Exploring learning strategies among accounting students undertaking an online program

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Abstract
The shift toward online education has transformed the learning landscape for many groups of learners, including accounting students. However, many still struggle to adopt effective strategies suitable for virtual environments. Unlike traditional classrooms, online learning emphasises strong self-regulation, digital literacy, and independent study habits, skills that not all students possess equally. This study explores the learning strategies used by accounting students enrolled in online Bachelor of Business Administration programs. Using a quantitative survey, data were collected from 86 students and analyzed through descriptive statistics, correlation, and regression techniques. The findings reveal that cognitive strategies, resource management, and time management all play a key role in boosting comprehension and academic performance. Of these, resource management had the most significant impact, highlighting the value of collaborative tools and instructor support in fostering self-directed learning. These findings highlight the importance of self-discipline and intrinsic motivation in navigating the flexible structure of online education. The study also provides practical insights for educators to enhance instructional design and student support, ultimately improving the online learning experience for accounting students.

Keywords: *Accounting education, learning strategies, cognitive learning, resource management, time management, online studies*

INTRODUCTION

With the rapid advancement of technology and the increasing demand for flexible education, online learning has become a prominent mode of education worldwide (Mahai, 2022; Sukon, 2021; Rahim et al., 2020; Mwale, 2019). This shift has opened up unique opportunities for learners across geographical, economic, and social boundaries, making education more inclusive and accessible than ever before (SADC & UNESCO, 2020). Despite its growing popularity, online learning continues to face challenges related to digital infrastructure, instructional knowledge, and emerging technologies (Mahai et al., 2022). Addressing these challenges requires a

refined understanding of local contexts and innovative pedagogical approaches. This includes choosing learning strategies that are relevant for students in a particular specialization rather than in a combined program.

In Tanzania, the Open University of Tanzania (OUT) offers higher education through Open and Distance Learning (ODL). Cumulatively from 1994 to 2023/24, the OUT has admitted a total of 221,046 students; among them, 92,035, 48,807, and 80,204 were enrolled in Undergraduate, Postgraduate, and Non-degree programs, respectively (OUT, 2024). Of the total enrolled students in undergraduate programs, 15,722 (17.2%) are from the Faculty of Business Management, and specifically, 2,140 (13.6%) are enrolled to pursue the Bachelor of Business Studies (BBA) in Accounting (OUT, 2024). In the past five years, from the 2019/2020 to the 2023/2024 academic year, the enrollment trend of students specialising in accounting was 100, 200, 283, 389, and 314. (OUT, 2024). This enrollment pattern highlights the growing demand for business-related qualifications, particularly in accounting, reflecting both national workforce needs and the increasing recognition of financial literacy as key to economic growth.

The field of accounting, which has traditionally relied on rigorous and structured learning, has also adopted online education (Tettamanzi et al., 2023; Tabatabaeian et al., 2021; Malinic et al., 2025). Unlike traditional classroom settings, online learning presents unique challenges and opportunities for students. Among these challenges is the limited interaction between students and instructors, which can hinder the development of practical accounting skills that typically benefit from guided, hands-on learning and immediate feedback (Tettamanzi et al., 2023). To address these challenges, studies suggest the need for greater self-discipline, effective time management, and the ability to navigate various technological tools and platforms (Malinic et al., 2025). Consequently, students must develop and adopt specific learning strategies to succeed in this digital learning landscape (Puteh et al., 2022; Wilson et al., 2021; Jeng, 2023). To further this discussion, we employ a survey tool with students at the Open University of Tanzania studying accounting courses as part of their speciality. Accounting students represent a critical and timely focus for educational research due to the evolving nature of the online learning environment and the unique demands of the accounting discipline (Tabatabaeian et al., 2021; Malinic et al., 2025). By targeting accounting students studying at OUT first, the study provides a focused lens through which to explore these student dynamics, which are scarce in the literature. Second, exploring this group of students offers insights into how learners in developing contexts navigate digital

education, adding depth and diversity to the global discourse on the effectiveness of online learning.

The study is relevant to Tanzania following the recent implementation of a new competence-based curriculum, in which business studies is among the core specialisations (URT, 2025). A competence-based curriculum places high demands on learners to engage in independent self-study and conduct independent internet searches (Slimi, 2023). Nowadays, businesses operate in highly unified global markets, catering to the needs of professionals who are equipped with knowledge of international financial regulations, taxation systems, cross-border transactions, emerging technologies, and data analytics (Thottoli et al., 2022; Widuri et al., 2019; Kotb et al., 2012; Lal & Bharadwaj, 2016). Accounting serves as the language of business, enabling organisations to communicate financial performance, ensure compliance, and make informed decisions (Jeng, 2023). Therefore, understanding the most effective learning strategies for students pursuing the accounting field will expose them to a balanced learning approach while maintaining a degree of flexibility, avoiding traditional learning behaviours such as memorising, highlighting, emphasising, and rereading, which are considered ineffective (Rovers et al., 2018; Puteh et al., 2022). Three learning strategies are examined in this study, namely, cognitive, resource-based, and time management. The findings of this study will provide insights that can help educators design more effective instructional materials, develop targeted support services, and create a more conducive online learning environment. To steer the investigation, the following three key research questions were established:

i) Does cognitive strategy influence students' performance?
ii) Does resource management influence students' performance
iii) Does time management influence students' performance?

LITERATURE REVIEW

Hofstede's cultural dimensions theory (HCDT)

Geert Hofstede propounded Hofstede's cultural dimension theory (HCDT) in 1984. The theory explains how societal and organisational values are influenced by culture. It identifies six key dimensions that describe national cultures and how these cultural traits affect society in terms of behaviour, responsibility, attitude, and learning. The theory states that there are six cultural dimensions in a society: (1) high power distance vs low power distance, (2) individualism vs collectivism, (3) masculinity vs femininity, (4) uncertainty avoidance, (5) long-term vs short-term orientation, and (6) indulgence vs restraints. In this paper, the focus will be on the first three traits that are considered more reflective of the discussion in this study.

Power distance refers to the relationship between individuals with high authority and those with low authority. Tanzania, as a country, is categorised as having a high power distance (Mshana et al., 2022), similar to other emerging countries such as Malaysia and Mexico. In these countries, the top authority must be highly respected because of the significant power it holds. There are minimal interactions between the person with authority and the lower person (or subordinates in the organisation). As a result, it creates a big communication gap (Hofstede, 1984). Students in high-power-distance countries tend to respect authority and teachers who lead the learning process (Gillies, 2016). In this case, learning may be passive, characterised by less critical questioning and overreliance on teachers to guide the learning process and to develop materials. On the contrary, in low power distance cultures, students tend to ask numerous questions, challenge teachers and materials, and create their own materials tailored to their learning subjects (Jeng, 2023). In this case, learning becomes more student-centred, which encourages critical thinking, collaboration, and peer learning.

Individualism vs. collectivism describes how a society prioritises individual achievements over group achievements (Hofstede, 1984). People in individualistic countries (such as the US and the UK) perceive themselves as independent and self-reliant. Personal achievements and individual rights are emphasized over group achievements (Zeng et al., 2025). On the contrary, collectivist societies believe in group achievements, creating a sense of belonging to a family, community, or organisation. Studies have found that in individualistic cultures, learners tend to prefer self-learning due to the cultural emphasis on independence, self-sufficiency, and personal responsibility, which promotes a focus on individual goals and accomplishments (Jeng, 2023). Meanwhile, collectivist societies view learning as a collaborative process embedded in discussions and listening to peers and friends. As such, learning is often perceived as a collective effort in which students learn from peers through discussion and listening, fostering a sense of shared responsibility and mutual support (Kole, 2025; Gillies, 2016). Additionally, a collaborative strategy emphasises peer learning and group outcomes, where students work together, share ideas, and build mutual understanding, fostering stronger relationships and a support system within the learning context.

