Examining Leadership and Management of Digital Student Services in Higher Learning Institutions: A Case of the Open University of Tanzania

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Abstract
This study examined students' experiences with Digital Student Services (DSS) and explored the leadership strategies used by staff responsible for day-to-day management of these services at the Open University of Tanzania (OUT), focusing on one regional centre. Using a mixed-methods approach, data were collected from 300 students via structured questionnaires and from five key staff members via semi-structured interviews. Quantitative data were analysed using descriptive statistics, while qualitative data underwent thematic analysis. Findings revealed that students frequently interacted with multiple digital platforms, including Moodle, SARIS, and ARMIS, indicating widespread adoption of DSS. However, variations in usage patterns highlighted inconsistencies in accessibility, user experience, and system responsiveness. Students noted challenges, including delayed updates, limited technical support, and interoperability issues with the platform. On the leadership side, the study found that staff employed several adaptive strategies, including proactive technical support, decentralisation of ICT personnel, and training initiatives to improve system functionality and user competence. These strategies aligned with distributed leadership theory and emphasised collaborative problem-solving and resource allocation. The study concludes that while OUT has made significant strides in digital service provision, gaps in system integration and responsiveness remain. It recommends strengthening inter-platform interoperability, increasing user support services, and enhancing staff capacity through continuous professional development. Overall, the findings contribute to ongoing efforts to improve the governance and delivery of digital student services in open and distance learning contexts.

Keywords: *Digital Student Services (DSS), Leadership and Management, Higher Learning Institutions (HLIs), Open and Distance Learning (ODL), Student Experience, Operational Leadership, Resource-Constrained Contexts*

Introduction

The global higher education landscape is undergoing unprecedented digital transformation, largely driven by rapid technological innovation and evolving demands for accessible, student-centred learning (Aithal & Maiya, 2023; Bakar, 2021). This accelerating pace necessitates technological upgrades and decisive leadership, and adaptive management within higher learning institutions. Institutional leaders are now expected to develop innovative governance frameworks that align educational delivery with contemporary technological demands, ensuring broad accessibility to both academic resources and administrative services (Adole, 2024). A critical component of this transformation is the implementation of Digital Student Services (DSS), integrated platforms that support functions such as admissions, registration, learning management, communication, and student support. DSS have become central to enhancing institutional competitiveness, boosting student engagement, and improving academic success (Levin, 2024; Salhab & Daher, 2023). According to Syed *et al.* (2021), institutions that fail to deliver substantive value through digital integration risk operational inefficiency and eventual obsolescence.

The imperative for digital transformation is particularly significant for Open and Distance Learning (ODL) institutions such as the Open University of Tanzania (OUT). Given their dispersed student populations and commitment to accessibility, ODL models inherently rely on vigorous DSS to overcome geographical limitations and support non-traditional learners (Levin, 2024; Munna & Kalam, 2021). For the OUT in particular, DSS functions as the primary institutional interface for students, making their efficacy fundamental to the university's mission fulfilment (Taliento, 2022). In such contexts, digital infrastructure is not a supplementary element but a foundational pillar of educational service delivery. These demands are deliberate and integration of technology to optimise pedagogical outcomes and maintain relevance in a rapidly digitising educational landscape (Schmidt & Tang, 2020). Further, it is argued that advances in digital technology have created opportunities to deliver education and training through various modes, including distance and open learning (Ndibalema, 2025).

Despite the global shift toward digital education, higher education institutions in resource-constrained African contexts, such as Tanzania, face significant challenges in implementing DSS. Among the most pressing are infrastructural deficits, including unreliable internet connectivity, inconsistent electricity supply, and inadequate access to essential hardware, particularly in rural regions (Sotery, 2023; Nsama *et al.*, 202). Additionally, digital literacy gaps persist among both students and staff, leading to uneven usage and competence (Ndibalema, 2025; Barasa, 2021). Fragmented user experiences, often the

result of poorly designed or unintuitive digital platforms, further hinder effective engagement (Hameed *et al.*, 2025). Compounding these issues results in disconnected services and hinders data flow, reducing the efficiency and coherence of student service delivery (Yusuf & Ibrahim, 2024). Finally, sustainability remains a critical concern, as many institutions face financial constraints that limit their ability to scale and maintain digital service initiatives (Mohamed *et al.*, 2022).

