



A Study on Awareness of Artificial Intelligence Among First Degree Students in Chibombo

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Abstract— Human beings, today, are taken to the another paradigm shift in terms of technology and that is artificial intelligence. In human psychology, terms are familiar such as emotional intelligence, social intelligence and the like. Human intelligence, which is God-given unique gift, has been manipulated today by means of artificial intelligence. This fact pervades into all the spheres of human activities such as education, health care, finance, agriculture and so on. Zambia, one of the African countries, remains as one of the under development countries. This country faces a lot of challenges in the adoption of AI and in its efforts, the country remains in early stages. Moreover, this country initiated certain moves like Smart Zambia which is gaining momentum towards digital transformation. In this move, students and professional, technicians and innovators play a crucial role. In this context, the investigator explored the awareness of AI among First Degree (undergraduate) students in Chibombo, one of the towns in the central province of Zambia. The aim is to assess the level of awareness among the students and to examine the demographic differences. Survey method was used and by creating google form, collected data from hundred students through a structured and validated tool. Descriptive and inferential statistics were applied to analyze the data. The results revealed that students have high level of AI awareness and gender difference was observed that female students have higher level of AI awareness. In addition, there was no significant difference between rural and urban background students. This may be because of the digital access over regions and National ICT strategies. This study highlighted the significance of AI literacy in specific context. It also emphasized the need for educational reforms, gender-based strategies and institutional readiness to support AI implementation. This research supports the future focus on skill development and infrastructure to AI adoption in higher education.

Keywords-- Artificial Intelligence, Student Awareness, Higher Education, Gender Differences, Chibombo, Zambia

I. INTRODUCTION

The advent of Artificial Intelligence (AI) brings a drastic change in human life such as health care, education, finance, agriculture, human thought process and in every sector.

Chibombo, one of the towns in central province of Zambia, and the country as a whole is still under development and stays still in early stages. The government of Zambia tries to implement the programme like Smart Zambia to promote digital skill and to encourage students to involve in innovations as they are the future leaders, professional and the pillars of change. Though the government is trying to implement and progress, very few researches are found in this area of AI and its awareness.

In the review of literature, the investigator found that a study conducted by Lubungu and Siame (2023) revealed that literature students of Kwame Nkrumah University showed much involvement in creative writing and interpretation while using AI in their study activities. Similarly, a study conducted by Tripathi (2024) contributed a notable finding that the lack of access to AI prevented students to fully understand its benefits, gaps and to develop skills in AI.

In Vietnam, a study conducted by Dang Thi Minh Loana et.al. (2024) supported that AI can improve educational quality but lacked better integration to attain the best learning results. Another study conducted by Ibrahim et.al. (2025) at the University of Jordan also ascertained that there was high AI awareness and positive attitude among students. Those findings emphasized the need for institutional support, infrastructure and training programme for educators.

Having these studies at the background and identifying the gap as no study found in Chibombo context, the investigator aimed at studying the awareness of AI among First Degree students studying at DMI-St. Eugene University. The knowledge of AI among college students is not only important for their academic and professional development but also crucial for the development of the country of Zambia.

II. OBJECTIVES OF THE STUDY

The researcher has formulated the following objectives for the present study:

- To determine the level of awareness of Artificial Intelligence among first degree students.



- To identify if there is any significant difference between male and female students, rural and urban students.

HYPOTHESES OF THE STUDY

Based on the objectives, the investigator prepared the following hypotheses:

- The level of awareness of Artificial Intelligence of First Degree students is at average.
- There is no significant difference between male and female students in terms of Artificial Intelligence
- There is no significant difference between rural and urban students in terms of Artificial Intelligence

III. METHOD OF STUDY

This study employed survey method to investigate the level of awareness of Artificial Intelligence (AI) among first degree students in Chibombo, one of the towns in the central province of Zambia. The quantitative approach was chosen to enable the collection of numerical data that can be statistically analyzed to identify general levels of AI awareness within the target population.

IV. SAMPLE OF THE STUDY

The target population for this study consisted of first degree (undergraduate) students enrolled in DMI-St. Eugene University in Chibombo campus, Zambia. A stratified random sampling technique was used in the study. A sample size of 100 students was selected to find the results.

V. TOOL USED IN THE PRESENT STUDY

For the purpose of this study, a self-prepared structured questionnaire was developed to collect quantitative data from first degree students regarding their awareness Artificial Intelligence (AI). The tool was designed based on a review of relevant literature and similar studies conducted in other countries, ensuring that it effectively captures the key variables of interest. The questionnaire included a yes / no scale items to allow for structured responses that are suitable for statistical analysis. The tool consisted of 30 items with no dimensions. If respondent gives 'yes' response it carries one score and 'no' zero score. Higher the score better is the awareness of AI.

VI. RELIABILITY AND VALIDITY OF THE TOOL

To ensure clarity and reliability, the tool was pre-tested (pilot study) on a small group of twenty students before full deployment. It is evident that twenty is too small to establish statistical reliability. However, to assess clarity and usability of the instrument, the researcher limited the number as it is focused on the micro level research.

In this study, the split-half method was used to determine the reliability of the self-prepared questionnaire designed to measure students' awareness Artificial Intelligence (AI). The responses from a pilot group of 20 students were collected, and the questionnaire items were split into two sets. The correlation between the two halves was then calculated using the Pearson correlation coefficient. It was found to be 0.81 which is reliable.