Masculinity vs. Femininity reflects the distribution of emotional roles between genders (Hofstede, 1984). Masculine cultures value competitiveness and achievement, while feminine cultures emphasise relationship, cooperation, and quality of life. Tanzania is categorized as a feminist country as its community focuses less on competition, achievements, and material

gains. When applied to learning environments, the cultural trait of femininity encourages students to work together in class rather than compete in individual learning (Kole, 2025). Achievement is often measured by group harmony and shared improvement while maintaining gender roles and empathy (Zeng et al., 2025).

The discussion in HCDT offers a perspective framework for guiding this study. Specifically, it fosters understanding of how cultural values shape educational dynamics. By focusing on the dimensions of power distance, individualism versus collectivism, and masculinity versus femininity, the study can critically examine how cultural norms influence student-teacher relationships, learning behaviors, and classroom interactions. The emphasis on power distance is especially relevant in the Tanzanian context, where classified policies, structures, and respect for authority impact pedagogical approaches and student engagement. Therefore, Hofstede's theory provides a culturally grounded lens through which the study can interpret educational practices, reveal fundamental cultural inspirations, and propose strategies for improving learning outcomes in the Tanzanian context.

Learning strategies

Learning strategies can be defined as behaviours and practices that a learner chooses to adopt during the learning process (Deak & Santoso, 2021). The selection of a learning strategy should yield positive outcomes for the learner; otherwise, it will be regarded as ineffective (Wilson et al., 2021). Ineffective learning strategies can be time-consuming and may lead to a lack of self-directed learning and a decline in motivation among learners. In contrast, effective learning strategies should be tailored to build critical thinking, confidence, and motivation in learners while fostering continuous learning behaviour (Wilson et al., 2021; Molina et al., 2021). Accordingly, learners and instructors must understand the learning objectives and learning outcomes of a subject to engage appropriate resources to achieve the intended goals.

A learning strategy can be adopted based on a student's age or the purpose of learning. Young adults (i.e., undergraduate students) in their early careers adopted learning strategies such as note-taking, rehearsal, and organisation (Tran et al., 2019). Although these learning strategies are argued to be ineffective (Blasiman et al., 2017; Rovers et al., 2018), they are helpful at a particular stage when learning objectives assess lower levels of knowledge in Bloom's taxonomy (Mahdi et al., 2020). Meanwhile, students in upper levels adopted critical thinking, hypercritical analysis, interpretation, and case study analysis (Nurhilza, 2018; Mahdi et al., 2020). These learning approaches

were appropriate given the nature of the assignment, which required applying knowledge.

The literature on learning strategies has been widely explored in other fields, such as clinical medicine (Delgado, 2018; Lindblom et al., 2019; Chan et al., 2021). In clinical medicine, deep learning and kinesthetic learning are characterised as learning approaches among students (Zain et al., 2019). Arguably, kinesthetic learning, which requires physical movements in the lab for practical understanding, may not be an appropriate approach for learners in the accounting field (Marian et al., 2021). Instead, deep learning and surface learning can be combined as learning styles for students in an undergraduate accounting program (Marian et al., 2021; Shaffie et al., 2020). Deep learning is embedded in a cognitive learning approach, which requires critical thinking to digest concepts learnt in class (Shaffie et al., 2020). As a result, it can enable accounting students to map theories with practical applications, such as preparing bank reconciliations, invoices, or financial statements. In engineering systems, students identified time management as a crucial factor in achieving high grades (Galaviz et al., 2025). Time management is regarded as a self-regulation strategy that enables students to increase their academic achievement by balancing their time to complete multiple tasks, such as practical work, demonstrations, and case study analysis (Galaviz et al., 2025).

Studies have examined three learning strategies suitable for mature learners, namely cognitive, metacognitive, and self-regulatory (Kassim et al., 2023). Cognitive learning is a psychological technique that aims to enhance thinking, comprehension, and problem-solving skills. Standard cognitive strategies are approaches that enhance learners' ability to understand how to manage the learning process. Meanwhile, self-regulatory strategies empower learners to take charge of their own learning process (Puteh et al., 2022). Instead of relying solely on teachers or external guidance, learners actively plan, monitor, and reflect on their progress to achieve personal goals. The three learning strategies were tested among postgraduates, providing a balanced coverage of learning strategy types. Relevant results revealed that all three learning strategies were used interchangeably by postgraduate students and were related to one another, suggesting that they are more suitable for mature adults with varied family and work responsibilities (Kassim et al., 2023).

Other studies, conducted with a smaller sample of 68 postgraduate students, revealed that cognitive, self-regulatory, and resource management strategies were the most valued learning strategies among postgraduate students (Puteh

et al., 2022). Ultimately, all the learning strategies were positively correlated with one another. The considerations in research were adhered to, including obtaining informed consent from participants, maintaining confidentiality of information, and ensuring he need for further studies in different disciplines and modes of study. This study, therefore, extends the discussion of learning strategies by focusing on a specific group of learners, accounting students, and by including a new variable, time management, which has not been considered in previous studies.

Time management is the process of completing an assigned activity from start to finish within a stipulated time period, yielding positive results (Wilson et al., 2021). It involves planning, organising, assigning priorities, and evaluating goals to align with planned activities. Studies in time management have considered four main dimensions: setting goals, using tools to manage time, organisational preferences, and perception of control over time (Galaviz et al., 2025). Like any other limited resource, time can be more or less effectively managed (Britton & Tesser, 1991). Studies have found that individuals who manage their time more effectively exhibit greater awareness in their daily routines; as a result, they become more successful in their work, life, and academic pursuits (Reveron, 2015; Flores, 2018; Galaviz et al., 2025). Specifically, students who planned their time effectively showed greater improvements in grades and overall performance (Galaviz et al., 2025). It was suggested that students be equipped with time management skills immediately upon reporting to college in their first year of studies (Galaviz et al., 2025).

The literature on time management has recently gained popularity in various fields, including management, psychology, and education (e.g., Molina et al., 2021; Gozalo et al., 2022; Reyes et al., 2022; Reyes & Garcia, 2022; Wilson et al., 2021; Galaviz et al., 2025). However, the literature presents subjective evidence for the usefulness of time-management practices on students' learning. Time management is argued to be linked with self-regulated learning (Molina et al., 2022), which encompasses planning, monitoring, and self-discipline (Flores, 2018). Students who are equipped with relevant time management skills can effectively plan their daily activities, including when to wake up, eat, revise for a test, meditate, exercise, socialise, and rest. As a result, they can improve in academic performance, engagement, and overall student well-being (Wilson et al., 2021).