To overcome the multifaceted challenges associated with digital student services (DSS), effective leadership and management are essential. Institutional leaders must navigate complex socio-technical environments by articulating clear digital visions, cultivating adaptive institutional cultures, and strategically allocating limited resources (Thomas, 2024). Adopting flexible strategies and transformation models, such as the Higher Education Digital Capability (HEDC) Framework, can facilitate the development of inclusive, student-centred digital ecosystems (Ahmad, 2024). Despite growing interest in digital governance, three key research gaps remain, particularly within the context of African open and distance learning (ODL) institutions. First, there is a contextual gap, as most existing studies focus on traditional universities in the Global North and provide limited empirical evidence from African ODL settings, such as the Open University of Tanzania (Mtombeni, 2020). Second, an operational leadership gap persists in which research tends to emphasise top university management while overlooking the practical strategies used by mid-level staff at the grassroots who are directly involved in day-to-day DSS management. Third, there is a disconnect in perspective, as student experiences, despite being central to service effectiveness, are rarely incorporated into leadership and management discourse. This study sought to address these gaps by (1) assessing students lived experiences with DSS and (2) exploring the leadership strategies employed by frontline administrative staff responsible for managing these services at OUT.

The Open University of Tanzania

This study positions itself to address these gaps by focusing on The Open University of Tanzania, Tanzania's flagship ODL institution, within the broader context of pan-African DSS implementation challenges. Based on enrolment statistics, the OUT is one of the largest institutions of higher learning in Tanzania. It serves a diverse and substantial student population across multiple academic levels. The university had an estimated total of 80,533 students on the record by June 2024. Among the active students who registered in 2023/2024, 16,885 were registered, leaving 63,648 unregistered. Additionally, the institution offers a comprehensive array of 133 academic programmes, underscoring its significant role in shaping Tanzania's higher education sector. Notably, the university's reach extends across 30 operational

centres in the United Republic of Tanzania. There are also institutions outside the country which assist in coordinating university activities in those countries; these include centres in Kenya, Uganda, Namibia, Ethiopia and Ghana (OUT, 2024).

Digital Student Services at the Open University of Tanzania

The OUT has established an integrated digital ecosystem to support its geographically dispersed student population (Tsindoli, 2025). Central to this infrastructure is Moodle, the university's e-learning platform, which facilitates online course delivery, discussions, assignment submissions, seminars, and access to lecture materials. Complementing this are mission-critical administrative systems, including the Student Academic Record Information System (SARIS) and the Academic and Registration Management Information System (ARMIS) for academic records; the Online Registration and Examination System (OREX) for exam scheduling and results; the E-Application for admissions; and dedicated email services for institutional communication.

Students further leverage mobile accessibility (via the OUTLeMs Android and Moodle Mobile iOS apps), online library resources, and specialised portals like the Postgraduate Information Management System (PGIMS) and HIV/AIDS information platforms. Institutional support is coordinated through the Institute of Educational and Management Technologies (IEMT), which provides ICT troubleshooting, network management and system maintenance. Collectively, these services represent OUT's strategic commitment to digital transformation in open and distance learning (ODL). However, their effectiveness hinges on consistent leadership oversight and adaptive management, particularly during high-demand periods such as examinations, when system reliability and user experience are paramount.

Learning at the Open University of Tanzania

The OUT anchors its operations with a vision of becoming a leading open online University in knowledge creation and application. Its mission is to deliver relevant, high-quality, flexible, accessible, and affordable open online education, research, and services for Tanzania's socioeconomic development and global impact. To operationalise these goals, the university employs a blended learning model integrating Asynchronous self-paced learning (printed modules, Moodle-based e-learning resources), synchronous engagements (Zoom-based virtual lectures/physical tutorials), and collaborative forums (regionally diverse student discussion groups via Zoom or in-person). This pedagogical framework prioritises learner agency, allowing students to customise their educational pathways while ensuring comprehensive course coverage through digitally archived lectures. Moodle,

OUT's open-source Learning Management System (LMS), serves as the central hub for resource distribution, assessment, and multimodal interaction. This study investigates students' experiences with digital student services (DSS) during high-stakes examinations held in June 2025, alongside the operational leadership strategies employed by key frontline administrators, namely DRCs, IT Officers, and Admission Officers. In doing so, it addresses the previously outlined tripartite research gap by integrating student perspectives, operational realities, and contextual relevance. Additionally, the study seeks to model sustainable educational management by examining how inputs, processes, and outputs are overseen in DSS implementation (Iwogbe *et al.*, 2020). This dual focus advances both theoretical understanding and the practical application of digital transformation in open and distance learning (ODL) contexts, particularly in resource-limited settings.

