Method

The current study uses an exploratory qualitative approach to ascertain perceptions from higher education stakeholders (students and academic faculty) in Jamaica about *ChatGPT*. As the aim was to solicit the perceptions of these individuals, purposive sampling was the dominant technique used. However, we also recognised the benefits of snowball sampling to extend the reach of our survey; therefore, participants were also asked to share the survey with other higher education stakeholders in their network.

Data was collected over four months – February to May 2023 – in two distinct phases. First, a survey was created and administered via *Qualtrics* and disseminated via social media (mainly *WhatsApp*) to tertiary students. The survey included a combination of both open- and closed-ended questions and centred around probing participants' knowledge of and engagement with *ChatGPT* and perceptions about the advantages and disadvantages of the platform. Although 68 individuals from various local HEIs responded to the survey, our final sample was reduced to 21 students and 8 academic staff members, after eliminating ineligible respondents and incomplete surveys. Second, we used structured interviews, administered via email, to probe some of the emerging themes from our

survey data among 14 academic faculty, as well as ascertain their views on *ChatGPT's* impact on academic policy.

4. Results

Qualitative data obtained by this study on the perception of C*hatGPT* has been categorized according to the following areas of interest to the researchers: notions of AI (respondents' awareness of AI); usage of *ChatGPT* (whether respondents have used the tool); benefits of *ChatGPT*; usefulness of ChatGPT/AI (for what purposes is the tool ideal); disadvantages of ChatGPT/AI (risks and challenges associated with their use); and ChatGPT/AI policy (whether generative AI policies exist at respondents' institution).

4.1 Notions of AI

All the student respondents (N=21), who are from a wide range of institutions and academic disciplines, provided notions of their understanding of AI, which encompasses generative intelligence through computerised machines that complete both linguistic and content specific tasks and produce information with great efficiency. One student noted that AI is "computer-generated intelligence that is trained through multiple interactions with humans; it seeks to bypass human intelligence to perform complex tasks that would take humans more time to complete."

4.2 Usage of ChatGPT

Of the participants whose data was analysed (N=43), 47% said they have used *ChatGPT*, 33% said they have never tested the platform, while 20% did not provide a valid response. Students who have used the platform did so for varied reasons, including: as an aid with difficult courses; complete research and projects; write codes, speeches and letters; provide prompts for fictional works; generate ideas for assignments; "write responses when too lazy to think"; and simply out of curiosity or to test its limits and functions. One student commented, "I found it fascinating so I mainly used it to play around and test what it could do," while another said, "I heard about it and wanted to see… [what] something like this so intelligent was really about". A small contingent of students (N=3) indicated that they used the chatbot for critical thinking reasons, comparing responses to validate their interpretations of materials or questions. In addition, academic faculty (N=8) indicated using *ChatGPT* to generate ideas for projects, create lesson plans, write sample essays and speeches, create tests and quizzes, review research papers, and analyse thesis statements.

4.3 Benefits of ChatGPT

Students indicated numerous benefits of *ChatGPT* in higher education, such as: the simplification of academic tasks, both in terms of understanding and composing; the provision of quick responses with full and simple explanations; the accessibility of information within real-time (less time-consuming); the compilation of information from a wide range of credible online sources and databases; and the generation of information through limited prompts and predictive writing.

Academic faculty note that students can use *ChatGPT* to practise or have topics explained to them in the absence of their teachers. For example, a student engaging in personal reading at home may prompt *ChatGPT* to explain information on which they need clarity, thereby readily accessing knowledge without the need to contact their lecturer outside of class. Additionally, the platform can be used to increase creativity in brainstorming ideas and instructors can use it to expose students to textual models. Furthermore, *ChatGPT* can foster more analytical thinking, thereby promoting more research and writing necessary for national educational development. The chatbot also provides more perspectives for robust discussions and depth in exploring content. It challenges instructors to ask better questions and not rely on testing lower-order skills. Moreover, *ChatGPT* offers strong support to human teachers, operating as a compendium of information about any topic and supplying that information instantaneously. Therefore, it helps to facilitate the delivery of instruction and can accelerate the researching and evaluating of students' data. Furthermore, it can provide a guideline for students to write academic papers and for academic faculty to prepare lectures.