In the scholarly literature, researchers generally agree that intellectual achievement requires time, tolerance, ambition, and self-regulation (Wilson et al., 2021). That can partially justify strict timetables that display a calendar

for a semester or a full academic year in many universities. The almanack requires students to plan and manage their time by adjusting their individual timetables within the University timetable, thereby developing time-management skills (Galaviz et al., 2025). This suggests that time management practices play an important role in educational achievement, and that students should treat time as a limited resource. Studies measured time management using various indicators, including self-monitoring, self-judgement, and alertness (Flores, 2018). At the same time, others have considered different measurements to include selecting goals and subgoals, ranking the goals, producing tasks and subtasks, arranging the tasks, listing the tasks on a "to-do" list, preparing the tasks, and finally applying the tasks to yield the desired outcome (Britton & Tesser, 1991). Students who observed this taxonomy of time management were found to yield higher academic performance scores (Galaviz et al., 2025).

Empirical studies are lacking on the integration of time management as a learning strategy in practical courses such as accounting (Tettamanzi et al., 2023; Malinic et al., 2025; Asuquo et al., 2020). Effective time management is a crucial factor that can significantly influence cognitive learning among students (Wilson et al., 2021). Time management strategies such as creating a structured study schedule, setting specific goals, and prioritising tasks help students allocate sufficient time to thoroughly understand complex accounting concepts and modern technologies (Asuquo et al., 2020). This disciplined approach reduces cognitive overload, allowing for better retention and application of knowledge (Puteh et al., 2022). Moreover, consistent study habits fostered through time management can enhance students' ability to engage in deeper cognitive processes, such as collaborative learning and problem-solving, which are essential in the field of accounting (Edmund & Tiggeman, 2009). By managing their time efficiently, students can also reduce stress and anxiety, leading to a more focused and productive learning experience (Kassim et al., 2023).

Given the current state of the literature in this area, this study is limited to three learning strategies that foster critical thinking. First, the study considered the cognitive development learning approach. This approach has been linked to the development of critical thinking, elaboration, and the organisation of study materials in ways that enable learners to build self-confidence and foster continuous learning behaviours (Puteh et al., 2022). Second, the study combined two other learning strategies, namely resource management and time management. While resource management focuses on the learner's environment (Rahmat, 2019), time management fosters planning and organising time as a scarce resource in the learning environment (Galaviz

et al., 2025). The following section discusses the conceptual framework that integrates the three learning strategies.

Conceptual Framework

This study conceptualises three learning approaches, cognitive learning, resource management, and time management, as one component in fostering learning in ODL mode. The conceptual framework (Figure 1) encompasses two constructs adopted from Wenden and Rubin (1987), namely cognitive and resource management. The third construct, time management, was adopted from Britton and Tesser (1991), which has three dimensions: short-range planning, time attitude, and long-range planning. Meanwhile, the study's dependent variable is the student's performance. Student performance in online learning is influenced by a combination of variables, including personal, technological, pedagogical, and environmental factors (Kole, 2025). However, this study focuses on personal factors which reflect learners' internal capabilities, behaviours, and circumstances (Kassim et al., 2023; Shaffie et al., 2020). Learners' internal capabilities include self-discipline, digital literacy, academic self-efficacy, participation in discussion, and the motivation for continuous learning (Puteh et al., 2022). By linking these items of the dependent variable, the study will be more focused on personal attributes that enhance students' performance. Figure 1 below shows the conceptual framework of the study.

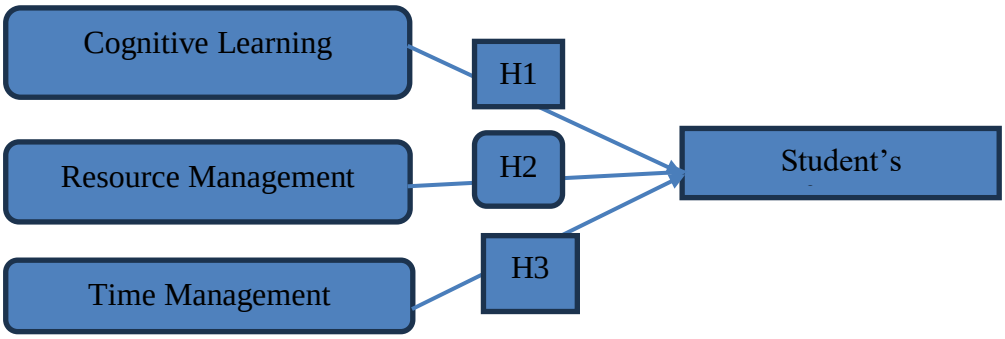

Figure 1- Conceptual Framework

RESEARCH METHODS

A positivist research paradigm was adopted, which necessitates a quantitative research approach in the collection, analysis, and presentation of the findings (Hair et al., 2019). Accordingly, a survey was prepared and posted to students' WhatsApp groups, which is a standard method of communication among students in OUT. The survey criteria required students studying the Bachelor of Business Administration (BBA) who specialised in accounting. This group of students is expected to either be working or employed in the

industry as accountancy graduates in various private and government departments. The respondents were studying in a blended mode, combining online and face-to-face components. A simple random sampling technique was employed to ask students to complete the questionnaire. This technique was considered ideal because it allowed many students to participate in the survey with minimal bias (Field, 2013; Kumar et al., 2019). Another set of questionnaires was sent to the directors of the regional centres, asking them to have their students complete the survey tool when they appeared for their examinations. This procedure helps minimise any potential contextual gap arising from students being concentrated in one regional centre. Several reminders followed over the next week, with the online link being resent to the students' WhatsApp groups. Ethical considerations in research were adhered to, including obtaining informed consent from participants and the organisation (OUT); maintaining confidentiality of information, and ensuring data integrity (Kumar et al., 2019). Observing ethical issues enabled the study to avoid harming the respondents and the institution (Saunders et al., 2019).

The questionnaire items were adapted from two authors. The first set of questionnaires measured cognitive learning strategies (CLS) and the Resource Management Learning Strategy (RMLS), which were adapted from Wenden and Rubin (1987). Specifically, the Wenden and Rubin (1987) questionnaire was adopted for three reasons. First, it provides a balanced coverage of learning strategy types relevant to various academic disciplines. Second, the questionnaire items are exhaustive in their coverage of cognitive, meta-cognitive, and resource-based learning, which are crucial for diverse groups of learners (Puteh et al., 2022; Kassim et al., 2023). Third, the questionnaire was validated using instruments that enhance its applicability in different contexts. The CLS questionnaire comprised four dimensions: rehearsal, organisation, elaboration, and critical thinking. Meanwhile, the RMLS questionnaire comprised three dimensions: environmental management, effort management, and help-seeking. The items of the CLS and RMLS questionnaires were measured on a 5-point Likert scale, where one denoted "strongly disagree" and five denoted "strongly agree".

The second part of the questionnaire was the Time Management Questionnaire (TMQ), adapted from Britton and Tesser (1991) and comprising three dimensions: short-range planning, time attitude, and long-range planning. The measurement scale was an interval scale stated in a 5-point Likert scale where 1denoted 'never', two denoted 'rarely', three denoted 'sometimes', four denoted 'often', and five denoted 'always'. Data collection commenced during the examination period, from June 2 to July 15, 2025. During this period, students visit their regional centres to take their

examinations; therefore, it becomes easier for them to access the information, especially those who are not active WhatsApp users. After 1.5 months, 97 responses were received. The responses were sorted out, and only students who specialised in accounting were retained, resulting in 86 usable questionnaires.

