

Navigating the AI Frontier: Awareness and Preparedness at the University of Belize

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Abstract

This study examined the University of Belize (UB) community's awareness, usage patterns, and preparedness concerning AI and generative AI tools, such as ChatGPT. Recognizing AI's growing impact on global higher education, the research assessed UB's readiness for ethical and effective adaptation. Employing a quantitative survey method, data from 307 students, faculty, staff, and administrators indicated diverse levels of AI literacy. While a majority are acquainted with and utilize AI tools like ChatGPT for academic and professional tasks, perceptions regarding AI's influence and helpfulness varied across demographic groups. Notably, higher educational attainment and older age correlated with more optimistic views on AI's utility and professional relevance. However, a widespread lack of awareness regarding institutional AI policies underscores the necessity for enhanced communication and strategic direction. The study advocates for UB to implement inclusive AI literacy initiatives, establish clear ethical guidelines, and develop institutional policies to ensure responsible AI integration throughout its academic and administrative operations.

Keywords: ChatGPT, AI in higher education, Ethical use of AI, university AI awareness, GenAI

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Background

The swift advancement of AI technologies, including GenAI tools like ChatGPT, is transforming global higher education. Universities must prepare for AI integration in education and administration while considering ethical implications. While AI's impact on jobs has been studied, less research in Belize focuses on AI awareness in education, especially in developing regions. As Belize's national university, the University of Belize (UB) has shown adaptability in its 25-year history, including research and infrastructure growth like the Hummingbird Analytical Laboratory (HAL). Despite limited resources compared to larger institutions, UB's adaptability allows it to keep pace with technological progress and avoid falling behind.

Generative AI chatbots, built on large language models (LLMs) trained on vast datasets (Brown, et al., 2020), represent a major advancement, enabling dynamic, context-aware conversations. Key features include sophisticated dialogue, such as admitting mistakes and refusing inappropriate requests, and generating fluent, human-like text (Brown et al., 2020; Biswas, 2023). Progress is driven by scaling laws, where larger models and datasets improve performance, and few-shot learning for task adaptation without fine-tuning (Brown, et al., 2020). The field evolves rapidly, integrating tools like web search and code execution and expanding to multimodality across text, audio, image, and video (OpenAI, 2025). Challenges remain, including factual accuracy or "hallucinations" (Atomic14, 2023), data bias (Biswas, 2023; O'Brien et al., 2024), and misuse risks (DataCamp, 2024). Future work focuses on enhancing reasoning, reliability, safety, and ethical alignment (Island, 2024). These advances have fueled an AI race not just among large technology companies wanting to position themselves in the field of GenAI model development, but a race for universities and higher education institutions to adapt and become AI literate and stay abreast of the rapidly evolving AI landscape. This has led to potential concerns about its use and in Belize, investigations of these chatbots usage is nonexistent; (Janssen, Grutzner, & Breitner, 2021) describes few reasons for chatbot's failure in practice such as incorrect use case, not having sufficient resources for reasoning, some even produced unethical responses during initial release and then taken offline.

In the education sector initial concerns expressed among the majority of professors was they felt AI (like ChatGPT) would be used by students for academic dishonesty (Anders, 2023). While some educational institutions banned the use of GenAI like ChatGPT (Blöse, 2023), others cautiously welcomed its arrival (UNESCO, 2023). Various schools and universities, for instance have made commitments to preparing staff and students to benefit from AI and; to enhance teaching practices and student learning experiences in an effective, ethical and transparent manner (Russell Group, 2023). UB currently does not have this support or guidelines on AI usage within its organization. For this reason, the purpose of this research is to help with policy decisions on AI integration in education at UB; AI projects that maybe initiated without proper planning can lead to unwanted effects; proper guidance will ensure UB remains competitive while addressing ethical and pedagogical challenges.

This study assessed the awareness, perceptions, and preparedness of UB students, faculty, staff, and administrators regarding generative AI tools like ChatGPT. It examines usage, perceived job impacts, and attitudes toward regulation to understand UB's readiness for responsible AI integration. The hypothesis is that awareness and adoption vary across demographics, with higher education and responsibility linked to greater use and optimism. Ultimately, the study provides recommendations for ethical and creative AI integration to potentially revolutionize teaching, learning, research, and administration at UB.

Literature Review

As artificial intelligence (AI) technologies rapidly evolve, their integration into educational contexts has sparked both enthusiasm and concern. This literature review provides a conceptual overview of AI in education, with a specific focus on generative AI (GenAI), its implications in higher education, and the ethical challenges it presents. Drawing from global reports, peer-reviewed studies, and institutional guidelines, this section builds the theoretical framework necessary to examine the University of Belize's awareness, preparedness, and policy development surrounding AI. Given the increasing use of GenAI tools, like ChatGPT; this review also positions these tools at the center of discussion, aligning with the design of the UB's AI survey.

The OECD (Organization for Economic Co-operation and Development) defines AI as: "*a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems are designed to operate with varying levels of autonomy.*" (OECD, 2019). To bridge this global definition with the focus of this study, we emphasize GenAI, particularly ChatGPT, as the primary reference for AI within our survey-based investigation

One of the most transformative and visible subfields of AI is Generative Artificial Intelligence (GenAI), which has recently gained significant traction in public and academic discourse. The field of AI has evolved rapidly and has become more popular to the general public because of a particular approach within it: the field of generative artificial intelligence, which exploded in late 2022. The implementation of applications that make Large Language Models (LLMs) easily accessible to end users such as ChatGPT, Dall-E or Midjourney have set a new milestone in AI. The general public can now engage in the creation of human-like texts, images of realistic quality and even music (García-Peñalvo & Vázquez-Ingelmo, 2023).

