

## Article

# Students' Utilisation of Artificial Intelligence in Open and Distance Learning

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## Abstract

The use of Artificial Intelligence (AI) in learning is expanding globally; however, the full potential of AI tools in the Open and Distance Learning (ODL) context, particularly at the Institute of Adult Education (IAE), remains underexplored. This study examined the IAE ODL students' perspectives on the use of AI tools in learning. Specifically, it investigated ODL students' familiarity with AI, AI preferences and use in learning, and perspectives on AI tool use in ODL. The study employed a mixed-methods approach, utilising a convergent parallel design to collect data from 93 second- and third-year ODL students at the Dar es Salaam and Morogoro Campuses. The findings revealed that 94.7% of students were familiar with AI, mainly after beginning their studies; 87% used ChatGPT for learning, and 57% used AI to answer their questions. In addition, 98% of students argued that the utilisation of AI in ODL is inevitable, citing its role in enhancing self-learning, improving access to learning materials, and saving time. Based on the findings, the study suggests that enhanced access to and awareness of diverse AI tools may help maximise their potential benefits in learning. The study also calls for academic integrity, ethical use, peer learning, and human-AI interaction among ODL students and institutions for the effective utilisation of AI in ODL.

**Keywords:** artificial intelligence; AI utilisation; ODL; student perspectives; IAE

## 1. Introduction

The utilisation of Artificial Intelligence (AI) has increasingly been a fundamental learning support among learners throughout various institutions in the world. Notably, for students studying through Open and Distance Learning (ODL), AI has become a learner support service, an instructor, and a fellow student [1]. Students at the Institute of Adult Education, the case for this study, like those in many other institutions, utilise AI in their learning. As such, the current research focuses on the utilisation of AI in ODL by the IAE students. However, before engaging with the focus of this study, the author provides a background of the Institute in relation to its role as a dual-mode institution and highlights the associated literature on the use of AI in ODL.

Established by Parliamentary Act No. 12 of 1975, the IAE is a dual-mode higher learning institution in Tanzania that offers learning programmes at both basic and higher education levels. From its establishment until the early 2000s, the IAE offered distance education through correspondence at the secondary education level. The IAE introduced ODL in 2004 to programmes and later to the Ordinary Diploma programmes in 2013. During these days, ODL students relied on self-instructional learning materials provided by the Institute and on support services from instructors during face-to-face sessions



Academic Editors: Dan-Alexandru Szabo, Carmen Pârnu, George Dănuț Mocanu and Haridimos Kondylakis

Received: 15 November 2025

Revised: 13 February 2026

Accepted: 14 February 2026

Published: 25 February 2026

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administered by IAE twice a year. Technological support was minimal among a few students who had computer skills and access to their own computers and the Internet. In 2021, the IAE began offering bachelor's degree programmes through ODL. The programmes attracted students from all 26 regions in Tanzania Mainland. Thus, students enrolled in the programme from all IAE regional centres and campuses in the country. It seems that IAE prospective students preferred ODL over conventional mode programmes. A study conducted at the IAE by [2] indicated that students preferred ODL because of its flexible nature, which allows students to learn at their own pace. Additionally, another study by [3], conducted at IAE, emphasises that ODL flexibility enables students to access learning while at their diverse locations, such as offices, homes, or any other places, without the need for physical classroom sessions. Thus, with ODL, IAE students access learning materials, assessments, and support remotely and convene for face-to-face sessions at scheduled times.

Practice shows that students registered in the programmes benefit not only from the mode but also from the blended learning approach. Blended learning is a hybrid model that combines traditional classroom and online learning, making ODL more effective and attractive to learners. Currently, with the hybrid model, learners utilise learning technologies to enhance their learning. The use of blended learning makes ODL more attractive to learners as it accommodates their contexts and preferences [4]. That being the case, AI enhances learning, considering that in ODL, students spend more time on self-learning and less time with instructors or facilitators.

AI is a computer-generated system that performs activities with human-like intelligence [5]. Ref. [6] defines AI as computer machines that can simulate human intelligence in terms of thinking and behaviour. Machines act like humans in planning, reasoning, communication, learning, and problem-solving. From an educational perspective, machines can, like humans, capture existing information, analyse it, process it, and present it, ready for end-user consumption with maximum satisfaction [7]. Thus, in a learning context, AI can be referred to as a computerised system that facilitates learning through problem-solving, intelligent tutoring, and learner support services.