The data were analysed using descriptive statistics, specifically mean scores, correlations, and regression. According to Sekaran and Bougie (2019), the mean is the most common measure of central tendency, providing a straightforward and easier interpretation for different users of the reports. Therefore, the mean values were used to interpret the scores and to make sense of the results. The threshold for interpretation of the mean values was adopted from Sekaran and Bougie (2019). It is suggested that mean scores ranging between 1.0 and 2.4 are regarded as low; mean scores ranging between 2.5 and 3.4 are considered moderate, and mean scores ranging between 3.5 and 5.0 are regarded as high (Sekaran & Bougie, 2019; Malhotra, 2019). Additionally, a Pearson correlation analysis was conducted to examine the relationship among the learning strategies constructs and determine whether they are related. The following benchmarks were used to interpret Pearson values (r): (1) when r = 0.00-0.40, it implies a low relationship (2) when r = 0.50-0.70, implies a moderate relationship, and while (3) r = 0.80-1.00 it implies a high relationship (Cohen, 1998; Sekaran & Bougie, 2019). Additionally, a reliability test was conducted after merging the indicators of each construct. It is suggested that Alpha values of 0.7 or higher indicate reliable data (Hair et al., 2019). Finally, a regression analysis was conducted to identify the most significant factors among the learning strategies. The variables of learning strategies were merged to form three constructs: cognitive strategy, resource management, and time management, which were regressed against the dependent variable —students' performance. Parametric assumptions were tested to verify the validity of the regression results—specifically, sample size adequacy, data normality, and a test for multicollinearity. The following subsection presents the findings of the study.

FINDINGS

Profile of respondents

The respondents of this study were students pursuing a Bachelor of Business Studies in Accounting. The questionnaire consisted of five items measuring personal profile, including gender, age, regional centre, employment history, and year of study, as shown in Table 1 below.

Table 1- Summary of the Respondents' Profile

Item	N=86	%
Gender		
Females	25	29%
Males	41	71%
Age		
18-24 years	3	3.5%
25-34 years	27	31.4%
35-44 years	32	37.2%
45-54 years	17	19.8%
55 and above	7	8.1%
Regional Center (Zone)		
Dar es Salaam Zone	34	39.5%
Mbeya Zone	11	12.8%
Lake Zone	21	24.4%
Arusha Zone	9	10.4%
Zanzibar Zone	11	12.9%
Years in employment/self-employed		
None	05	5.8%
1-5 years	10	11.6%
5-10 years	36	41.9%
10-15 years	22	25.6%
15 years and above	13	15.1%
Year of studies		
1st Year	31	36%
2nd Year	22	25.6%
3rd Year	17	19.8%
4th Year	13	15.1%
5th Year and above	03	3.5%
Total	**86**	**100%**

The majority of respondents were male students (71%), while female students accounted for 29%, suggesting that most male students are likely to enrol in accounting programs. The majority of respondents were aged 35-44 years (37.2%), followed by those aged 45-54 years, suggesting they were mature students. There were 34 students (39.5%) from the Dar es Salaam zone, followed by 24 students (29.1%) from the Lake zone. The remaining zones had almost an equal number of students represented. Regarding employment history, the majority of respondents (41.9%) had 5-10 years of work experience, while 25.6% had 10-15 years of work experience. Only five respondents (5.8%) were not employed. Finally, the majority of respondents were 1st-year students (36%), followed by 2nd-year students (25%), and 3rd-year students (19.8%). There were 15.1% and 3.5% of students in their fourth and fifth years, respectively. Overall, the demographic results suggest that accounting programs attract mostly male, mature, and career-oriented students, which is consistent with the National Board of Accountants and Auditors (NBAA) in Tanzania. The NBAA reported that there are more male

accountants than females in the accounting profession (NBAA, 2023). These insights are valued for program developers, instructors, and policymakers aiming to tailor accounting educational policies to meet the needs of this unique profile of learners in the ODL.

Learning strategies

Cognitive Learning Strategies (CLS)

The first learning strategy was cognitive (CLS), comprising four dimensions: rehearsal, organisation, elaboration, and critical thinking. The mean results are presented in Tables 2-5 below.

Table 2-Cognitive Learning Strategy-Rehearsal (CLSR)-4 items

	N	Min	Max	Mean	Value
CLSR1-When I study for the classes, I practice saying the material to myself over and over.	86	4	5	4.41	High
CLSR2-When studying for the courses, I read my class notes and the course readings over and over again.	86	4	5	4.54	High
CLSR3-I memorises keywords to remind me of important concepts in this class.	86	4	5	4.65	High
CLSR4-I make lists of important items for the courses and memorize the lists.	86	4	5	4.31	High
Overall Mean Value for Cognitive Component (Rehearsal)	86			**4.48**	**High**
Valid N (listwise)	86				

The first cognitive strategy component is rehearsal. Table 2 depicts the mean findings for the rehearsal component, which was measured by four (4) items, which scored "high" with an overall mean value of 4.3. Item 1, which is "when I study for the classes, I practice saying the material to myself over and over", scored 4.41. Item 2, namely "when studying for the courses, I read my class notes and the course readings over and over again", scored a mean value of 4.54. Meanwhile, item 3, which was related to memorising key words of important concepts, scored 4.65, the highest among the four indicators. Regarding item 4, which pertained to listing important course items and memorising them, it also scored a high mean value of 4.31. The overall mean value of 4.48 for the rehearsal component under cognitive strategy indicates that respondents agreed that the rehearsal component under cognitive strategy plays an important role in their learning strategy as accounting students studying in online classes. This is because, as an adult working student in the BBA-Accounting program, they are expected to discuss concepts and memorise complex accounting and business terminology (Puteh et al., 2022). It will enhance their understanding of what

they have learnt in class by reinforcing their knowledge of the subject matter and facilitating a meaningful discussion with their peers.

Table 3-Cognitive Learning Strategy-Organisation (CLSO) - 4 items

	N	Min	Max	Mean	Value
CLSO1-When I study the readings for the courses in the program, I outline the material to help me organize my thoughts.	86	3	5	3.41	Moderate
CLSO2-When I study for the courses, I go through the readings and my class notes and try to find the most important ideas.	86	4	5	4.25	High
CLSO3-I make simple charts, diagrams, or tables to help me organize course materials in this program	86	4	5	4.66	High
CLSO4-When I study for the courses, I go over my class notes and outline important concepts.	86	4	5	4.11	High
Overall Mean Value for Cognitive Component (organisation)	**86**			**4.12**	**High**
Valid N (listwise)	86				

The second cognitive strategy was organisation, comprising four items. Table 3 above depicts the results for each item as answered by the respondents. The first item was related to reading for the course in the program and outlining materials to help organise thoughts, which scored a moderate mean value of 3.41. Item 2, which was related to "reading class notes and trying to find the most important ideas", scored a high mean value of 4.25. Item 3, which was related to creating simple charts, diagrams, and tables to help organise materials, scored a mean of 4.66, the highest among the four items in the construct. Meanwhile, item 4, which was related to 'studying for the course by revising notes and making an outline of important concepts', also scored a high mean value of 4.11.

The overall mean value of 4.12 for the organisation component indicated that the respondents agreed that organising and planning their study is one of the cognitive strategies that helps them excel in their studies. With this practice in mind, enable students to be more organised and have a more structured study plan (Kassim et al., 2023). As a result, it helps them stay motivated to proceed with their learning in ODL mode.