4.4 Usefulness of ChatGPT/AI

When respondents (N=43) were asked about their impression on the usefulness of ChatGPT/AI in higher education (see Table 1), the majority (N=17) chose that it makes work easier. The second significant majority (N=10) indicated that it provides prompts and ideas to help complete tasks. Other responses included that it was a "faster way of processing information" (N=5) and "completes tasks ordinarily too complicated for humans" (N=5).

Table 1. Higher education stakeholders' impressions of the usefulness of ChatGPT/AI

Description	Number of participants
Provide prompts/ideas to help complete tasks	10
Makes work easier	17
Faster way of processing information	5
Completes tasks ordinarily too complicated for humans	4
Unsure/No response/irrelevant	7

4.5 Disadvantages of ChatGPT/AI

Several disadvantages were presented by the respondents concerning the use of *ChatGPT* and AI in higher education (see Table 2). Some posited that the platform can lead to low productivity and limited creativity in students (N=11), while others mentioned the potential of students becoming intellectually lazy or too dependent on the AI (N=7), which affects critical-thinking, problem-solving and research skills. Others highlighted the potential of academic dishonesty in the form of cheating and plagiarism (N=8). Other perceived disadvantages include the absence of credible sources, the threat of job security, the decline in socialisation, the possibility of it being used for illegal gains, and the cost applied to use the platform. Still, two academic faculty members do not believe that *ChatGPT* poses a threat to higher education.

Table 2. Higher education stakeholders' impressions of the disadvantages of ChatGPT/AI

Description	Number of participants
Underdeveloped human skills (critical thinking, research skills, etc.)	11
Encourages laziness and poor socialization	7
Susceptible to plagiarism and unscrupulous/illicit activity (hacking)	8
No longer free to use	1
Supplies inaccurate or wholly incorrect responses; highly censored	8
Requires very specific instructions to produce accurate responses	3
A threat to job security	2
Not sure or no threat	3

4.6 ChatGPT/AI policy in higher education

From the structured interviews conducted with academic faculty (N=14), all of them noted that they were unaware of any specific policy that has been developed or implemented to address the use of *ChatGPT* within their respective institutions. One respondent, however, noted that "policies are currently being discussed in order to be implemented as soon as possible." Another stated that at their institution, "the university has broad policies for academic integrity and for dealing with matters of plagiarism/cheating. I believe the broad policy is applicable to AI, despite not being specific to AI." Additionally, at the same institution, the university "has shared a very comprehensive set of resources to faculty members with regard to *ChatGPT*/AI and how it affects education policy globally. The university has also hosted numerous seminars and discussions on the issue."

Academic faculty also shared divergent views on the direction that their institutions could take concerning the utilisation of *ChatGPT* and AI. The notion of context was highlighted, which takes into account the type of dialogue that exists in the institution between the administration and the student body. One interviewee pointed out that "*if the institution is student-centered, then the most natural thing… is to initiate meetings with/among the students in order to establish dialogue and communication on the subject of AI/ChatGPT. Students need to be informed as to what it is about and the dangers it could pose. The objective would also be for students to understand the need to learn how to think for themselves, solve problems by themselves, and not depend on machines to replace their brains.*" However, if the institution is not student-friendly, "students may simply be told that sanctions will be imposed if AI/*ChatGPT* is used to do assignments."

These stakeholders propose different approaches to combat students' usage of and reliance on *ChatGPT*. They suggest that teaching faculty need to develop assignments that students are capable of doing without external help. In addition, written work may have to be done under supervision and written by hand, with no computers, tablets or smartphones allowed in the room.