This rapid phenomenon of these AI tools is driving technological changes in every industry and, it would be naïve to say AI will not have an impact on education (Holmes, Bialik, & Fadel, 2019) and bring both positive and negative effects to our educational society. Its widespread adoption has been driven by its ease of use and accessibility, though its launch has produced mixed reactions, particularly among students and faculty. While it can be argued that these applications can be useful, in education it presents a mirage of issues. For one its tiered and paid plans make it disadvantageous for some students, one student can have an edge using a paid version of say ChatGPT versus the student using a free version. While faculty could potentially allow its usage in various courses, there is no way of keeping balance among all students, weather used in class or at home for assignments.

The concept 'Generative Artificial Intelligence' lacks a universally accepted definition leading to potential misunderstandings. While a model producing any output can be technically seen as generative, the Artificial Intelligent research community often reserves the term for complex models that generate high-quality, human-like material (García-Peñalvo & Vázquez-Ingelmo, 2023). According to (UNESCO, 2023) Generative AI (GenAI) is defined as "*Artificial Intelligence (AI) technology that automatically generates content in response to prompts written in natural language conversational interfaces.*" GenAI is important as it is the most commonly used AI today, and GenAI is what our survey was based on. These types of LLM are trained via collected data from various webpages, social media, and other online data. While these tools can produce new content by statistically analyzing word distributions or pixel patterns in images and videos, they do so by identifying related or repeating sequences, such as which word typically follows another. However, it is argued that they cannot generate truly novel ideas or solve real-world problems, as they lack an understanding of the social relationships essential to such challenges. As a result, trusting these outputs in an educational context makes it more difficult for student learning. Even OpenAI for example says "*while ChatGPT can often generate answers that sound reasonable, they cannot be relied upon to be accurate.*" (OpenAI, 2023) So, should our students trust these answers? Should faculty or employees in higher education institutions trust outputs generated by these AI tools?

As GenAI continues to shape general technology use, its incorporation into formal education, especially higher learning, demands careful review. AI is today undoubtedly a vital part of the digital world. In education according to an article in (EdTech Magazine, 2020) AI's role is seen as having an enormous impact on both higher education and general education. Colleges and universities hope it will help offload time-intensive administrative and academic tasks, among other efficient uses. As an instructor I constantly ask myself "How can AI enhance or transform my courses?" GenAI offers various benefits; including a personalized learning path, real-time feedback, automated grading, and research support. However, alongside these advantages, AI raises growing concerns about academic integrity, fairness, and the pace at which education systems can meaningfully adapt.

Recent empirical research has explored this shift's positive and challenging dimensions. According to (Slimi, Khoufi, Ben-Slama, & Brahmi, 2023) while AI can enhance educational delivery and student outcomes, its integration must be supported by thoughtful policies addressing the ethical, technical, and human challenges accompanying its use.

However, this integration raises ethical and policy challenges that universities must tackle to ensure AI is applied fairly and responsibly. Responsible AI does not yet have a universally accepted definition. Nevertheless, AI can be defined as a set of principles that guide the design, development, deployment and use of AI (IBM, n.d.). In particular, building trust and transparency into AI systems. This can be seen through various lens. Thus different organizations may have their respective definitions. However, the overall goal is ethical implications, especially in academics where integrity, data privacy, research and innovation have higher standards. Universities worldwide are developing policies to address AI's role in academia, ensuring responsible use while preventing misuse. (UNESCO, 2023) cautions that GenAI, despite its promising capabilities, is introducing controversial dynamics into educational systems. These include the risk of widening digital inequality, accelerating the use of unverified content, and reinforcing biases embedded in training data. Furthermore, the inability to explain how generative AI models arrive at specific outputs presents serious limitations for educators who aim to promote transparency and critical thinking. In academia we must consider issues like plagiarism, data privacy, how it will impact learning, student cognitive ability, curriculum design and of course the teaching process.

In response to these challenges, many universities, like National Tsing Hua University (NTHU) have implemented AI ethical guidelines that emphasize transparency and responsibility in academic settings. Their policy encourages instructors and students alike to disclose AI use and critically evaluate its outputs (National Tsing Hua University, 2023). This approach complements UNESCO's recommendation for a human-centered framework that empowers learners and educators while promoting digital literacy, inclusion, and the ethical use of emerging technologies. As universities worldwide, including UB, further explore the use and integration of AI tools, it is essential to take a measured approach that blends international best practices with local strategies, ensuring a balance between innovation and academic integrity.

Methodology

This study utilized a methodology that follows a quantitative research method suitable for examining usage, attitudes, and correlations across a sample of participants (Creswell, 2014). The research design was survey based, where we applied single item questions to ensure the survey was doable in under 5 minutes. Some limitations may have been introduced such as not being able to apply reliability measures. However, this approach reduced the burden respondents may experience, or survey fatigue. According to (Bergkvist & Rossiter, 2007) the use of single item measures is just as effective as multi-item measures, as the predictive validity between them shows no difference. Our survey items are partly inspired by past work done by at Pew Research Center exploring "Americans' perspectives on emerging technologies and uses of artificial intelligence." Their study examined adults' experiences with chatbots such as ChatGPT, particularly in relation to their jobs and was conducted among 5,057 U.S. adults from July 17 to 23, 2023 (Park & Gelles-Watnick, 2023).

