Digital Literacy Skills among Students Pursuing Business Administration Programmes in Business Institutes in Tanzania

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Abstract

This study examines the extent to which BAI students are empowered by DLS and establish the specific way in which such students use DLS. This study was conducted at four (4) BAIs under NACTVET, namely, Institute of Arusha Accountancy (IAA), Institute of Finance Management (IFM), Institute of Tax Administration (ITA) and Tanzania Institute of Accountancy (TIA). The Researcher collected primary data from final year-students. The research applied the multi-sampling technique assisted by purposive, stratified, and convenience sampling approaches to collect data from the sample of 500 respondents. The findings of this study concludes that, the majority of surveyed students in the two BAIs in Tanzania acquired operation skills and collaboration skills to a large extent while they attained awareness skills and thinking skills to a small extent. The majority of the BAIs' students applied operation and thinking skills in academic issues while collaboration and awareness skills were applied in non-academic issues. The findings also showed that curriculum, internet connectivity, instructors' competence, and information data literacy are the major factors that limit the adoption of digital literacy among the BAI's students. The findings of this study recommend the BAIs to continuously impart more DLS to their students in order to enable them to balance the application of DLS in their daily life, both academic and non-academic. This calls for both private and public investment in DLS in BAIs in Tanzania.

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1. Introduction

1.1 Background of the Study

In the last two decades there has been a great wave of change in science and technology. Thus, there has been major reforms in the learning environment in higher education institutions. Therefore, digital skills are emphasized these days in those colleges. Indeed, students of the current generation need digital writing skills to be able to express their alternative ideas in digital media platforms (Techataweewan & Prasertsin, 2018).

Internet and digital technology has made it possible to process business information, services and main means of communication in everyday life (Chan, Churchill, & Chiu, 2017). Likewise, digital technology is changing the way people live, work, solve various social problems and ways, and use information in decisions every day in society (Muh, Weda, & Fansury, 2023).

Technology has changed the way college students learn. Digital technology has made it easier for students to find different materials and solutions to the exercises given by their lecturers as well as participating in discussions and brainstorming among themselves (Tang & Cha, 2016). Similarly, Muh, Weda, and Fansury (2023) concluded that apart from having a positive impact of digital literacy in students' education, it can also enable them to access to various kinds of information easily which are needed to solve problems, and seek information from teachers or text books.

Also, Giannikas (2025) points out that DLS can be used to seek knowledge and increase skills to students. Once they graduate from college, digital technology has become a stable and important pillar in the performance of their daily work (Reddy et al., 2023).

Furthermore, Vodă, Cautisanu, Grădinaru, Tănăsescu, and Moraes (2022) in their study investigated digital literacy in students of social sciences and humanities and found that critical thinking, communication, problem solving, and digital skills are more present in the case of students enrolled in social sciences, while other digital skills (of students in creativity and information) are prevalent among students. In addition, the study of Reddy, Chaudhary, and Hussein (2023) reveal that, there is a positive attitude towards the use of the DLS tool among students in the South Pacific countries. Besides, the results of the research of Muh (2023) that, DLS in education has a positive effect on students who graduated from universities and colleges of higher education. However, Purmayanti, 2022 identify several challenges in teaching digital skills among school students in Indonesia at the secondary level. These challenges include lack of supportive access and digital tools, lack of coordination, lack of digital literacy skill from teachers, high costs, and limited access to technology.

The way in which businesses are now operating has been transformed by digital revolution. As such digital skills are growingly demanded in the workplace (Kure, 2025). Students who do not have strong digital literacy skills may face many difficulties while studying and may even miss few employment opportunities. The challenge that universities and colleges of higher education are facing today is to embed digital in their education system (Raphael & Kipene, 2024).

Undergraduate students in the future will become students to be taught not only knowledge, but skills in technology so that they can do their jobs effectively. Therefore, the extent to which BAI students are empowered by DLS was evaluated by this study; and the specific way in which such students use DLS was established.