5. Discussion

This study sought to ascertain HEI stakeholders' perceptions on *ChatGPT* for academic purposes and its implication on academic policy. As observed in the findings, there are mixed views concerning its usage and usefulness. The findings are consistent with studies cited in the literature that students and academic faculty utilise the chatbot for various reasons, such as a prompt generator for ideas, an assistant to complete take-home assignments, a guide to explain complex tasks, and a source to produce lesson plans to create pedagogical materials (Dilmegani, 2023; Dahlan, 2023; Hasanein & Sobaih, 2023). While majority of the stakeholders use *ChatGPT* as an information-generating hub, a few students use the chatbot for critical-thinking purposes to compare their responses and confirm their understanding and interpretation of materials or questions. This suggests that students should be meticulous with their usage of the platform and use it as a complementary source of assistance as opposed to depending entirely on it to achieve their tasks. Academic faculty have raised concerns that students' dependence on the chatbot may result in low productivity, lack of creativity, and intellectual laziness. This may weaken their analytical and problem-solving skills. This position supports Banovac's (2023) study in which different experiments show that many students who use *ChatGPT* to write essays have received lower scores compared to those who write their papers manually. This further validates the point that total reliance on *ChatGPT* may render students incapable of producing original, quality content. Furthermore, this may lead to plagiarism and an increase in cheating, which is a serious concern among many academic faculty (Bin-Nashwan et al., 2023; Ahmed et al., 2022).

But even for academic faculty, they, too, are not to simply copy and paste the ideas and content generated by *ChatGPT*; instead, they should scrutinise them for accuracy and adjust them according to their specific learners' profiles and precise objectives to be achieved. Indeed, the chatbot makes work easier, as it can rapidly evaluate students' assignments and provide personalised feedback (Javaid et al., 2023; Kostka & Toncelli, 2023) as well as alleviating the burden of lesson planning. Notwithstanding, it is incapable of fully behaving like a human (Khan

et al., 2023; Shidiq et al., 2023; Zhai, 2023). Therefore, academic faculty will still have to bring the human touch to their lesson and relate to the socio-cultural contexts of their students and learning environments.

Concerning policy in HEIs to address the use of *ChatGPT* and AI, no institution has any specific framework, although some universities have general regulations with regard to plagiarism, which are applicable to *ChatGPT*. Nevertheless, questions of ethics and academic integrity are often raised (Mogavi et al., 2023). Consequently, HEIs need to establish clear guidelines on the chatbot's usage for both faculty and students. Otherwise, it may result in certain academic faculty and departments applying sanctions for its usage while others accept content generated by it. As revealed in the findings, two lecturers said they had no issue with its incorporation. The lack of clear policies may lead to inequity among the students. Furthermore, a policy would likely outline the pros and cons of the chatbot to guide both students and academic faculty. They would understand the leverage they have with the platform, what constitutes an infraction, and the consequences of any possible violation.

In the absence of a policy, academic faculty and administrators will have to rethink how they conceptualise and deliver lectures and assignments. This will require creative and innovative initiatives and non-traditional forms of evaluating learning.

6. Conclusions

Our study examined the perceptions of HEIs stakeholders on the usage of *ChatGPT* and AI for academic purposes and its implication for policy implementation. Major findings indicate that ChatGPT makes work easier, as it provides prompts and ideas to complete tasks. It simplifies academic tasks for students, provides access to a database of information within real-time, which makes it less time-consuming, and it generates information through predictive writing. Some academic faculty members believe it can serve as a tutor for the students in their absence. Additionally, the platform can help to reduce academic faculty's workload by supporting them in lesson planning, activity designing, correction of assignments, and giving of feedback.

However, some academic faculty and students are concerned that reliance on the platform may affect creativity and critical-thinking skills. Moreover, AI's susceptibility to producing false information under the guise of credible sources raises serious concerns about academic integrity. Nevertheless, stakeholders have to be deliberate in using the chatbot as a complementary support and not for total dependence. Furthermore, one of the greatest concerns of academic faculty is that of academic dishonesty. Questions of ethics and academic integrity are often cited by educators. Despite this, Jamaican HEIs are still without specific policies to address the use of *ChatGPT* and AI. The absence of precise regulations may lead to inequity in student assessment. In the meantime, academic faculty and stakeholders have to be creative and innovative in their design, administration, and correction of lectures and assignments.

While this study addresses initial perceptions of Jamaican HEI stakeholders on *ChatGPT*, the authors invite academic faculty to incorporate the chatbot in different ways, whether for lectures or adminstrative purposes, to conduct different experiments to have a broader representation of the affordances and limitations of ChatGPT and AI in HEI contexts.

Acknowledgements

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