Table 4-Cognitive Strategy-Elaboration (CSE) (6 items)

	N	Min	Max	Mean	Value
CSE 1-When I study for the course, I find that respondents agree on different sources, such as lectures, readings, and discussions.	86	As adult working students	5	4.63	High
CSE 2-I try to relate ideas in one subject to those in other courses whenever possible	86	3	5	3.67	Moderate
CSE 3-When reading for the courses, I try to relate the material to what I already know.	86	3	5	3.44	Moderate
CSE 4-When I study for the courses in this program, I write summaries of the main ideas from the readings and my class notes.	86	4	5	4.15	High
CSE 5-I try to understand the material in the classes by making connections between the readings and the concepts from the lectures.	86	4	5	4.37	High
CSE 6-I try to apply ideas from course readings in other class activities, such as lectures and discussions	86	4	5	4.21	High
Overall Mean Value for Cognitive Component (Elaboration)				**4.08**	**High**
Valid N (listwise)	86				

The third cognitive strategy, elaboration, consisted of 6 items, as shown in Table 4. The highest mean score is depicted in the first item named CSE1, which scored a high mean value of 4.63; corresponding to "when I study for attempts to explore ideas of my own related to the formation from different sources, such as lectures, readings, and discussions". The second-highest-scoring item in the elaboration component was CSE5, which related to understanding the material in the notes by making connections between readings and concepts from the lecturer, scoring a mean of 4.37. The remaining items, namely CSE6 and CSE4, had mean values of 4.21 and 4.15, respectively, which were considered high. Meanwhile, the last two items, CSE2 and CSE3, scored mean values of 3.67 (high) and 3.44 (moderate), respectively. The overall score for the six items of elaboration-cognitive strategy revealed a mean score of 4.08, which is considered high. The overall mean value of 4.08 for the elaboration component under the cognitive strategy indicated that respondents agreed that the elaboration component is important for accounting students studying in ODL. As adult working students with family responsibilities (for the majority of them), accounting students are expected to discuss what they have learnt in Zoom class. From course materials, thus, the ability to elaborate on and relate concepts and practices is considered a helpful strategy in their learning process (Shaffie et al., 2020). This will further deepen their knowledge of their various courses.

Table 5-Cognitive Strategy-Critical thinking (CSCT)-5 items

	N	Min	Max	Mean	Value
CSCT1-I often find myself questioning things I hear or read in the courses to decide if I find them convincing.	86	4	5	4.09	High
CSCT2-When a theory, interpretation, or conclusion is presented in classes or in the readings, I try to decide if there is good supporting evidence.	86	4	5	4.54	High
CSCT3-I treat the course materials as a starting point and try to develop my own ideas about them. I treat the course materials as a starting point and try to develop my own ideas about them.	86	4	5	4.24	High
CSCT4-I attempts to explore my own ideas related to the concepts I am learning in the courses.	86	4	5	4.45	High
CSCT5-Whenever I read or hear an assertion or conclusion in the classes, I think about possible alternatives.	86	4	5	4.36	High
Overall Mean Value for Cognitive Component (Critical thinking)	86			**4.34**	**High**
Valid N (listwise)	86				

The data in Table 5 above indicate the cognitive strategy, critical thinking (CSCT). The construct had five items. All five items had loadings with high mean values of above 4.0. This is to say that undergraduate students undertaking an accounting specialisation "highly" agree that they often question what they hear or read in courses, interpreting conclusions they draw from theories they hear in classes or in the readings by finding supporting evidence, treating course materials as the starting point in developing their own ideas. Similarly, they 'highly' agree that they play around with ideas of their own while learning in their courses, and also when they read or hear an assertion or conclusion in their classes, they think about possible alternatives. The overall mean value of 4.34 for the critical thinking component demonstrates that going the extra mile by linking what accounting students learnt in class with the working experiences they have accumulated (Rahim et al, 2020; Molina et al., 2021). This implies that understanding and applying concepts is critical for accounting students to think outside the box, hence enabling participants to maximise their learning experience.

Resource Management Learning Strategies (RMLS)

The second construct of learning strategy was RMLS, which was measured by 3 (three) dimensions, namely environmental management, effort management, and help seeking. The results for the three dimensions are presented in Tables 5, 6, and 7 below.

Table 6- Environmental Management Component (EMC)-everyday

	N	Min	Max	Mean	Value
EMC1-I usually study in a place where I can concentrate on my course	86	4	5	4.36	High
EMC2-I make good use of my study time for the courses in this program	86	4	5	3.62	High
EMC3-I have a regular place set aside for studying	86	4	5	4.31	High
EMC4-I make sure that I keep up with the weekly readings and assignments for the courses.	86	4	5	3.22	Moderate
EMC5-I attend the classes regularly in this program.	86	4	5	3.10	Moderate
Overall Mean Value for Resource Management (Environment component)	**86**			**3.72**	**High**
Valid N (listwise)	86				

The data in Table 6 above show the mean score for environmental management, the first dimension of the resource management strategy. The highest mean score of 4.36 refers to the statement "I usually study in a place where I can concentrate on my course". Meanwhile, the lowest mean score is 3.10 (moderate), which occurred for the statement, "EMC5-I attend the classes regularly in this program". Other items, EMC2, EMC3, and EMC4, scored a mean of 3.62, 4.31, and 3.22, respectively, resulting in an overall mean of 3.72 for resource management, which is high. The plausible explanation for these results suggests that most accounting students considered the time, place, and space of the learning environment important to their learning (Wilson et al., 2021). It becomes necessary to equip students with the ability to manage digital resources relevant to the academic journey.

Table 7-Effort Management Component (EFMC)-4 items

	N	Min	Max	Mean	Value
EFMC1-I have a regular place set aside for studying	86	4	5	4.15	High
EFMS2-I work hard to do well in the classes in this program, even if I do not like what we are doing.	86	4	5	4.35	High
EFMS3-When the course is challenging, I either give up or only study the easy parts.	86	4	5	4.31	High
EFMS4-Even when course materials are dull and uninteresting, I manage to keep working until I finish.	86	4	5	4.43	High
Overall Mean Value for Resource Management- (Efforts Management Component)	**86**			**4.31**	**High**
Valid N (listwise)	86				

The data in Table 7 above indicate items for the resource management component, specifically effort management. The construct had four items, whereby all the items had loadings of 4.0; which can be interpreted that accounting students highly agree having a regular place set aside for studying, highly agree to work hard even if the courses are challenging, and also are ready to strive to do well in class even if the materials are not interesting to them. They continue to work hard to complete their studies, irrespective of the odds and challenges they encounter along the way. The overall mean value was 4.31, which is considered 'high' for this dimension. A reasonable explanation for this component suggests that accounting students are ready to strive by putting more effort into their studies to achieve their goals, which is consistent with suggestions by Wilson et al. (2021), even in the face of various challenges related to the learning environment, technological issues, content, and instructors.

Table 8- Help Seeking Component (HSC)-2 Items

	N	Min	Max	Mean	Value
HSC1-When I cannot understand the material in a course, I ask another student from my class for help.	86	4	5	4.34	High
HSC2-I try to identify students from my classes whom I can ask for help if necessary.	86	4	5	4.37	High
Overall Mean Value for Resource Management (Help Seeking Component)	**86**			**4.36**	**High**
Valid N (listwise)	86				

The data in Table 8 above present the findings of help-seeking behaviour (HSC), the last dimension of the resource management component. The construct was measured with two items whose loadings were above 0.43, resulting in an overall mean score of 4.36, which is regarded as a 'high' mean value. The interpretation is that accounting students strongly agree that seeking help from their colleagues when they cannot understand the course materials is necessary. A high overall mean score for this dimension suggests that accounting students highly value learning from others to make their learning journey easier.