1.2 Statement of the Problem

Although most of the above studies concentrated in higher learning institutions and secondary schools, the Business Administration Institutes (BAIs) which provide technical and vocational education training (TVET) under the National Council for Technical and Vocational Education and Training (NACTVET) in Tanzania seem relevant in the application of DLS as being applied in other parts of the world in this era. It has been argued by many researchers and scholars (e.g. Chama & Subaveerapandiyan, 2023; Techataweewan & Prasertsin, 2018; Giannikas, 2025) that TVETs can easily achieve or accomplish their missions and objectives through DLS. However, little is known about the applicability of DLS and the extent to which the students are equipped with it in Tanzania. The specific way in which such students use DLS has not yet been established.

1.3 Research Objectives

1.3.1 General Objective

The general purpose of this study is to evaluate the extent to which BAI students are empowered by DLS and establish the specific way in which such students use DLS in four higher learning institutions in Tanzania.

1.3.2 Specific Objectives

In order to undertake this study, the following specific objectives were formulated:-

(i) To understand the degree to which BAIs' students are equipped with DLS in Tanzania.
(ii) To establish the angle of life from which the DLS are applied by the BAIs' students in Tanzania.
(iii) To establish factors prohibiting the acquirement of digital literacy skills among BAIs' students in Tanzania

1.4 Research Questions

In order to achieve the above-mentioned research questions, the following research questions were formulated:

1.4.1 Major Research Question

To what extent are BAI students in four **higher learning institutions in Tanzania** empowered by DLS and which specific way do such students use DLS**?**

1.4.2 Minor Research Question

(i) To what extent are BAIs' students quipped with DLS in Tanzania?
(ii) To what extend is angle of life from the DLS used by the BAIs' students in Tanzania?
(iii) What are the major factors prohibiting the acquirement of digital literacy skills among BAIs' students in Tanzania?

2. Review of Related Literature

2.1 Theoretical Literature Review

A number of theories have been developed to advocate digital literacy. Related theories are briefly explained below.

Critical literacy theory

Critical literacy theory is an approach, which is used by students to analyse texts and interpret results, thus uncovering some hidden digital information on the course of learning process. The theory was propounded by Frankfurt School and Paulo Freire, a Brazilian philosopher and educator, in the 1920s and 1940s, respectively. It helps students to make overcome challenges of globalization.

Information literacy theory

Information literacy theory is an approach, which consists of a number of ideas which help people to collect data, analyze them, interpret findings and hence have information which is being used for informed decisions. The theory was developed by Paul G. Zurkowski in 1974 who pointed out that it can help people solve problems at working place as well as one's daily life.

Social cognitive theory

Social cognitive theory (SCT) was developed by Albert Bandura in 1986. The SCT is a theory that explains how people acquire knowledge and skills which help them to interact with the environment they live in and seeing what others do. The theory is practiced in many fields, including education, psychology and communication.

"New literacies" theory

The new theory of literacy is a system that emphasizes that reading and understanding is more than just reading and writing, so we have to pay more attention and focus on digital technologies (West, 2019). It has also for two decades now focused on how the internet and digital media impact classrooms. The theory was developed by Colin Lankshear and Michele Knobel in xxx who extensively conducted researches and out of their research findings highlighted and insisted on the effect of digital technologies in the learning process.

2.2 Empirical Literature Review

Empirical research on digital literacy in the institutions of higher learning is extensively conducted in many countries at a global level, including African countries.

It has been argued that advancement and new developments in the technology has changed the way and manner business activities are undertaken in the 21st century. A study by Onwubuya & Odogwu (2023) concludes by indicating that the digital skills that were acquired by business in higher learning institutions had a significant influence on their entrepreneurial intents. It was also found that digital communication, digital safety, media literacy and technology skills had significant influence on BAIs' entrepreneurial intentions. However, a causal relationship among the research variables failed to be established by the study because it adopted a survey design/approach.