According to the National ICT Policy 2016, the government of Tanzania has been committed to enhancing the use of contemporary technologies, particularly AI. Consequently, the government developed the National Digital Education Strategy 2024/25–2029/2030, together with the National Guidelines for AI in Education [8,9]. The policy documents, particularly the guidelines, aimed at ensuring the integration of AI in education, as well as the ethical considerations related to the use of the technologies. Notably, the guidelines reflect the Beijing Consensus on AI and Education 2019 [10] and the Continental AI Strategy 2024 of the African Union [11], which advocated for the integration of AI technologies in enhancing flexible learning pathways and, ultimately, education for all. These policies and strategies, altogether, inform the current study's perspectives on the utilisation of AI tools among ODL students at IAE. They reflect efforts to ensure that AI is harnessed in enhancing access to education sustainably. However, the impact of these initiatives on countries, institutions, and individuals, particularly ODL students, requires ongoing research to inform practice.

In recent years, ODL institutions have been experiencing increasing student utilisation of AI [12]. According to [5,13], AI revolutionises learning experiences among ODL students. As such, ODL students in various institutions utilise AI tools in learning and reduce their dependence on facilitators or tutors [5,6,12]. As stated earlier, ODL students used to study remotely, with limited in-person contact with their instructors. Currently, students benefit from blended learning, in which the utilisation of learning technologies, especially AI, plays a vital role in self-study. The contemporary literature indicates that the use of AI

among students has demonstrated potential for enhancing learning experiences through self-directed learning [14–16]. Students utilise AI as a virtual learning partner and facilitator because it interacts with them in a human-like manner [14,17].

Several studies have indicated that ODL students utilise AI tools, mostly Chat Generative Pre-trained Transformer (ChatGPT), QuillBot, and Grammarly, to generate content, paraphrase, and enhance academic writing [18–20]. According to [14], students use AI tools, particularly ChatGPT, because it facilitates effective learning. Ref. [14] add that students prefer the tool because it is generative, in the sense that it analyses, filters, and produces information as requested, thus enhancing self-directed learning. Likewise, Ref. [16] showed that learners consider ChatGPT a useful learning aid and use it throughout their learning process because it is a generative AI tool.

Nonetheless, a study conducted by [18] indicated that among students at Jordanian Universities, the majority of whom study through ODL, 90.4% use ChatGPT. The students use other AI tools, such as Google Gemini, Meta, and Microsoft Bing, at a lower rate of below 40%. Another study by [21] indicated that students from selected universities in the United States used ChatGPT at a rate of 88%. In Indonesia, students are familiar with various AI tools but prefer ChatGPT, followed by QuillBot, for generating text, paraphrasing, refining grammar, and enhancing effective writing [19].

A study by [20] in Malaysia showed that AI affects students' behaviour and their control over their learning. Consequently, ODL students have adopted AI tools in learning, although they have not yet utilised their full potential. This study recommends a supportive environment to enhance students' effective use of AI tools.

In Tanzania, as in many other countries, the utilisation of AI tools in learning cannot be overemphasised. Studies by [22,23] show that students at selected higher learning institutions in Tanzania, namely, the University of Dodoma (UDOM), University of Dar es Salaam (UDSM), Kampala International University in Tanzania (KIUT), and the Institute of Finance Management (IFM), used AI tools to enhance writing skills, conduct assignments, and generate new knowledge. According to the study, approximately 66% of students were aware of the use of AI tools, particularly ChatGPT, and approximately 72% acknowledged using them in their learning. Another study by [24] indicates that undergraduate students at the Tanzania Institute of Accountancy, Mbeya Campus, use AI tools, with ChatGPT being the most popular (86%), followed by QuillBot (41%) and Grammarly (12%). Likewise, a study by [25] indicates that students at the Institute of Accountancy Arusha (IAA) and the Open University of Tanzania (OUT) utilise AI tools such as ChatGPT and Grammarly to generate research ideas, improve clarity, search the literature, and generate discussions. Ref. [25] adds that, with AI, ODL students learned many things on their own with less dependence on instructors.

Seemingly, IAE ODL students, like students at other higher learning institutions in Tanzania and beyond, utilise AI in their learning. However, the maximisation of these tools' potential to enhance learning effectiveness and accessibility within the ODL context remains underexplored. This study addressed this gap by investigating the utilisation patterns of AI tools among students. Specifically, it identified preferred AI tools and examined their specific use in learning. Additionally, it explored students' perspectives on AI tool use in learning. Accordingly, the study sought to answer the following research questions: (1) What is the state of familiarity with AI tools among IAE ODL students? (2) Which AI tools do IAE ODL students prefer to use in their learning? (3) For what specific purposes do IAE ODL students use their preferred AI tools? (4) What are the IAE ODL students' perspectives on the use of AI tools in learning?