Some refinements were made in our survey to assess AI adoption at UB as an institution within academia and not just students' use. The questions used in our survey were divided into 3 sections, the first required respondents to accept and answer the survey and, the second collected demographic information. The third section asked various questions, and a summary of the categories include: Who has used an AI chatbot at UB? How does the UB community use AI Chatbots? Which jobs does the UB community think will be most affected by AI chatbots? Whom are most likely to think AI will affect their jobs? Will AI chatbots help people do their jobs? How do UB users feel about government regulation of AI? What is the level of AI adoption at UB?

An email invite with a link to the survey was sent out to the university community through the marketing and communication department. Thus, another limitation is the sample was voluntary. The survey opened from Thursday October 10, 2024 through November 1st, 2024, with a reminder sent out October 29th, 2024. We secured a total sample of 307 respondents from the entire UB community, including 241 students, 30 faculty members, 24 staff, and 11 administrators, with one respondent not specifying their role. In terms of gender, 161 identified as female, 89 as male, and 57 did not state their gender.

To move beyond descriptive statistics and make inferences about the entire University of Belize (UB) community, a series of hypothesis tests were conducted. We employed the chi-square (χ^2) test of independence to determine if statistically significant relationships exist between various demographic groups and their awareness, usage patterns, and perceptions of AI. This statistical method is appropriate for analyzing the categorical data collected from the survey. The null hypothesis (H_0) for each test posited that there is no association between the demographic variable (e.g., age, education level, role) and the AI-related variable (e.g., usage, perceived helpfulness). The alternative hypothesis (H_a) stated that an association does exist. A significance level (alpha) of $\alpha=0.05$ was used to evaluate the p-value for each test. If the p-value was less than 0.05, the null hypothesis was rejected, suggesting a statistically significant relationship between the variables.

Discussion & Analysis

Since its release ChatGPT has been the most widely used GenAI chatbot in the world. In higher education especially, universities around the world have instituted bans on its use while other have embraced the use of AI (Stöhr, Ou, & Malmström, 2024). In Belize however, and possibly the nearby region, there is little information known on AI usage or adoption in education, particularly higher education (or tertiary institutions). At the University of Belize most persons have heard of AI tools, like ChatGPT; few think less of its impact, while very few have not used it. To better understand how the UB community views AI, let's discuss these findings.

Who has used an AI chatbot at UB?

Table 1 examines whether AI usage is independent of age and educational level.

Variables Tested	χ^2	df	p-value	Finding
AI Usage vs. Age Group	33.98	3	< 0.001	Significant
AI Usage vs. Education	2.56	3	0.464	Not Significant

Table 1: AI Usage by Demographics

Figure 1 shows the percentage of respondents who have used AI, broken down by various demographic categories. Among those who have heard of AI chatbot such as ChatGPT, 83% also used it. Among the surveyed population, 86% of male respondents reported having used AI, compared to 81% of female respondents who gave a similar response. The difference in AI usage between these genders is relatively small, with males showing a 5% higher usage. This could potentially be attributed to traditional gender roles

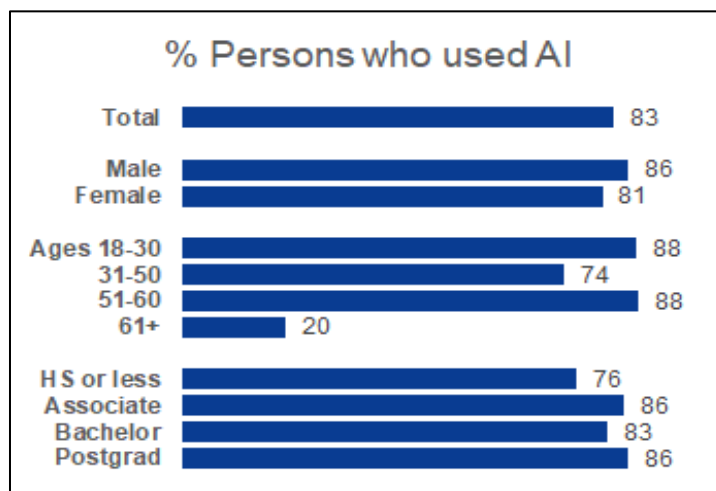


Figure 1: % Persons who used AI

in technology or fields of study/work that might involve more technical tools. However, the small difference also suggests that both genders are adopting AI at a similar rate and is becoming increasingly widespread. Age, however, shows a much clearer distinction. The highest percentage of AI usage is observed in younger adults (18-30) and older adults (51-60) age groups, both at 88%. Both young and old adult groups indication of a strong usage within the university could be due to greater familiarity with technology in general for the younger adults in an era of rapid tech growth, while the older adult's usage might be linked to specific professional roles or a personal interest in staying updated with technological advancements. The 31-50 age group shows a lower usage rate of 74% compared to the younger and older adults, this could be due to different levels of exposure or need for AI within these mid-career age ranges. The lowest usage is seen in the 61+ age group, with only 20% reporting use. Importantly, the statistical analysis confirms that AI usage significantly varies by age group ($\chi^2 = 33.98$, $df = 3$, $p < 0.001$).

Looking across different educational levels, users with an Associate's degree and those with a Postgraduate degree show the highest rates of AI usage, both at 86%. This could indicate that both those entering the workforce with a foundational higher education and those with advanced degrees are actively exploring and utilizing AI tools. Bachelor's degree holders report a slightly lower usage rate of 83%, while those with a High School education or less show the lowest rate at 76%. While these patterns may hint at a relationship between education level and AI adoption, the statistical test results ($\chi^2 = 2.56$, $p = 0.464$) show no significant association between education and AI usage. This indicates that, unlike age, education alone does not appear to be a determining factor in whether individuals use AI. The observed differences could be due to other influences, such as exposure, job roles, or personal interest rather than education alone and therefore warrant further exploration.