To establish content validity, the questionnaire was carefully developed based on a comprehensive review of existing literature, previous related studies, and current discussions on AI in education. The questionnaire was given to experts in the field of computer science and technology and the final consent was obtained to ensure a well-balanced instrument. Thus a strong content validity was arrived at and deemed as reliable tool for measuring AI awareness among first degree students.

VII. STATISTICAL TECHNIQUES USED IN THE STUDY

For data analysis, mean, standard deviation, and an unpaired 't' test were used in this study.

Analyses Of Data

Table 1:
Mean and SD of whole group for Awareness of Artificial Intelligence

Variable	Number	Mean	SD
Awareness of Artificial Intelligence	100	21.78	6.15

The calculated mean value of whole group score is 21.78 out of a possible highest score of 30. This suggests that, on average, the participants have a fairly high level of awareness about artificial intelligence, scoring approximately 72.6% of the maximum possible score. The SD is 6.15, which indicates that the awareness scores are moderately spread out around the mean.

Some participants have scores significantly above or below the average, showing variability in the group's awareness. Overall, the group shows a relatively high average awareness of artificial intelligence with moderate variation. Therefore, the hypothesis that 'level of awareness of Artificial Intelligence of First Degree students is at average' is rejected.

Table 2:
 Mean, SD and 't' value for awareness of artificial intelligence based on gender

Gender	Number	Mean	SD	t-value	Level of Significance
Male	57	20.53	6.69	2.97	Significant at 0.01 Level
Female	43	23.9	4.63		

There is a statistically significant difference in the awareness of Artificial Intelligence between male and female first degree students. Female students (M = 23.9) showed significantly higher awareness of AI than male students (M = 20.53). Since the t-value (2.97) is significant at the 0.01 level, we reject the null hypothesis that there is no difference between the groups. At the 0.01 level of significance, the analysis reveals that female first degree students have a significantly higher awareness of Artificial Intelligence than their male counterparts.

Table 3:
 Mean, SD and 't' value for awareness of artificial intelligence based on locality

Locality	Number	Mean	SD	t-value	Level of Significance
Rural	39	21.67	7.81	0.10	Not Significant at 0.05 Level
Urban	61	21.81	5.82		

A t-value of 0.10 indicates that there is very little difference between the means of the two groups. Since the means are almost identical (21.67 vs. 21.81) and the t-value is very close to 0, this suggests that the difference in awareness of artificial intelligence between rural and urban students is statistically insignificant. Therefore, it is concluded that there is no significant difference in the awareness of artificial intelligence between rural and urban first-degree students. Both groups have similar levels of awareness.

VIII. DISCUSSION

The findings of this study show that undergraduate students in Chibombo have a high level of AI awareness, with an average score of 21.78 out of 30. This finding substantiates the idea that students are getting more and more familiar with changing modern technology and AI awareness. Students at Chibombo are aligned with the global trend to enhance their digital literacy and skill development.

This study brings forth another finding that there is a gender difference in AI awareness. Female students exhibit higher level of when compared to their male counterpart. This stands as a unique finding while observing a general tendency in the world that male students possess more confidence and exposure in STEM education including AI.

Historical evidence is that access to digital tools and infrastructure has been uneven, and rural students at a disadvantage (UNESCO, 2026). This study reveals that digital outreach is even and it may be due to the initiative of Government of Zambia such as Smart Zambia. This challenge was noted by Tripathi (2024) in his study that lack of access led to disengagement in AI.

The findings of this study also comply with the study of Ibrahim et.al. (2025) where students at the university of Jordan showed high AI awareness and positive attitude. Furthermore, the Jordanian study called for a support from educational institutions and readiness to learn among educators. This idea can also be considered in the context of Zambia to render solid support and readiness for the learners to engage.

In addition, Lubungu and Siame (2023) contributed that the engagement of Literature students in AI only helped in creative writing and other tasks. Coupled with AI awareness, the study highlighted demographic differences and a need for students' engagement beyond subject specific context.

Dang Thi Minh Loana et.al. (2024) found widespread AI use but pointed out the need for effective integration of the same. They also suggested for curriculum reform and need for skill training of students to use AI across different academic related activities.

IX. CONCLUSION

The observations made from the present study leads to think that students in Chibombo, DMI – St. Eugene University have high level of AI awareness and can be increased by incorporating adequate policy and educational improvements.



This study emphasizes the need for equal divide among gender to access technology and AI, curriculum update, and never ending efforts to include everyone in digital world. Any future research in this area should look into institutional frameworks, faculty and student's readiness, AI skill so as to empower the students of today to contribute maximum to the future of Zambia.

X. IMPLICATIONS AND RECOMMENDATIONS

The insights drawn from the findings further offers certain implications and recommendations for educators, stakeholders, policy makers and all involved for the cause of education regarding AI literacy among degree students.

Implications

- The high level of AI awareness directly shows the evidence that the undergraduate students are open to changing world of technology and AI.
- Gender difference in AI awareness paves the way for investigating further why such difference exists and the probable causes for it.
- Areas differences between rural and urban do not exist as there may be widespread of smartphone even in rural areas.
- A related study can be taken up focusing on the AI awareness, student and faculty readiness, academic performance and the like.

Recommendations

- An inter-disciplinary approach can be adopted to integrate AI into curriculum rather than focusing on computer science subject alone.
- Peer-tutoring can be introduced in educational institutions to promote knowledge in AI tools.
- Faculty induction programme can be organized to orient teachers to use AI tools effectively in teaching strategies.
- A longitudinal study can be conducted to track changes in AI awareness among students and faculty members.

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