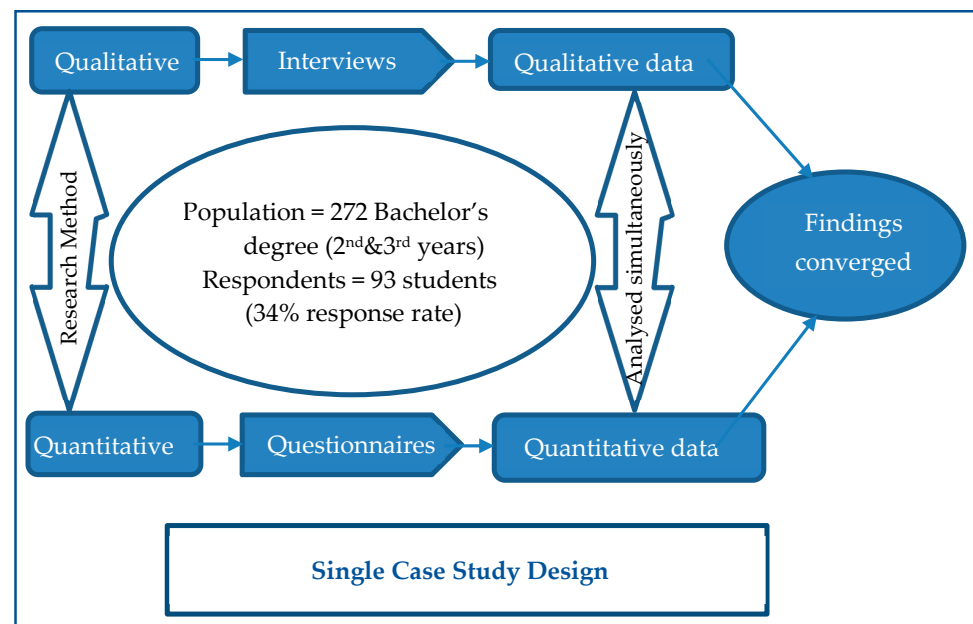
Notably, this study aims to inform practitioners and policymakers about the current utilisation of AI tools among ODL students at higher learning institutions in Tanzania, using

IAE as a case study. It provides valuable insights to guide the design and development of related interventions, support systems, and policies to enhance effective and context-sensitive use of AI in ODL environments. Unlike previous research, this study offers novel empirical evidence by indicating detailed patterns of AI tool usage, preferences, and student perspectives specific to the ODL setting in the country, a context that remains underexplored. Ultimately, this study contributes to the optimal use and advanced adoption of AI within the higher education ODL context.

## 2. Methodology

### 2.1. Research Design

The current study is a case study of the Morogoro and Dar es Salaam Campuses of IAE, focusing on the second- and third-year ODL students of the Institute as the unit of analysis. A mixed-methods approach utilising a convergent parallel design was employed to enable the simultaneous collection and analysis of quantitative and qualitative data for triangulation purposes [26]. Figure 1 illustrates the study design.



**Figure 1.** The Research Design (Source: Author).

Figure 1 shows a graphical representation of the survey. It shows that the survey, as explained in the following sections, utilised both the questionnaire and interview methods to enrich separate findings, which were thereafter converged to consolidate and interpret the findings from the field.

The researcher developed questionnaires using Google Forms, as it provides an efficient means to reach study participants online and receive immediate responses, thereby saving time and resources in data collection and analysis. Since the ODL students study from home, the researcher shared the questionnaire link in their class WhatsApp groups to ensure accessibility. The questionnaires included both closed- and open-ended questions examining participants' familiarity with AI before and after joining IAE, the means used to familiarise themselves with AI, their AI utilisation, and their perspectives on the use of AI tools in learning.

Regarding the interviews, the administrators of the Class WhatsApp groups, who were also the Class Representatives, provided the phone numbers of all survey participants. The researcher, upon reaching data saturation [27], interviewed 16 participants online using

convenience sampling, as not all of them were accessible in time due to busy lines, unreachable numbers, and poor network connectivity. This technique helped obtain participants who were reachable for the online interviews. The interviews aimed to gain an in-depth understanding of the participants' perspectives and experiences in similar dimensions addressed by the questionnaire.