How does the UB community use AI chatbots?

Table 2 explores if the reasons for using AI (entertainment, learning, work) are associated with age or education.

Variables Tested	χ^2	df	p-value	Finding
Use for Entertainment vs. Age	15.21	2	< 0.001	Significant
Use for Entertainment vs. Education	11.89	3	0.008	Significant
Use for Learning vs. Age	7.65	2	0.022	Significant
Use for Learning vs. Education	21.43	3	< 0.001	Significant
Use for Work vs. Age	4.12	2	0.127	Not Significant
Use for Work vs. Education	1.87	3	0.6	Not Significant

Table 2: Purpose of AI Use by Demographics

As seen in Figure 2, the most common use of AI is to learn something, with 89% of users indicating they use it for this purpose, a significant majority (78%) use AI for tasks related to their work, while the least common use among the three is for entertainment with 53% of AI users reporting this. The data shows that younger adults are more likely than their older peers to have used AI for entertainment and educational purposes. For example, among those who use AI, 59% of adults aged 18-30 have used it for entertainment, and 49% of those aged 31-50 have done the same, compared with only 6% of those 51 and older. Regarding learning, younger adults also show a higher tendency to use AI for this purpose. Among AI users, 91% of those aged 18-30 have used it for learning, and 81% of those aged 31-50 have done so, while a slightly lower but still significant 87% of those 51 and older have used AI for learning. There is a notable difference in the use of AI for tasks at work across age groups. AI users aged 51 and older are the most likely to report using it for work (87%). This is higher than the 79% of those aged 18-30 and the 72% of those aged 31-50 who have used AI for work related tasks.

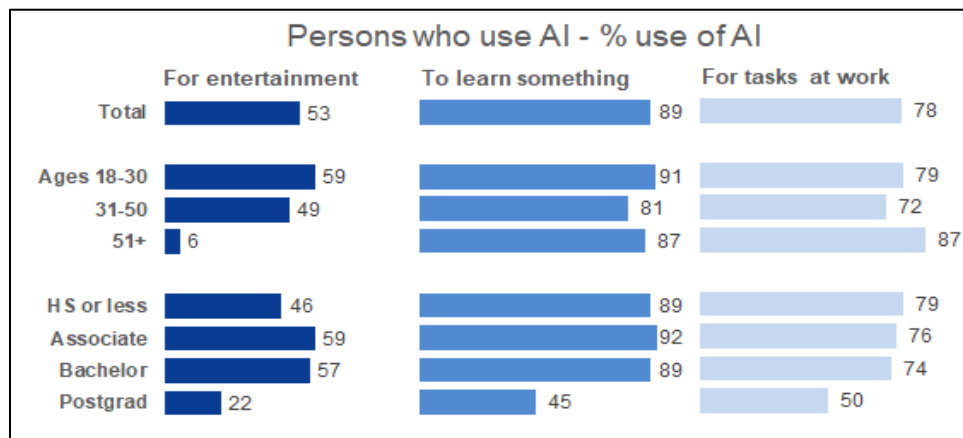


Figure 2: Persons who use AI - % use of AI

Adults with a high school education or less who have used AI are less likely than those with higher levels of formal education to have used it for entertainment and work. For example, among those who use AI, 46% who have a high school diploma or less say they have used it for entertainment, compared with 59% of those with an Associate's degree and 57% of those with a Bachelor's degree. However, a lower percentage (22%) of those with a Postgraduate education used AI for entertainment. The age trend suggests that younger individuals are more inclined to explore AI for leisure activities, aligning with broader technology adoption patterns. The lower usage among older adults might reflect different entertainment preferences or a lack of awareness of AI's entertainment applications. Low postgraduates' rates could indicate a focus on academic or professional pursuits over entertainment-focused AI. AI users with a high school education or less show a high usage rate (89%) for learning, similar to those with an Associate's degree (92%) and a Bachelor's degree (89%). However, a significantly lower percentage (45%) of those with a Postgraduate education used AI to learn something.

Our data indicates that younger UB individuals are more inclined to use AI for leisure, while older adults and postgraduates show lower usage, possibly due to differing preferences or priorities. This aligns with general trends of younger demographics being early adopters of technology for leisure while the 51+ group suggests entertainment is not a primary driver for their AI usage. High AI usage for learning reflects its value as an educational tool, with slightly lower rates among 31-50 and postgraduate groups. This might suggest that younger individuals and those pursuing higher education are actively using AI as a learning tool.

Work-related AI use shows an interesting contrast. Descriptively, older adults (51+) report the highest use of AI for work (87%), while younger adults (18-30) and those aged 31-50 report somewhat lower levels (79% and 72%, respectively). Education shows similar descriptive variation, with postgraduate users reporting notably lower work-related use (50%) compared with other groups (74-79%). However, statistical tests reveal that AI use for work is not significantly associated with either age ($\chi^2 = 4.12$, $p = 0.127$) or education ($\chi^2 = 1.87$, $p = 0.600$), suggesting these differences are not consistent enough to establish clear demographic trends. Further research is needed to examine what factors, such as job role, discipline, or attitudes toward AI could explain why some groups turn to AI for work more than others.

Which jobs does the UB community think will be most affected by AI chatbots?

Table 3 tests for relationships between demographic factors and perceptions of AI's impact on jobs and its helpfulness.