Time Management Strategies (TMS)

The third learning strategy was TMS, which was measured by three dimensions: short-range planning, time attitude, and long-range planning. The descriptive results are presented in Tables 9, 10, and 11 below.

Table 9-Short Range Planning (SRP)-7 Items

	N	Min	Max	Mean	Value
SRP1-I make a list of the things that I have to do each day	86	3	5	3.58	High
SRP2-I make a schedule of the activities that I have to do on work days	86	3	5	3.66	High
SRP3-I plan the day before I start	86	4	5	4.45	High
SRP4-I write a set of goals for myself for each day	86	4	5	4.14	High
SRP5-I have a clear idea of what I want to accomplish during the next week	86	3	5	3.25	Moderate
SRP6-I spend time each day planning	86	3	5	3.11	Moderate
SRP7-I set and honour priorities	86	3	5	3.02	Moderate
Overall Mean Value for Time Management strategy (Short Range Planning component)	**86**			**3.60**	**Moderate**
Valid N (listwise)	86				

Data in Table 9 above indicate items for short-range planning (SRP), the first dimension of the time management component. Seven (7) items measure the short-range planning dimension. For item SRP1, the mean score was 3.58 (indicating a high level of agreement). The response sample sizes, ranging from 30 to 460, include a list of tasks they perform each day, which are ranked by importance. For the following items, SRP2, the respondents collectively agreed that creating a schedule of activities to be done on workdays is very important. Meanwhile, for items SRP3 and SRP4, the scored mean determines whether the data meet the assumptions of a normal distribution. Participants highly agree that planning the day before and writing a set of goals (to-do list) for each day is necessary.

Meanwhile, for the remaining three items, SRP5, SRP6, and SRP7 scored moderate mean values of 3.25, 3.11, and 3.02, respectively. The plausible interpretation is to determine whether the data meet the assumptions of normality. A day with a clear idea of what to do involves spending time each day planning, setting, and honoring priorities. The overall average mean score for short-range planning was high (3.60); this suggests that, for accounting students, the element of short-term planning for their studies and work-life balance enhances their learning journey.

Table 10-Time Attitudes (TA)-6 Items

	N	Min	Max	Mean	Value
TA1-I believe there is room for improvement in the way I manage my time	86	4	5	4.45	High
TA2-I find myself doing things which interfere with my college work simply because I hate to say no to people	86	3	5	3.46	Moderate
TA3-I feel I am in charge of& time, by and large	86	4	5	4.05	High
a statistical measure of the normal distribution of data, yielded alpha values above 0.05	86	3	5	3.24	Moderate
Every day, constructive use of time	86	4	5	4.21	High
A reliability test was conducted to measure the internal consistency of the items, ensuring	86	4	5	4.10	High
Overall Mean Value for Time Management strategy (Time Attitude Component)	**86**			**3.92**	**High**
Valid N (listwise)	86				

Data in Table 10 above indicate items for time attitude (TA), the second dimension of the time management component. Six (6) items measure the time attitude dimension, abbreviated as TA, TA2, TA3, TA4, TA5, and TA6. Four items scored 'high' mean values of above 4.0. These include TA1 (mean score =4.35); TA3 (mean score=4.05), TA5 (mean=4.21) and TA6 (mean=4.10). These scores indicate that the respondents strongly believe there is room for improvement, feeling that they generally own their time, make constructive use of it, and work until the last minute to complete major assignments. These findings highlight the importance of deadlines for submitting assignments, which also serves as a motivating factor for increasing efforts to complete a task. Meanwhile, two items had moderate mean values: TA2 and TA4, at 3.46 and 3.24, respectively. The two items suggest that, in some situations, respondents find themselves doing things that interfere with their college work simply because they cannot say no to others. At other times, they spend more time on personal grooming than on college work. The overall mean value for the item of time attitude is 3.92, indicating a high mean, suggesting that accounting students can change their attitude based on the situation and the nature of the study environment in ODL.

Table 11-Long Range Planning (LRP)-5 Items

	N	Min	Max	Mean	Value
LRP1-I have a set of goals for the entire quarter	86	3	5	3.64	High
LRP2-I keep my desk clear of everything other than what I am currently working on	86	2	5	3.43	Moderate
LRP3-I review my class notes well in advance for all my courses to avoid doing things in a hurry	86	3	5	3.52	High
LRP4-When I have several things to do, I think it is best to do a small quantity of work on each one	86	2	5	3.52	High
LRP5-I review my class notes even when the exam is not imminent.	86	2	5	3.11	Moderate
Overall Mean Value for Time Management Component (Long Range Planning)	**86**			**3.44**	**Moderate**
Valid N (listwise)	86				

The data in Table 11 above indicate that items for long-range planning (LRP), the third and final dimension, are discreetly valued by the respondents in this category of accounting students as a learning tool to facilitate their long-term planning. The highest mean score was recorded for item LRP1, at 3.64. I have a set of goals for the entire quarter. Meanwhile, two items scored similar values of 3.52 each, namely LRP3 and LRP4, indicating that respondents strongly believe in reviewing class notes well in advance to avoid doing things in a hurry. Similarly, the respondents highly believe that "when there are several things to do, it is best to do a little bit of work on each one". Meanwhile, the respondents believe that 'keeping desk clear of everything' (mean = 3.43) and reviewing class notes even when the exam is not imminent (mean = 3.11) are moderately important. The overall mean value for the long-range planning dimension is 3.44, which is moderate in the mean value criteria. These results suggest that respondents in this accounting student category discreetly value long-term planning as a learning tool to facilitate their study journey in blended and online learning environments.

Relationship between the three learning strategies

To determine the relationship between the three learning strategies, Pearson product-moment correlation (r) was conducted on all three dependent variables. In SPSS, the items within each dimension were combined to form a single construct for Pearson correlation. Table 12 below presents the Pearson correlation results. Data in Table 12 depicts the strongest correlation was between CLS and TMS (r=.847; p=.000) which was significant at .000. The second stronger relationship was between RMS and TMS (r=.825; p=.000)

and the least correlation was between CLS and RMS (r=.819; p=.000). According to Pearson values for interpretation, r≥.80 implies a strong relationship (Sekaran & Bougie, 2019). It can be concluded that the three learning strategies are highly correlated, suggesting that accounting students in this category apply them concurrently to enhance their learning in the ODL environment.

Table 12- Pearson Correlations (r) for combined items

		CLS	RMS	TMS
CLS	Pearson (r)	1	.819**	.847**
	Sig. (2-tailed)		.000	.000
	N	86	86	86
RMS	Pearson (r)	.819**	1	.825**
	Sig. (2-tailed)	.000		.000
	N	86	86	86
TMS	Pearson (r)	.847**	.825**	1
	Sig. (2-tailed)	.000	.000	
	N	86	86	86

**. Correlation is significant at the 0.01 level (2-tailed).

Multiple Regression Analysis (MRA)

Parametric assumptions were checked before running regression analysis. First, we confirmed the adequacy of the sample size based on the survey response rate. It is suggested that a minimum sample size sufficient for multiple regression depends on the number of variables and the complexity of the model (Wolf et al., 2013). A Monte Carlo simulation suggests that sample sizes between 30 and 460 are adequate for both first-order and second-order regression (Structural Equation Modelling) (Wolf et al., 2013). Nonetheless, this study considered the suggested sample size from O'Brien and Scott (2012) in estimating a minimum sample size for regression. They suggest it be calculated based on the formula 50 + 8m, where m is the number of independent variables, which in this study is three (3). Therefore, the minimum required sample size for this study should be 74 (i.e., 50 + 8 × 3); thus, concluding that the 86 questionnaire responses are adequate for regression analysis.