## 2.2. Population and Sampling

The study population comprised all 272 second- and third-year ODL students enrolled at the Dar es Salaam and Morogoro Campuses. The researcher applied purposive sampling to the population due to their longer learning experience at the IAE and the ICT skills attained during their studies. Additionally, the researcher purposively selected the campuses because they hosted a larger number of the targeted population compared to other campuses in the Ruvuma and Mwanza Regions [22]. Notwithstanding the sampling technique, the current study was not designed to generalise the findings to other IAE campuses.

Data were collected from 93 participants who voluntarily responded to the questionnaire, making a 34% response rate, which is considered fair and reasonable for an online survey [27,28]. Of the total participants, 64% were third-year students and 36% were second-year students. Programmatically, 89.5% of participants were from the Bachelor's Degree in Adult Education and Community Development (BAECD) programme and 10.5% from the Bachelor's Degree in Adult and Continuing Education (BACE) programme. The smaller number of BACE students corresponds to the overall number of students enrolled in the programme, which is significantly lower than that of the BAECD programme.

## 2.3. Data Analysis and Presentation

Content analysis [26] was used to analyse the data. Deductive content analysis was used to set responses on the Google Forms worksheet. Thereafter, the worksheet provided an auto-analysis of the responses, with the respective auto-generated graphical representations, in real time upon submission of each questionnaire online. The generated graphics included pie charts and histograms that were extracted to Microsoft Excel sheets for adjustments and arrangement of details to enhance clarity and visibility. Additionally, the researcher reviewed the interview notes and transcribed the recorded audio data to obtain a narrative summary. Excerpts obtained from the interviews were extracted and presented as quotes to represent the participants' voices. To maintain confidentiality, the researcher referred to the study participants using pseudonyms. Hence, in the current study, participants are referred to in numbers such as "student 1," "student 8," and "student 13."

## 2.4. Ethical Considerations

The study engaged participants with their consent. The researcher contacted the class leaders via phone calls and introduced the study's purpose. The leaders shared the message with their fellow class members and thereafter agreed to invite the researcher to their class WhatsApp group for further clarification. Upon joining the group, the researcher highlighted key issues to ensure understanding and shared the Google Forms link with the study participants to provide access to the questionnaire. The researcher assured participants of the anonymity of their identities and that the data would be collected strictly for research purposes.

## 2.5. AI Use Declaration

The author used Grammarly and Paperpal AI tools to review the grammar, readability, and vocabulary throughout the document. Notably, Grammarly tracked each sentence as it was typed and instantly highlighted errors, whereas Paperpal was used to review the full paper after it was completed. The author then accepted or rejected the suggestions or

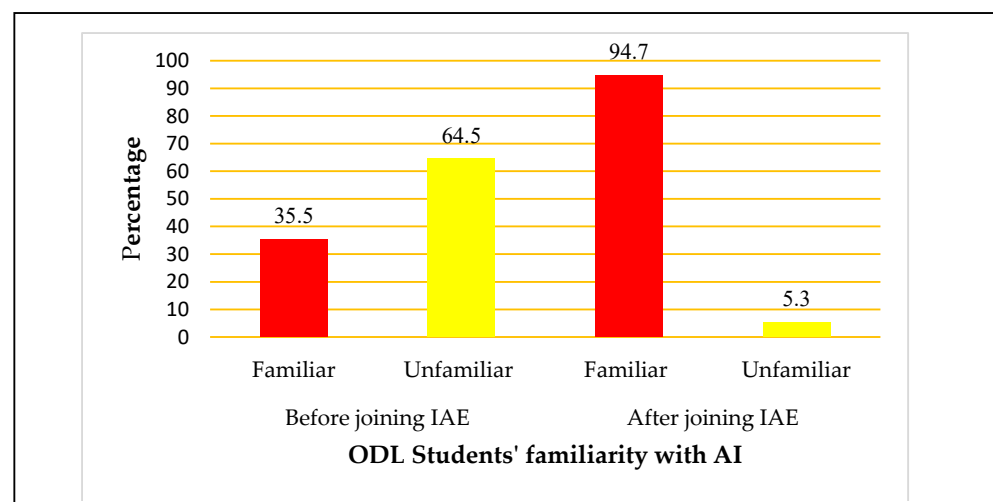
opted for another word or phrase to avoid the highlighted errors. Additionally, the author used Perplexity AI to search for the literature and, in a few cases, to request grammar and clarity checks. In some instances, Perplexity provided false sources and DOIs. However, none of the false sources was used in this study. In addition, none of the content in the current study was AI-generated.

### 3. Results and Discussion

The Findings are presented in line with the study objectives and research questions. This section, therefore, is organised into subsections as follows: first, participants' familiarity with AI tools; second, preferred AI tools among participants; third, utilisation of the AI-preferred tools; and lastly, participants' perspectives on the use of AI tools in learning.