Variables Tested	χ^2	df	p-value	Finding
Perceived Impact on Own Job vs. Age	24.55	3	< 0.001	Significant
Perceived Impact on Own Job vs. Education	19.87	3	< 0.001	Significant
AI Helpfulness for Work vs. Age	8.99	3	0.029	Significant
AI Helpfulness for Work vs. Education	7.91	3	0.048	Significant

Table 3: Perceived Impact and Helpfulness of AI by Demographics

Artificial intelligence may have a significant impact on jobs that often require a college education. In this survey, over 60% of those who use AI believe that AI will have a major impact on software engineers (64%), graphic designers (65%), and journalists (63%). A slightly higher percentage (68%) think AI will have a major effect on teachers. In contrast, a smaller share (32%) anticipate a major impact on lawyers. However, AI users are somewhat less likely to think AI will have a major impact on their own jobs. About 47% of AI users believe AI will have a major impact on their current job. Another 33% say it will have a minor impact, and 7% expect no impact at all.

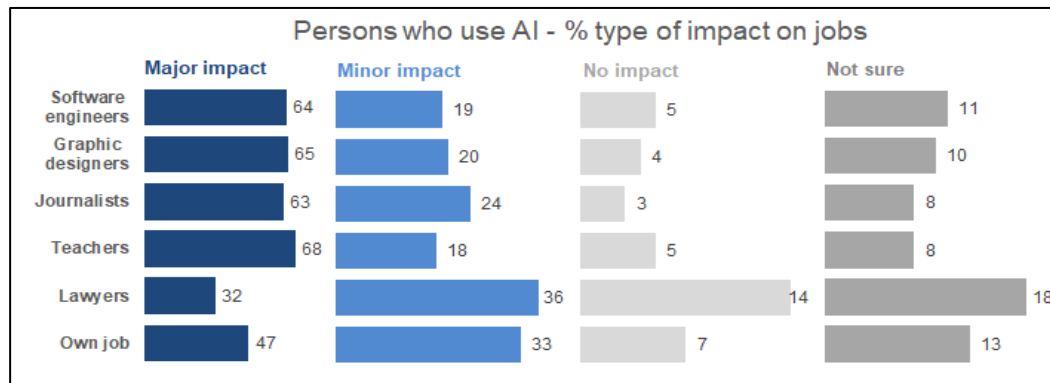


Figure 3: Persons who use AI - % type of impact on jobs

Teachers (68%), Software Engineers (64%), Graphic Designers (65%), and Journalists (63%) are perceived to be the most impacted by AI. These professions likely involve tasks that are already being significantly augmented or automated by AI technologies. Some examples include:

Software Engineers: AI tools for code generation, debugging, and testing are already becoming increasingly sophisticated.

Graphic Designers: AI can assist with image generation, design suggestions, and automation of repetitive tasks in the workplace.

Journalists: AI is being used for generating news articles, analyzing data, and assisting with research, new models have released “deep research” (Gómez-Olea, 2024) features.

Teachers: AI could potentially impact areas like personalized learning, automated grading, administrative tasks, and course preparation.

Lawyers (32%) are seen as having the least major impact among the listed professions. The legal profession might be perceived as less vulnerable to major disruption by AI due to the critical need for human judgment, or understanding of legal precedents, and complex ethical considerations. While AI is being used in legal research and document review, the core aspects of legal practice might still require significant human involvement (Stepka, 2022). The high “Not sure” percentage for lawyers could reflect uncertainty about the future role of AI in this field. The perception of major impact on “Own job” falls in the middle at 47% could suggest a varied experience among the respondents, reflecting the diverse roles within the university. The statistical tests provide further insight into these perceptions. Perceived impact on one’s own job varies significantly by both age ($\chi^2 = 24.55$, $p < 0.001$) and education ($\chi^2 = 19.87$, $p < 0.001$).

Whom are most likely to think AI will affect their jobs?

Among those who have used of AI (ChatGPT), 47% think AI will have a major impact on their own job, while 33% perceive a minor impact, this results in an overall net impact of 80%. Looking at the age groups, young adults (18-30) who have heard of ChatGPT, 75% say chatbots will have a major or minor impact on their own job. 88% of those ages 31 to 50 say chatbots will have a major or minor impact on their own job. However, a 100% of those ages 51 to 60 say chatbots will have a major or minor impact on their own job. This group has the highest perception of major impact at 93%. Similarly, those of ages 61 and older adults say 100% the chatbots will have a major or minor impact on their own job.

The perception of major impact generally increases with age, starting at 38% among the youngest group (18-30) and rising to 93% in the 51-60 age group. This may be because younger adults, frequently engaged in entry-level roles or industries (including student and call center environments) where AI adoption is less widespread, may view it as an eventual workplace feature rather than a significant immediate disruption. Conversely, the view of minor impact is highest among the youngest group (37%) and decreases with age, reaching just 7% in the 51-60 age group, with the 31-50 group reporting 28%. The higher perceived major impact in the 31-50 and 51-60 age groups could reflect more significant changes in roles due to AI, particularly in established professions or leadership positions.