In today's rapidly changing work environment, business professionals need to have digital skills for their success. A study by Antonio, Atienza, and Herrera (2024) shows that students of different filed acquire digital skills differently. Students majoring in financial management exhibited superiority in information safety and management while those majoring in human resource management and marketing management exhibited superiority in problem-solving capacities and proficiency in communication skills, respectively.

Digital literacy has a positive impact on students who use it to learn and ultimately achieve success. Our working environment is surrounded by digital technology. Large digital file resources are more readily available than paper-based learning resources. Modern companies and public organizations and private users are used to work, so programs have taken the place of employees (Chama & Subaveerapandiyan, 2023). Computers also heal those who perform unusual functions of normal and systemic problems (Techataweewan & Prasertsin, 2018).

3. Methodology

3.1 Approach of the Study

This study used quantitative approach with support from quantitative data. The method enabled the establishment of statistics on digital literacy skills among students in BAIs, Tanzania.

3.2 Research Design

In order to cover a large geographical area of Tanzania and obtain large amount of data at low cost and quickly, we applied descriptive cross-sectional survey designs. The design facilitated the studying of each individual BAIs' students as a unit of analysis. This enabled a research to study individual student's attitudes, characteristics and views. The designs enable the research to analyze the information collected from the students pertaining digital skills in BAIs.

3.3 Research Area

This study was conducted at four (4) BAIs under TVET. These institutes such as Institute of Arusha Accountancy (IAA), Institute of Finance Management (IFM), Institute of Tax Administration (ITA) and Tanzania Institute of Accountancy (TIA). The above-mentioned institutes were chosen because have the similar historical background. They all belong to the Ministry of Finance, and offer similar academic programmes, mainly being specializations in

Business Administration or related disciplines. The information, communication and technology (ICT) courses are taught to every students as cross-cutting modules in early levels. As like other TVET institutions, they are required to undertake digital transformation pertaining to the learning process, research and consultancy.

3.4 Population and Sampling

The Population and sample size of the study is 500 respondents

3.5 Data Collection

The study made use of questionnaire in gathering primary data. The questionnaire was used due to its fastness, efficiency and inexpensiveness in collecting data related to DLS among students in BAIs in Tanzania.

3.6 Data Analysis

Data were then analysed using descriptive statistics with an aid of statistical packages for social sciences (SPSS) ver25. The descriptive statistics results were presented using frequencies, arithmetic means, standard percentages, and standard deviation.

4. Findings

4.1 Background Information

Among the surveyed 500 BAIs' students, 340(68%) were male whereas 160(32%) were female (**Table 1**). The findings indicated that the majority of the surveyed students were the male. This implies that, the male students outperformed female students with regard to DLS.

The surveyed students were between 21 and 35 and above years. The results demonstrate that the majority of the surveyed students totaling to 200(40%) had the age between 25 and 29 years old, followed by 135(27%) who had the age between 30-34 years, 110(22%) who had the age between 21-24 years, and 55(11%) who had age between 35 and above years (**Table 1**).

For this study, the unit of analysis was five (5) BAIs in Tanzania, in which the students were asked to indicate the institute they were pursuing their courses. It was found that the majority of the surveyed students, that is, 133(27%) were studying at IFM whereas 130(26%) were studying at IAA, 122(24%) were studying at ITA and 115(23%) were studying at TIA (**Table 1).**

The study also envisioned to survey final year-students of academic 2022/2023. The results show that out of 500 students, 315(63%) were pursuing Business Administration programmes and 185(37%) were pursuing Business-related programmes **(Table 1).** The majority of the surveyed students were pursuing Business Administration programmes in the surveyed BAIs in Tanzania.