#### 3.1. Participants' Familiarity with AI Tools

The first research question asked about participants' familiarity with AI tools. This section presents results related to the question, focusing on participants' knowledge and awareness, before and after joining IAE, as well as how they familiarised themselves with the technology during their learning process. The study findings, presented in Figure 2, show that the surveyed ODL students at IAE are familiar with AI. Some were familiar with AI before joining the IAE, while others became familiar after joining the institute, signifying the influence of the learning process on their knowledge and awareness.



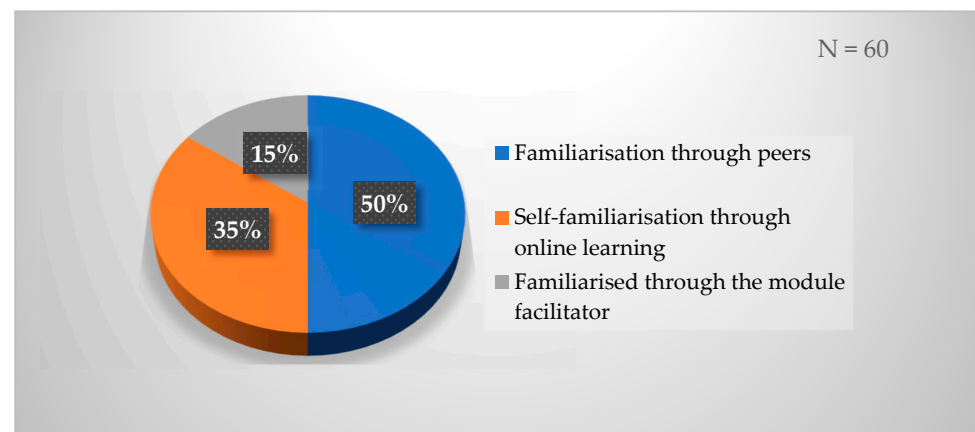
**Figure 2.** Participants' Familiarity Before and After Joining IAE.

Figure 2 shows that 94.7% of the IAE ODL students were familiar with AI. However, 64.5% of respondents indicated that they became aware of AI after joining the IAE. Only 35.5% were familiar with AI before joining the institute. The analysis suggests that the students in this study had a higher level of awareness, which is an indicator of how ODL students strongly engage in utilising technology for learning. Interestingly, a similar study conducted in Tanzania by [22] indicated a 66% level of awareness among students, which is significantly lower than that of the current study. However, this could have resulted from differences in the learning context between the two study areas, as most students at IAE became familiar with AI after joining the institute.

Also, Figure 2 shows that the percentage of respondents who were unfamiliar with AI before joining the IAE declined from 64.5% to 5.3%, suggesting that ODL students become familiar with the technology after joining the Institute. As such, IAE plays a transformative role by setting a learning environment that enhances learning through the use of technologies, particularly AI. In addition, since ODL students learn ICT-related

modules in their second year, especially multimedia technologies and library search, their skills in utilising AI widen significantly. When interviewed, Students 6 and 10 said they became familiar with AI tools through self-study requirements that required them to complete several individual and group assignments. Notably, this implies that the students undergo self-orientation toward the utilisation of tools during their learning process.

In response to how the students became familiar with AI after joining the IAE, the responses from questionnaires provided a range of reactions. Figure 3 presents the distribution of responses on how ODL students familiarised themselves with AI tools.