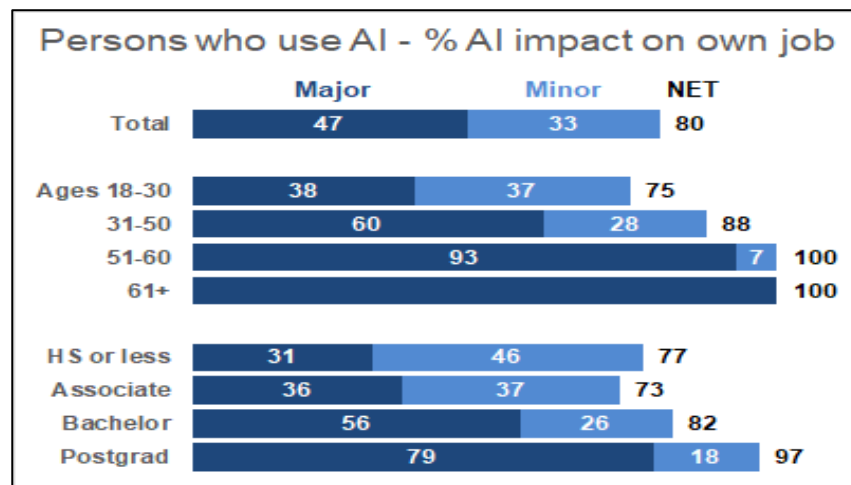


Figure 4: Persons who use AI - % AI impact on own job.

Those with higher education levels are more likely to think chatbots will have an impact on their job. For example, among adults who have heard of ChatGPT, 97% of those with a post-graduate degree say this, compared with 82% of those with a bachelor's degree, 73% of those with an associate degree, and 77% of those with a high school diploma or less. The lower view on major impact and higher notion of minor impact among those with a high school education or less may suggest that AI is affecting their roles in more task-oriented ways. In contrast, higher perceived major impact among those with bachelor's and post-graduate degrees may reflect their involvement in areas where AI is driving significant change, such as research and specialized fields.

Will AI chatbots help people do their jobs?

Most of the respondents anticipate AI chatbots to be helpful for their own work. 30% believe AI will be extremely helpful for their work, and 36% believe it will be very helpful, resulting in a net positive perception of helpfulness of 66%.

Younger adults who have used AI reported the lowest (65%) optimism overall that AI would help them do their job, slightly lower than the 31-50 age group (66%). Older adults reported the highest net positive view that AI will help their job, with 80% overall in the 51-60 group and 100% from the 61+ age group.

Among the 65% of those aged 18-30, 28% said AI will be extremely helpful and 37% think it will be very helpful. In contrast, 34% from the age group 31-50 said it will be extremely helpful and 32% believe it will be very helpful, resulting in a net positive perception of 66%. While 51-60 were both even at 40% and 100% for the age group 61+. This result indicates that the idea of AI being extremely helpful generally increases with age, the slightly lower net positive perception among younger adults (18-30) might be due to less experience in the workforce (or students not employed) or uncertainty about how AI will specifically integrate into their future careers. The higher net positive perception among older adults (especially the 51-60 and 61+ groups) could indicate a greater recognition of AI's potential to assist them with tasks, improve work efficiency, or research. Their work experience might give them a clearer understanding of the areas where AI could provide significant support.

Respondents with higher levels of formal education are also more optimistic. Those who have used AI and have a college degree (Bachelor's or Postgraduate) are more likely than those without a college degree (HS or less or Associate) to say AI will be helpful for their job. Specifically, 74% of those with a Bachelor's degree and 79% of those with a Postgraduate degree believe AI will be helpful, compared to 59% of those with a High School education or less and 60% of those with an Associate's degree.

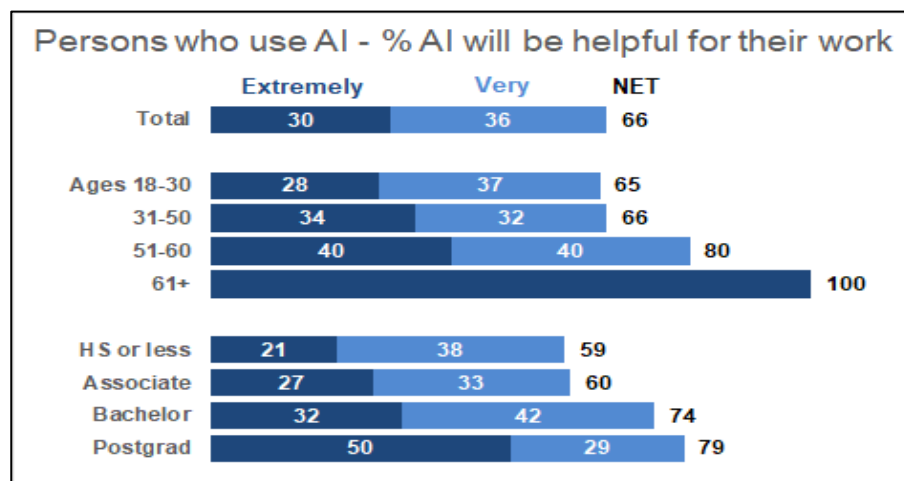


Figure 5: Persons who use AI - % AI will be helpful for their work.

At UB, the belief that AI will be extremely helpful increases as education increases. Perceptions of AI's helpfulness for work tasks also vary significantly by age ($\chi^2 = 8.99$, $p = 0.029$) and education ($\chi^2 = 7.91$, $p = 0.048$). While many respondents see AI as a tool to support productivity, streamline repetitive work, and expand creative possibilities, the level of enthusiasm or skepticism appears to differ across demographic groups. The lower net positive perception among those with a high school education or less and Associate's degrees might reflect roles where the immediate benefits of AI are less obvious or require more specialized training. While the higher net positive view among those with Bachelor's and Postgraduate degrees could be attributed to their involvement in more complex tasks, research, or fields where AI tools have a more direct and significant impact on productivity and work efficiency. The advanced education might also provide a better understanding of AI's capabilities and potential applications in their respective fields, hence the reason why they are more likely to say AI chatbot like ChatGPT would be helpful for their job.