Table 1: Background Information

Information	Scale	Frequency	Percent
Sex	1. Male	340	68.0
	2. Female	160	32.0
	Total	**500**	**100.0**
	1. 21-24 years	110	22.0
	2. 25-29 years	200	40.0

Age	3. 30-34 years	135	27.0
	4. 35-39 years	55	11.0
	Total	**500**	**100.0**
BAIs	1. IAA	130	26.0
	2. IFM	133	27.0
	3. ITA	122	24.0
	4. TIA	115	23.0
	Total	**500**	**100.0**
Specialization/Course Pursued	1. Business Administration Programmes	315	63.0
	2. Business-related Programmes	185	37.0
	Total	**500**	**100.0**

Source: *Field Survey Data, 2024*

4.2 The Degree to which the BAIs' Students are Furnished with DLS

In answering Research Question 1, the study sought to understand the degree to which BAIs' students are equipped with DLS in Tanzania. The study included four skills, namely, collaboration skills, awareness skills, operation skills, and thinking skills. Collaboration skills included *networking, teamwork, and sharing*; awareness skills included *legal literacy, ethics and safeguarding self*); operation skills included *cognition, invention and presentation*); while thinking skills include *evaluation, analysis, and creativity*. The results as depicted in **Table 2** also indicate that, the operation skills were perceived to be acquired by the BAIs' students by indicating very large extent by 18%, large extent by 58%, small extent by 6%, very small extent by 8% and neutral by 10%. The majority of the surveyed students perceived that they acquired the DLS to the large extent (58%) in four surveyed BAIs in Tanzania.

Table 2 further signpost that, the collaboration skills were perceived to be acquired by the BAIs' students to the very large extent by23%, large extent by 62%, small extent by 3%, very small extent by 2% and neutral by 12%. The majority of the surveyed students perceived to acquired the DLS to the large extent (62%) in four surveyed BAIs in Tanzania.

Furthermore, the results in **Table 2** pinpoint that the thinking skills were perceived to be acquired by the BAIs' students to the very large extent by 8%, large extent by 12%, small extent by 61% and very small extent by 19%. The majority of the surveyed students perceived to acquire the DLS to the small extent (62%) in four surveyed BAIs in Tanzania

In addition, the results as depicted in **Table 2** portray that the awareness skills were perceived to be acquired by the BAIs' students to the very large extent by 7%, large extent by 17%, small extent by 60%, and very small extent by 12% and neutral by 4%. The majority of the surveyed students perceived to acquire the DLS to the small extent (60%) in four surveyed BAIs' in Tanzania.

Generally, the students perceived to acquire operation skills and collaboration skills to a large extent while the thinking skills and awareness skills were perceived to be acquired to a small extent. These results are likewise by Vod ˇa et al. (2022) who identified problem-solving, critical thinking, communication, and technical digital skills and other digital skills (i.e., creativity and information) being applied by social sciences and humanities students.

Table 2: The Degree to which the BAIs' Students are Furnished with DLS

Scale	Operation Skills		Collaboration Skills		Thinking Skills		Awareness Skills	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Very large Extent	89	18	108	23	40	8	31	7
Large Extent	292	**58**	311	**62**	58	12	93	17
Neutral	49	10	60	12	0	0	20	4
Small Extent	32	6	13	3	305	**61**	299	**60**
Very Small Extent	38	8	8	2	97	19	57	12
Total	**500**	**500**	**500**	**100**	**500**	**100**	**500**	**100**

Source: *Field Survey Data, 2024*

4.3 The Angle of Life from which the DLS are Applied by the BAIs' Students

In answering Research Question 2, the results on which angle of life the DLS are applied by the BAIs' students in Tanzania was provided. The results in **Table 3** display that, 71% of students applied operation skills in academic issues while 29% of them applied the same operation skills in non-academic skills. The majority of the BAIs' students (71%) applied operation skills in academic issues.

Furthermore, the results in **Table 3** exhibit that, 38% of students applied collaboration skills in academic issues while 62% of them applied the same collaboration skills in non-academic skills. The majority of the BAIs' students (62%) applied collaboration skills in academic issues.