**Figure 3.** Respondents' Percentage Distribution on their familiarity with AI.

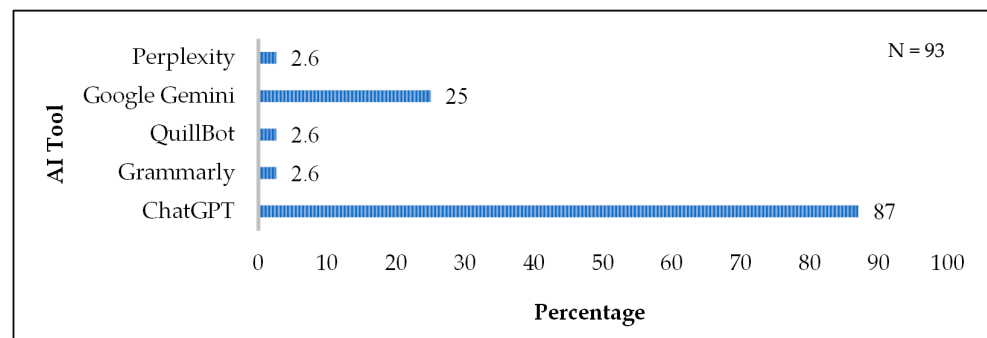
The pattern across the quantitative data in Figure 3 indicates that the majority (50%) of respondents became aware of AI tools through their peers, suggesting that peer learning impacted their skills. The findings also show that some respondents (35%) indicated that they familiarised themselves through self-initiatives online, while others (15%) did so through their module facilitators. When interviewed, Student 2 stated that some facilitators guided them in using AI tools, especially ChatGPT. Student 1, when interviewed, said in Kiswahili that, “Wengi tumekuja hatujui haya mambo lakini kiukweli tumejifunzia hapahapa kupitia wanafunzi wenzetu wenye kujuajua haya mambo.” Literally, Student 1 said that most of them joined IAE with no familiarity with AI, but, frankly speaking, they later learned from their peers who had some knowledge of the technology. These results are consistent with those of other scholars, such as [20,22], who show that peer interaction and learning significantly contribute to AI usage among students. These findings implicitly suggest that, with ODL, module facilitators are not necessarily the primary source of AI orientation for students, as students can orient themselves online and through peers, see [5,12].

### 3.2. Preferred AI Tools Among the IAE ODL Students

The second research question asked about the AI tools IAE ODL students preferred for their learning. This section presents findings addressing participants' choice and preference regarding these tools. Findings indicate various preferred tools, including ChatGPT, Grammarly, QuillBot, Google Gemini, and Perplexity. Figure 4 presents these tools along with the percentage distribution of students' preferences as obtained from questionnaires.

Figure 4 shows that the use of ChatGPT ranked highest (87%), followed by Google Gemini (25%). The use of Grammarly, QuillBot, and Perplexity was below 3%, suggesting minimal use. These insights suggest a high preference for generative AI, mainly ChatGPT and Google Gemini, which are chatbots capable of engaging in real-time conversational dialogue using natural language processing (NLP). One participant stated, “We prefer using ChatGPT because it is conversational in nature, and it studies our problem and provides solutions based on what was actually asked” (Student 14). Another respondent

stated, “I use Grammarly very little . . . ChatGPT is my favourite, and I use it throughout my studies. It has become like a library and a tutor for me” (Student 8). These findings, from interviews and questionnaires, suggest that students have increased their reliance on AI chatbots, mainly ChatGPT.



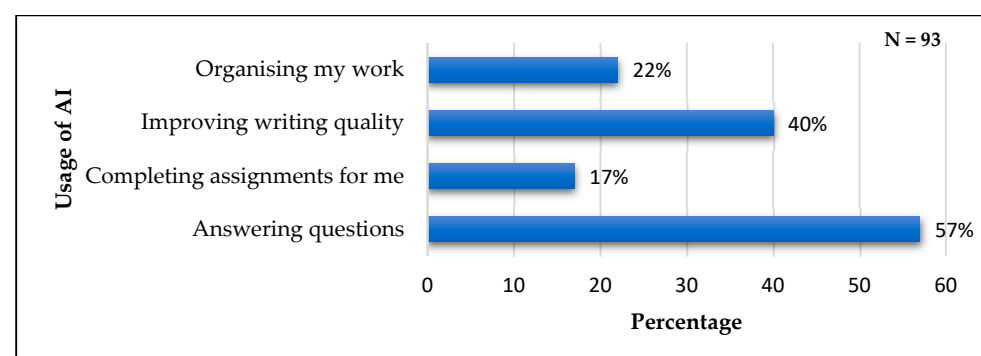
**Figure 4.** Percentage Distribution of the Students’ Preferred AI Tools.

Interestingly, the preference for ChatGPT (86%) indicated in Figure 4 aligns with the study by [24], who reported an 87% preference rate for the same tool among students at the Institute of Accountancy, Mbeya Campus, Tanzania. The result similarities imply students’ reliance on and confidence in AI technology. Additionally, the findings align with those of [14,18], who concluded that ODL students prefer ChatGPT because it generates content in response to their requests. Notably, the implication of the current study results, as related to those of other previous studies, is that IAE ODL students, just like those in other institutions [24,25], are increasingly maximising the potential of AI tools for learning.

In comparison with other studies, the current study indicated that the use of other AI tools, apart from ChatGPT and Google Gemini, is minimal, contrary to other studies conducted in Tanzania and elsewhere (cf. [18,19,24]). This suggests a unique context-specific pattern, possibly resulting from exposure factors, familiarity issues, or the dominant preferred tool among ODL students. Wider utilisation of various AI tools among students should be encouraged, as it enriches compelling learning experiences, enables self-learning, enhances understanding, and ultimately improves learning outcomes [29].