Second, Skewness and Kurtosis tests were performed to assess whether the data met the assumptions of normality. As a rule of thumb, Skewness and Kurtosis tests should be close to plus/minus 2 and 4 (Pallant, 2020; Field, 2013). The results showed that the minimum skewness value was -2.132, and the maximum was -2.933. The Kurtosis values were 1.228 and 2.401 for the minimum and maximum values, respectively. It can be concluded that the data are slightly left-skewed but approximately normally distributed and

within the acceptable threshold (Pallant, 2020). Table 13 below shows these findings.

Table 13- Skewness and Kurtosis values for normality test

Variables	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Cognitive learning	86	-2.933	0.397	2.161	0.869
Resources management	86	-2.132	0.412	2.401	0.869
Time management	86	-2.896	0.637	1.228	0.769
Student performance	86	-2.348	0.397	1.244	0.469

Additionally, a Shapiro-Wilk test ($p > .05$) (Shapiro & Wilk, 1965; Razali & Wah, 2011) confirmed that the data were approximately normally distributed for all variables. The Shapiro-Wilk Test, a statistical measure of the normality of the data distribution, yielded alpha values above 0.05, resulting in the acceptance of the null hypothesis regarding the normality of the population sample (Razali & Wah, 2011). This affirmed that the data met the assumption of normality, allowing for further parametric analysis. Table 14 below shows the SPSS output.

Table 14- Normality Tests

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Cognitive learning	.161	86	.211	.758	86	.303
Resource management	.293	86	.176	.827	86	.214
Time management	.182	86	.112	.455	86	.245
Student performance	.394	86	.156	.673	86	.133

a. Lilliefors Significance Correction

Fourth, a multi-collinearity test was performed to ensure the absence of extreme values. Accordingly, tolerance levels and Value Inflation Factors (VIFs) were tested to detect the presence of extreme values. It is recommended that VIF should be close to 1 and less than 10 to avoid multicollinearity (Pallant, 2020). It was revealed that Tolerance values ranged from 0.745 to 0.860, while VIF values ranged from 1.215 to 1.342, indicating that multicollinearity was not a concern. Table 15 below shows the output results of SPSS.

Table 15 - Multicollinearity test

Variables	Collinearity Statistics	
	Tolerance	VIF
Cognitive learning	.745	1.342
Resource management	.823	1.215
Time management	.860	1.163
Student performance	.795	1.258

Source: Field data (2024)

Reliability Test

Finally, a reliability test was conducted to measure the internal consistency of the items, ensuring they measure the same thing (Saunders, 2019). It was revealed that Cronbach's alphas (Table 16) are above .70, suggesting good internal consistency and reliability of the data, which permit further parametric analysis.

Table 16-Reliability test

Predictor	Cronbach's Alpha	N of Items
Cognitive learning	.812	4
Resource management	.871	3
Time management	.750	3
Students' performance	.893	3

Multiple Linear Regression Results

To address the research objective and the underlying hypotheses, a multiple regression analysis was employed. This permitted the prediction of the influence of combined constructs on the theoretical framework. The regression results produced two tables, namely (1) the model summary and (2) the beta coefficients. In this case, Tables 17 and 18 are relevant in explaining the regression outcomes.

Table 17- Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.614[a]	.533	.502	.32214	1.631

a. Predictors: (Constant), Cognitive Learning, resource management, Time management
b. Dependent Variable: Students' Performance

Table 17 above shows an initial summary of the regression model with three predictors (cognitive learning, resource management, and time management) against one DV (student performance). The overall regression value (R) is .614, and the R2 value is .533, adjusted to .502. It means that the predictors explain 53.3% of their relevance on the dependent variable (students' performance), adjusted to 50.2%%. According to Field (2013), R^2 values

between 50% and 70% imply a moderate effect. Hence, we can conclude that the three predictors have an "average" prediction on the student's performance in this sample of respondents. The effect of each variable on the dependent variable is explained in the following table.

Table 18-Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	β		
1	(Constant)	5.651	.487		1.106	.000
	Cog Learning	.316	.074	.234	2.131	.000
	Resourc Magt	.421	.078	.363	2.562	.000
	TimeManagement	.216	.056	.203	1.450	.000

a. Dependent Variable: Students' Performance

Table 18 above presents the regression equation as a concise summary of the unstandardized beta coefficients, which reflect the final regression output. The regression above can be summarised in an equation $\hat{Y} = \alpha + \beta_1 X_{CL} + \beta_2 X_{RM} + \beta_3 X_{TM} + \acute{\varepsilon}$

Where:
$\hat{Y}$ = Students' performance
β = Partial regression coefficients
CL =Cognitive learning
RM = Resource management
TM = Time Management
$\acute{\varepsilon}$ = Error term.
α = Constant

The regression equation indicates that all three predictors are positively related to the dependent variable, and this relationship is statistically significant. If ceteris paribus, when cognitive learning increases by 1, Students' performance (DV) increases by .316. Similarly, a one-unit increase in the other remaining predictors increases the DV, as reflected in Table 18 above. The final regression results are presented as Y = 5.651 + 0.316CL + 0.421RM + 0.216TM + ε. A discussion of each variable follows in the next section.

Table 19- Summary of findings

Learning strategy	Dimension	Mean	Overall
Cognitive learning (CLS)	Rehearsal	4.48	4.25-high
	Organisation	4.12	
	Elaboration	4.08	
	Critical thinking	4.34	
Resource Management (RMS)	Environment	3.72	4.12-high
	Efforts management	4.31	
	Help seeking	4.34	
Time management (TMS)	Short-range plan	3.60	3.65 high
	Time attitude	3.92	
	Long-range plan	3.44	
Pearson Correlation (r)			
Correlation between CLS & RMS		r=.819	p-value=.000
Correlation between RMS & TMS		r=.825	p-value=.000
Correction between TMS &CLS		r=.847	p-value=.000
Regression (R)			
Cognitive learning strategy		β =.316	Accepted
Resource management		β =.421	Accepted
Time management		β =.216	Accepted

DISCUSSION AND CONCLUSION

Cognitive learning strategies and students' performance

To address the first research question, we consider the descriptive statistics, summarised in Table 12 above, and the regression analysis. The first component of the learning strategy was the cognitive strategy (CLS). The findings revealed that the highest mean score was on the rehearsal dimension, at 4.48. These findings are contrary to those reported by Puteh et al. (2022) and Kassim et al. (2023), who found high mean scores for cognitive strategies, suggesting that undergraduate students' ability to manage resources in higher education is challenging, especially when balancing a new learning environment, self-discipline, and cultural expectations. It is argued that postgraduate learners are more mature, and their curriculum requires them to apply knowledge by relating theory to practice, adapting and applying what they have learned across courses with minimal notes (Sheikhbardsiri et al., 2020). Meanwhile, most undergraduate students tend to learn slowly by revising notes as they become familiar with learning strategies in higher education (Díaz et al., 2019; Tran et al., 2019). Additionally, the majority of respondents in this study were first-year students who were nearing the completion of their first year of studies. Henceforth, rehearsal becomes one tool to familiarize oneself with concepts in the new courses and new learning environment. Other learning strategies in the cognitive domain, namely organisation, elaboration, and critical

thinking, scored equally high mean values, suggesting that they are valued by accounting students in this domain. These findings suggest that accounting instructors in higher education should design courses that incorporate a balanced content of Bloom's taxonomy, beginning with small concepts that require rehearsal and progressing to higher levels, including critical thinking.