Moreover, the results in **Table 3** reveal that, 67% of students applied thinking skills in academic issues while 33% of them applied the same thinking skills in non-academic skills. The majority of the BAIs' students (67%) applied thinking skills in academic issues.

Also, the results in **Table 3** expose that, 40% of students applied awareness skills in academic issues while 60% of them applied the same awareness skills in non-academic skills. The majority of the BAIs' students (60%) applied awareness skills in academic issues.

Generally, operation and thinking skills were applied to academic issues to a large extent while collaboration and awareness skills were applied in non-academic issues to a large degree by the BAIs' students in Tanzania. Academically, these results are consistent to what is noticed by Techataweewan and Prasertsin (2017 who show that, the students apply DLS in easy seeking and accessing to information needed to solve problems and be more critical and do tell a lot of information with their friends. Muh (2023) further show that the students apply DLS to solve learning and life problems in general.

Table 3: The Angle of Life from which the DLS are Applied by the BAIs' Students

Scale	Academic Issues		Non-academic Issues	
	Frequency	**Percent**	**Frequency**	**Percent**
Operation Skills	355	71	145	29
Collaboration Skills	189	38	311	62
Thinking Skills	335	67	165	33
Awareness Skills	201	40	299	60
Total	**500**	**500**	**500**	**100**

Source: *Field Survey Data, 2024*

4.4 The major factors prohibiting the acquirement of digital literacy skills among BAIs' students in Tanzania

In answering Research Question 3, the study sought to establish major factors limiting the adoption of digital literacy among the students. The major factors were seen to be the following:

(i) Curriculum

It was revealed by respondents that some curricula developed by relevant colleges fail to meet the requirements for the teaching of digital education. This causes students to lack the understanding and knowledge of digital skills.

(ii) Internet connectivity

Internet connectivity is a problem in large parts of Tanzania. Also, internet providers charge high rates for their services. This inhibits students to access internet services.

(iii) Instructors' competence

Instructors lack competence in digital education in such a way the not able to impart knowledge to students. Students need to be taught by instructors who are competent enough and which have capability of transferring knowledge to them.

(iv) Information data literacy

Some BAI students seemed to lack knowledge of information data. This also seemed to be attributed to the lack of digital education on the part of their lecturers.

Discussion

The study evaluated the extent to which BAI students are empowered by DLS and establish the specific way in which such students use DLS. This study was conducted at four (4) BAIs under NACTVET, namely, Institute of Arusha Accountancy (IAA), Institute of Finance Management (IFM), Institute of Tax Administration (ITA) and Tanzania Institute of Accountancy (TIA). The researcher collected primary data from final year-students.

Regarding the degree to which the BAIs' Students are furnished with DLS, the findings of this study shows that, the majority of surveyed students in the two BAIs in Tanzania acquired operation skills and collaboration skills to a large extent while they attained awareness skills and thinking skills to a small extent. The majority of the BAIs' students applied operation and thinking skills in academic issues while collaboration and awareness skills were applied in non-academic issues.

Regarding t**he angle of life from which the DLS are applied by the BAIs' students it was found that** operation and thinking skills were applied to academic issues to a large extent while collaboration and awareness skills were applied in non-academic issues to a large degree by the BAIs' students in Tanzania.

4.5 Regarding the major factors prohibiting the acquirement of digital literacy skills among BAIs' students in Tanzania, curriculum, internet connectivity, instructors' competence, and information data literacy seemed to be the major candidates.

5. Conclusion and Recommendations

The findings of this study conclude that, the majority of surveyed students in the two BAIs in Tanzania acquired operation skills and collaboration skills to a large degree while they attained awareness skills and thinking skills to a small degree. The majority of the BAIs' students applied operation and thinking skills in academic issues while collaboration and awareness skills were applied in non-academic issues. The findings of this study recommend the BAIs to continuously impart more DLS to their students to enable them to balance the application of DLS in their daily life, both academic and non-academic life. This calls for both private and public investment in DLS in BAIs in Tanzania.

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