How do UB users feel about government regulation of AI?

The rise of ChatGPT and other AI chatbots has generated conversations about how they should be regulated. In early 2023, according to (Shepardson & Bartz, 2023) the US government started exploring potential regulations of artificial intelligence. In Belize and the region, this is still a conversation that is in its infancy or nonexistent at UB, the overall sentiment when asked which is of greater concern, we see there is a near balance in these two opposing concerns regarding AI regulations. Overall, 51% of all respondents believe that as the technology becomes more widespread, regulations will "not go far enough," while 49% think it might "go too far."

Table 4 assesses whether concerns about government regulation and awareness of UB's AI adoption level differ by role within the university.

Variables Tested	χ^2	df	p-value	Finding
Concern of AI Regulation vs. Role	15.32	3	0.002	Significant
Level of UB AI Adoption vs. Role	13.67	12	0.322	Not Significant

Table 4: Views on AI Regulation and Institutional Adoption by Role

Of the total respondents among all faculty, a strong majority (77%) feel that regulations of AI will "not go far enough." Only 23% of faculty are concerned it might "go too far." From an administration perspective, a slight majority (56%) think it may "not go far enough." While a notable 44% of administrators are concerned that regulations might "go too far." Students present a contrasting view where the majority (55%) believe the regulation of AI might "go too far," and 45% otherwise.

Looking closer, the largest difference in opinion exists between faculty and students. Faculty members are 32% more likely than the students to believe that AI regulation will not go far enough. Conversely, students are also 32% more likely than faculty to think regulation might be excessive. These role-based differences are not only descriptive but also statistically significant. Our test confirms that concerns about AI regulation differ by role ($\chi^2 = 15.32$, $df = 3$, $p = 0.002$). This suggests that position within the university shapes perspectives.

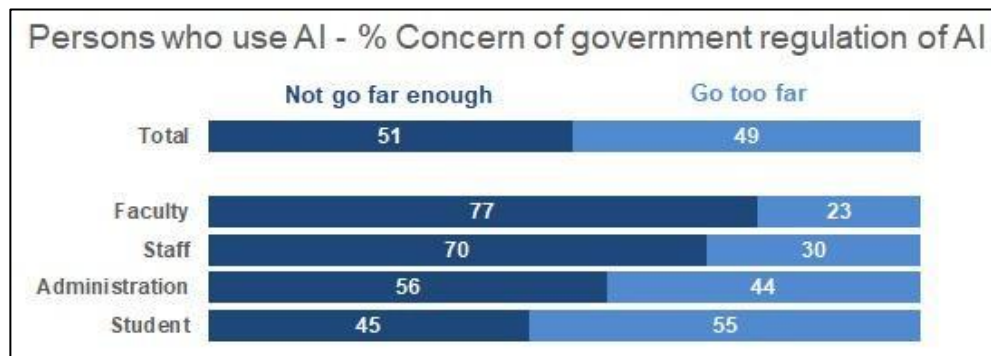


Figure 6: Persons who use AI - % concern of government regulation of

Comparing both faculty and staff, we see a strong inclination towards wanting more AI regulation, however, faculty expressed this view slightly stronger with 77% thinking regulations will not go far enough compared to 70% of staff. Though these perspectives differ by only 7%, it could suggest that faculty are slightly more concern about the potential risks associated with unregulated AI and the need for stronger oversight.

Between staff and administrators, staff seem more inclined to believe that regulations will not go far enough (70% vs. 56%). At the same time, administrators show a greater concern about over-regulation compared to staff (44% vs. 30%). This difference might reflect the administrative role in balancing work with potential risks.

Students are significantly more concerned than other groups about AI regulation going too far (55%). Administrators also share this concern at a notable level (44%), suggesting a worry about stifling innovation. In contrast, faculty and staff express less apprehension about over-regulation. This indicates a clear divergence in perspectives on AI governance across the academic community. Students' heightened concern may stem from how AI regulation could impact their learning and future opportunities.

What is the level of AI adoption at UB?

The fast pace advancement of AI and GenAI tools have made it challenging for many organizations to stay informed about or monitor the extent of their adoption by employees within the organization itself; according to (Bickford & Roselund, 2023) this is known as shadow AI. From an educational perspective the university of Belize seems to be unaware of its adoption. The high percentage of "Don't know / Not sure" across all roles suggests a lack of clear communication or awareness within UB regarding the institution's level of AI adoption. This a most striking finding, that of the respondents who use AI a significant proportion of individuals across all groups fall into the "Don't know/Not sure" category regarding AI adoption. This group represents 62% of students, 65% of faculty, 55% of staff, and 56% of the administration.

The patterns vary across the groups among those who have made a definitive choice or action regarding AI. A notable percentage of students (20%) feel that UB has not adopted AI and have no plans to do so. This is the highest percentage in this category across all groups and could indicate they are less aware of any institutional initiatives or pilot projects and the small percentage (1%) indicating extensive adoption could be based on their personal use of AI in their studies or courses. Conversely, the administration shows the highest percentage (22%) of individuals who think UB has not adopted AI but may have plans to in the future. This could indicate they have a somewhat better overview of any ongoing or planned AI initiatives within the university, although the level of awareness is still not widespread even within this group. Faculty shows a consistent 12% across three categories: "Not adopted/Has no plans to," "Not adopted/Has plans to," and "Incorporated some AI." This suggests a more even distribution among these early stages of adoption compared to other groups, probably because the type of incorporation can be either in course work or being used to improve work/teaching efficiency. The high "Don't know / Not sure" among faculty is notable. It could suggest that while some faculty might be involved in individual AI initiatives or research, there isn't a widespread understanding of a formal institutional strategy or level of adoption.