To confirm the descriptive findings, the regression results, which combined all dimensions, showed a positive sign between cognitive strategy and students' performance. The regression analysis yielded a coefficient (β) value of 0.316 and a t-value of 2.131, which was significant at $p < 0.000$. This result suggests that an increase in cognitive learning among accounting students in online learning may likely result in a 31.6% increase in student performance. In other words, the more students improve their cognitive learning, the more likely they are to increase their performance level. This finding suggests that cognitive learning is one of several factors influencing performance; it is impactful but not dominant for this category of learners. Therefore, interventions should be holistic, combining cognitive strategies with other supports, such as time management and access to resources. Comparative studies in online learning have demonstrated that cognitive learning is essential for enabling learners to complete their learning activities successfully (Puteh et al., 2022). Similarly, the study by Rahmat (2018) revealed that the use of cognitive strategies helps reduce learning difficulties, and Lokman et al. (2021) showed that cognitive learning strategies foster motivation for continuous learning behaviour. These findings suggest the importance of curriculum design authorities in integrating cognitive learning strategies into course materials, such as concept mapping, self-questioning, and summarisation, to enhance students' ability to process and retain information.

Resource management and students' performance

The second learning strategy is resource management, which encompasses environmental, effort management and help-seeking. The Help Seeking dimension was found to have the highest overall mean value of 4.36. These findings suggest that accounting students collectively agree to ask their colleagues for assistance if they do not understand some material in the course of study. These findings are consistent with those of Puteh et al. (2022), who found that help-seeking had the highest mean score among the resource management components. It can be concluded that both undergraduate students pursuing accounting courses and postgraduate students utilise help-seeking as a management tool in their learning to improve their comprehension. This is understandable as a characteristic of learners in the ODL, as they have minimal interactions with course

instructors due to the absence of face-to-face sessions (Mahai, 2020, 2022). Nonetheless, the findings of this study are consistent with those of Diaz et al. (2019), who found that undergraduate students' ability to manage resources in higher education is challenging, especially when balancing a new learning environment, self-discipline, and cultural expectations. This entails balancing the concepts learnt in class with group discussions with peers, especially with more experienced colleagues, to strengthen their understanding and academic success. These strategies not only support academic success but also build a sense of flexibility among ODL learners.

In addressing the second hypothesis, which tested the relationship between resource management and students' performance, the regression results revealed a positive correlation between the two variables. Specifically, the regression formed an unstandardized coefficient (β) value of .421 and a t-value of 2.562, which is much higher than the 1.96 critical region thresholds for a 95% confidence level, producing a p-value of .000. Resource Management has the highest standardized coefficient (β = .421), indicating it has the most significant relative impact. This finding is essential as it highlights the critical role of resources necessary for learning, including technology, mobile phones, various Applications, shareware, and a student's ability to utilise digital platforms for self-learning (Mahai, 2020). Comparable findings were reported by Hederich-Martinez et al. (2020), who suggested that mature learners are effective at resource management, primarily due to their capacity to seek support and influence through collaboration and discussion (Díaz et al., 2019). Recognising that resource management is not just logistical but also cognitive and strategic, students who can organise, access, and apply resources effectively are more likely to succeed in their academic journey.

Time management and students' performance

The findings highlight that short-range planning, time management and long-range planning are vital and well-recognised strategies among accounting students for managing their time effectively. Students demonstrate a strong commitment to short-term planning tasks, such as daily lists and goal setting, which are essential for academic success and personal organisation. It was also revealed that accounting students' moderately value long-range planning, particularly in goal setting and developing proactive study habits. At the same time, organisational behaviours like workspace management and non-exam note review were less emphasised. The data support the conclusion that effective time management contributes significantly to students' learning journeys, enabling them to navigate the complexities of academic life with greater confidence and control (Garcia et al., 2008; Galvis et al., 2025).

However, the moderate scores on deeper planning behaviors in long-range time management suggest an opportunity for further studies on the construct. Moreover, the positive correlations among time management, cognitive learning and resource management suggest that students who excel in one area tend to apply similar techniques and awareness across other dimensions. This insight is especially relevant in blended and online learning environments, where self-regulation and strategic planning are critical to academic success (Sizoo et al., 2003). To further enhance student outcomes, educators and institutions may consider reinforcing long-term planning habits through structured goal-setting exercises, time management workshops, and digital planning tools tailored for distance learning.

Additionally, the regression results revealed a significant positive relationship between time management and students' performance. However, the size of the effect was the smallest compared to the previous two constructs. The coefficient value ($\beta = 0.216$) and a t-test of 1.450, which was significant at $p < 0.000$. This finding showed a positive beta coefficient, indicating that effective time management could partly explain improvements in students' performance in online mode. Time management, categorised into short-range, attitude, and long-range planning, can be a tool to improve students' performance. This is the first time the variable of time management is integrated into learning strategies and tested in adult learning with a special category of learners (accounting students). Galaviz et al. (2025) and Wilson et al. (2021) reported similar results on a positive relationship between time management and students' academic performance.

Conclusion, Implications, and Suggestions for Future Research

The findings from this study affirm that learning strategies are vital in specialised programs, particularly in accounting. Accounting students should be given more exposure to practical learning strategies, as Tanzania is transitioning towards a competence-based curriculum. The findings of this study demonstrate that accounting students' use of cognitive, resource-based, and time-management strategies is significant and that these strategies are interrelated. The findings suggest that curriculum design authorities should integrate cognitive learning strategies into course materials, such as concept mapping, self-questioning, and summarisation, to enhance students' ability to process and retain information. Similarly, based on resource-based management, the findings highlight the importance of instructors encouraging self-directed learning by promoting tools such as task managers and collaborative platforms (e.g., Zoom, Moodle, Google Workspace, and Microsoft Teams). These strategies will foster a culture of digital collaboration, resource sharing, and meaningful discussions. Furthermore, the

findings on the time management dimension suggest that instructors and university management should instill time management skills in students and foster a culture of time management throughout their early career. Although the time management construct showed the smallest effect size among the three predictors, its significance suggests that even modest improvements in time use can yield measurable performance gains. Therefore, instilling a culture of time consciousness in learners early in the academic journey can empower students to flourish, particularly in self-directed online environments.

This study is limited to 86 participants, whose characteristics are specified in the profile section. The study acknowledges this as a limitation that could limit the generalizability of the findings. Future scholars are encouraged to build upon this study by conducting more evidence-based studies with larger sample sizes, thereby enhancing the reliability of the research findings. Similarly, as the literature review shows, various learning strategies can be adopted depending on the learners' group and the intended learning outcomes. Therefore, future studies should explore this area by incorporating additional variables into the conceptual model. This will broaden the understanding of various learning strategies in the specified field. Additionally, future studies can explore the application of more advanced techniques, such as structural equation modelling (SEM). Indeed, the time management questionnaire and the learning strategy questionnaire by Wenden and Rubin (1987) have multi-dimensional indicators that SEM can handle well, enabling the simultaneous examination of many constructs. The use of SEM will therefore enhance understanding of each construct and provide more robust generalisation, while testing the interaction effects of respondents' characteristics to further the discussion in this area.

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