### 3.3. Utilisation of the AI-Preferred Tools Among ODL Students

The third research question asked about the specific uses to which IAE ODL students utilise their preferred AI tools. This section presents findings related to the question, focusing on the application and function of the tools. The distributed questionnaires revealed various uses, including work organisation, improving writing quality, completing assignments, and answering questions. Figure 5 shows the percentage distribution of these responses.



**Figure 5.** Percentage Distribution on the Usage of the Preferred AI Tools among ODL students.

Figure 5 shows that the 57% of respondents used their preferred AI tools primarily to answer questions, 40% to improve work quality, 22% to organise their work, and 17% to complete assignments. Interviews revealed similar patterns that complement these quantitative results. When asked about specific uses of their preferred AI tools, participants reported:

I return to ChatGPT whenever I am stuck. It generates answers, fixes language errors, and guides me throughout the process as I work on my assignments. I also enjoy using Google Gemini to structure my essays. . . . Usually, I write down my ideas to instruct the platform on what I want, and it structures the work for me (Student 2).

Usually, after getting answers from ChatGPT, I tend to assess whether they are correctly responding to my assignment. At the end, I usually ask AI to check for grammar, flow, and clarity. In this way, I find my work improved significantly (Student 11).

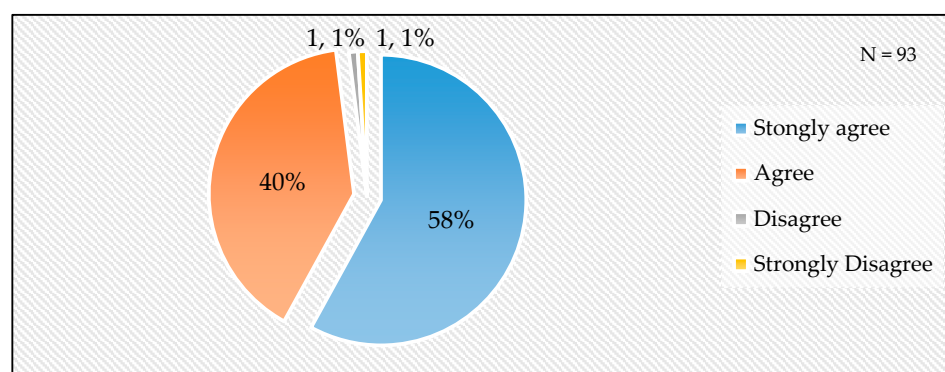
Consequently, these results suggest that IAE ODL students primarily use the preferred tools to conduct their assessments and search the literature. Interestingly, the responses from both interviews and questionnaires show that the students not only use AI to search for answers to their problems but also to shape their work to an acceptable academic standard. In other words, students utilise AI tools to also improve their knowledge and skills, as one of them said, “I use ChatGPT and Google Gemini to ask questions about particular topics or complex words” (Student 7).

Based on patterns across both questionnaires and interviews, it is evident that questioning AI for answers has been a widely reliable practice among ODL students in their learning. Hence, AI has become like search engines, libraries, learning peers, and instructors, available at all times. The results extend previous work by [14], which highlights the role of self-learning aided by AI’s collaborative nature and flexibility. Moreover, [17] noted similar practices in which students use AI chatbots to ask questions and explore information on complex topics and various issues related to their studies. Such flexible options make AI tools useful and impactful to ODL students. This is also evident in the study by [22]. However, these findings imply that students are highly dependent on AI, which threatens learning collaborations among themselves. Studies by [30,31] pointed out the dangers of overreliance on AI tools in learning, as they reduce critical thinking, limit peer interaction, and hinder authentic collaboration. As such, traditional learning collaborations through human interaction should be encouraged to maintain the human aspect of learning while leveraging the benefits of machine learning.

### 3.4. Participants’ Perspectives on the Use of AI Tools in Their Learning

The final research question examined IAE ODL students’ perspectives on the use of AI tools in learning. This section presents findings related to the question, focusing on attitudes and experiences. Figure 6 presents findings on the distribution of responses from questionnaires on the students’ perspectives.