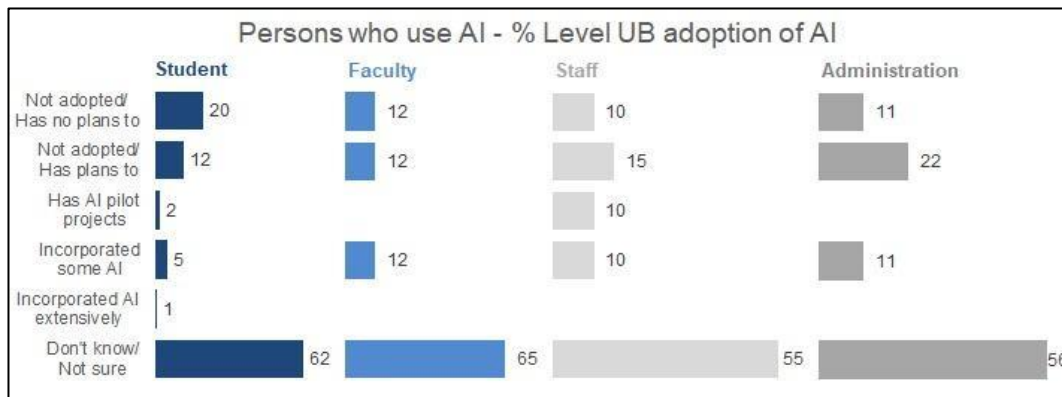


Figure 7: % Level UB Adaption of AI

Staff presents a slightly different profile, with 15% saying UB has not adopted but plans to, and 10% each in the categories of "Has AI pilot projects" and "Incorporated some AI." This level of uncertainty could possibly indicate that AI adoption is not yet a prominent aspect of their daily work or institutional communications, but their belief in plans to adopt AI might reflect some awareness of potential future changes in administrative or operational processes in their work.

The percentage of individuals who think UB has "Incorporated some AI" is relatively low across all groups, ranging from 5% for students to 12% for faculty. The category "Incorporated AI extensively" shows the lowest figures, with only 1% for students and 0% reported for faculty, staff, and administration based on this chart who think the organization has extensively incorporated AI. While descriptive patterns show some variation, such as students being more likely to believe UB has not adopted AI and administrators slightly more aware of potential plans; the statistical test shows no significant differences across roles ($\chi^2 = 13.67$, $df = 12$, $p = 0.322$). This indicates that uncertainty about institutional adoption is widespread and not confined to any particular group. This highlights a potential need for better communication and transparency regarding UB's AI strategy and implementation efforts.

Conclusion & Recommendations

The survey and study collectively reveal that AI technology, especially generative AI tools like ChatGPT, has gained significant traction within the University of Belize (UB) community, with many leveraging its capabilities primarily for learning and work-related tasks. However, while AI's potential is widely recognized, usage rates and perspectives on its utility vary across demographics, with higher education levels and older age groups expressing more positive views. This enthusiasm contrasts with widespread uncertainty about institutional AI policies, highlighting a disconnect between individual usage and centralized oversight. This lack of clarity risks impeding ethical integration and strategic growth. Alongside this, differing opinions on AI regulation emerge; students express concern over over-regulation impacting their academic and career prospects, while faculty advocate for stricter measures to safeguard academic integrity. These results show that while significant demographic differences exist in how AI is adopted, perceived, and regulated at UB, the non-significant findings highlight that AI use and perceptions cannot be fully explained by demographics alone, pointing to a more complex interplay of professional, cultural, and contextual factors that merit deeper exploration as UB navigates its evolving relationship with AI.

In addition, the findings underscore the need for UB to develop a comprehensive AI strategy that bridges these gaps, these could include fostering AI literacy, establishing ethical guidelines, and promoting clear communication. Such a strategy is vital to thoughtfully integrate AI into the university's mission and avoid challenges posed by uncoordinated adoption and rapid technological advancement. To guide this process, several recommendations can serve as a foundation for UB's efforts such as:

- **Define a University-Wide AI Mission and Vision:** Establish a clear statement that reflects UB's values and goals for AI integration. This guiding framework will align future initiatives, literacy programs, ethics, infrastructure all with a shared purpose and strategic direction.
- **Developing and Implementing AI Literacy Programs:** Providing a comprehensive training for faculty, students, and staff, covering the basics of AI and its applications in education and professional contexts. Tailored workshops can help departments explore specific tools relevant to their fields.
- **Establishing clear Ethical Guidelines and Policies:** Institutional frameworks addressing academic integrity, AI course integration, data privacy, and bias. A standing committee can ensure these guidelines evolve alongside advancements in AI.
- **Improving Communication Channels:** Regular forums, seminars, and a centralized online hub can keep the university community informed about AI initiatives and resources.
- **Promote Interdisciplinary Collaboration:** Encouraging joint efforts between departments to uncover innovative AI applications and address regional challenges.
- **Investing in Infrastructure and Resources:** Ensuring technological support for AI use and funding opportunities for faculty to engage in AI-related development.
- **Assessment Mechanisms:** Regular evaluations to measure the effectiveness of AI integration in education and administration. Using these findings as a guide to inform future AI strategies and policies.

By implementing these recommendations, the University of Belize can foster a culture of AI awareness and preparedness, ensuring that the institution is well-equipped to harness the benefits of AI while mitigating its potential risks. This proactive stance will position the university to lead in the thoughtful integration of AI technology, aligning with its educational mission and future aspirations.

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