Figure 6 indicates that nearly all respondents (98%; 58% + 40%) agreed that the use of AI in their learning is essential. This data distribution pattern shows that ODL students recognise the role of technology in their learning. It suggests that the utilisation of AI in ODL among students is inevitable. The results extend the previous work by [12,23], who encouraged the use of AI in learning to enhance students’ skills and self-competence. When interviewed, participants in the case, using questionnaires, demonstrated a positive attitude toward the utilisation of AI, citing several associated academic benefits. Notably, they advocated the use of AI in ODL because it facilitates understanding of complex topics and vocabulary, self-learning, searching for learning materials, completing assignments, and gaining a broader knowledge and understanding of various issues, while also saving time. Table 1 presents excerpts from the field that narrate the participants’ perspectives.



**Figure 6.** Percentage Distribution of Students' Perspectives on the use of AI in ODL.

**Table 1.** Excerpts on Students' Perspectives toward the utilisation of AI tools in ODL.

| Participants | Excerpts                                                                                                                                                                   |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Student 10   | As distance learners, AI helps us to access learning and understand various issues related to our studies.                                                                 |
| Student 5    | In cases where clarification is needed on complex terms or topics, it is easier for us who study remotely to ask an AI than to ask fellow students.                        |
| Student 15   | AI assists us in gaining broader knowledge.                                                                                                                                |
| Student 9    | AI makes our lives easier as it clarifies various issues.                                                                                                                  |
| Student 13   | We get instant answers to our class assignments.                                                                                                                           |
| Student 6    | The technology saves time when searching for answers to what we need.                                                                                                      |
| Student 4    | The AI tools simplify our learning, help us answer questions with authentic examples, and provide knowledge beyond the learning materials provided by module facilitators. |
| Student 7    | AI acts as a facilitator . . . we ask it questions and get answers, sometimes better than those from module facilitators.                                                  |

The quotes from the interviews and percentage distributions from the questionnaires demonstrate clear perspectives among ODL students on the use of AI in learning. Thus, the results suggest strong students' confidence in using AI for learning. Subsequently, the study extends previous works by [22,24], where students similarly advocated for the use of AI in learning, but uniquely demonstrates ODL students' practical reliance on AI as a consistent learning partner throughout their studies. This suggests a noticeable positive attitude among ODL students toward the utilisation of AI in learning. However, these perspectives raise concerns about effective implementation strategies for this population, signalling the need for further research into optimising AI use while balancing its benefits against potential side effects.

#### 4. Conclusions and Recommendations

This study indicated the need for AI integration in ODL at higher learning institutions. The students' preference for AI and experiences reflects their stance on the technology and implies that its use in the ODL context is inevitable. The study, therefore, calls for discussion and discourse on how to engage ODL students broadly in utilising AI in learning. AI complements learning, especially for ODL students, as they study remotely with minimal face-to-face interaction with their facilitators and peers. In addition, AI responds to students' learning needs instantly and in real time. However, students need to use AI responsibly while observing academic integrity and engaging in active learning without compromising quality. Although the study demonstrated the need for AI in ODL, misusing or abusing the technology might lead to devastating consequences [31]. Additionally, uncontrolled use may lead to over-dependence, loss of competence among students, and academic

dishonesty [32]. The study, therefore, provides the following recommendations to ensure the effective utilisation of AI in ODL at IAE and other similar Institutions in Tanzania.

- a. IAE and other similar Institutions in Tanzania should establish an AI utilisation policy and guidelines to ensure academic integrity and the ethical use of AI in learning.
- b. Enhancing students' access to and awareness of diverse AI tools is essential for maximising their potential benefits in learning.
- c. Encouraging peer learning and online self-orientation among ODL students for AI familiarisation is essential.
- d. Traditional learning collaboration through human-AI interactions should be encouraged to maintain the human aspect of learning, while also enjoying the benefits of machine learning.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Ethical review and approval were waived for this study because the Institute of Adult Education (IAE) formally certifies all studies conducted at the institute by its academics. No ethical approval is required from other local research institutions or authorities for studies conducted by IAE academics at the Institute.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data presented in this study are available on request from the corresponding author.

**Acknowledgments:** The author acknowledges all of the IAE students who voluntarily participated in this study. Special thanks are also extended to IAE researchers who gave advice on the conduct of this study.

**Conflicts of Interest:** The author declares no conflicts of interest.

## Abbreviations

The following abbreviations are used in this manuscript:

|         |                                                       |
|---------|-------------------------------------------------------|
| AI      | Artificial Intelligence                               |
| BACE    | Bachelor in Adult and Continuing Education            |
| BAECD   | Bachelor in Adult Education and Community Development |
| ChatGPT | Chat Generative Pre-trained Transformer               |
| IAE     | Institute of Adult Education                          |
| ICT     | Information and Communications Technology             |
| ODL     | Open and Distance Learning                            |

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