National Policy Context

Tanzania's National Digital Education Strategy (2024/25–2029/30) underscores a transformation of HLIs, emphasising institutional digitisation, the adoption of blended learning, and administrative efficiency (URT, 2024). Anchored by the Tanzania Commission for Universities' (TCU) 2022 Guidelines for Online and Blended Delivery Modes, the strategy prioritises scalable digital content development and ICT programme expansion, evidenced by 161 accredited ICT courses and a fourfold increase in ICT graduates since 2016. Complementing this, the National ICT Policy (URT, 2023) mandates the integration of digital skills into formal education and the deployment of ICT solutions across teaching, learning, and administrative functions (URT, 2023). The OUT, as a pioneer of distance learning, operationalises these national directives through its digital student services (DSS), including Moodle-based e-learning, OREX exam management, and SARIS and ARMIS academic records. This study directly interrogates the implementation efficacy of these policies at OUT. By evaluating leadership strategies, institutional preparedness, and student experiences in DSS delivery, the research addresses a critical gap: whether national digitisation aspirations translate into equitable, well-managed services. Findings will reveal how OUT's practices align with (or diverge from) TCU's blended learning guidelines and the ICT Policy's emphasis on the effective use of technology, providing evidence to refine Tanzania's HLI accountability frameworks.

Methodology

Research Philosophy and Approach

The study adopts a pragmatic research philosophy, prioritising the research problem and enabling the use of methods best suited to address each specific objective. Consequently, a mixed-method approach was employed. Quantitative data (mainly addressing objective 1) and qualitative data

(addressing objective 2) were collected concurrently during the June 2025 annual examination period at the Dodoma Regional Centre. These datasets were analysed separately and their findings subsequently integrated during the interpretation phase to provide a comprehensive understanding of the interplay between student experiences and leadership/management practices.

Cite selection and justification

Dodoma Regional Centre was selected as the site for this case study for several reasons. Methodologically, as the third-largest centre by enrolment (768 undergraduates in 2023/24), it provides a sufficiently large population for robust quantitative sampling and enhances the potential generalizability of the findings. In practice, the concentration of students during the June 2025 examination period enabled feasible data collection. Furthermore, its location in Tanzania's capital city marks it as a strategic and symbolically important site, likely to be at the forefront of digital service implementation. This combination of factors ensures the research is both methodologically sound and contextually relevant. Furthermore, selecting a single regional centre is a deliberate, methodologically sound choice aligned with the principles of qualitative and mixed-methods case study research, as described by Guetterman and Fetters (2018).

Study Population and Sampling

The study targets two distinct populations integral to DSS at the Dodoma Centre. The first population comprises students registered to sit for their annual examinations at the Dodoma Regional Centre in June 2025. A stratified random sampling technique was used for this group. Students were stratified by their programme to ensure representation across the academic offerings. A random sample was then drawn from each stratum, aiming for a target sample size of approximately 300-350 students. This size balances feasibility during the exam period, expected response rates, and the need for vigorous quantitative analysis. The second population consisted of administrative staff holding direct responsibility for the day-to-day leadership and management of DSS at the Dodoma Centre. This includes the Director of the Regional Centre (DRC), IT Officers, and Admission Officers, as they are pivotal in overseeing core digital services. Purposive sampling was used to identify and recruit these key informants, targeting approximately 5 participants to ensure a saturation of perspectives on leadership strategies and management challenges.

Data Collection Methods

The questionnaire used in this study was structured into three parts. The first part collected demographic information from respondents, including variables such as age, year of study, programme of study, and ratings of digital literacy. The second part focused on respondents' use and experiences with digital

student services and included closed-ended items designed to capture the frequency and patterns of use. The final part of the questionnaire included open-ended questions that allowed respondents to offer more detailed, personal reflections on their challenges and suggestions for digital services. The questionnaires were distributed in person at the Dodoma regional centre during the June 2025 examination period, leveraging the concentration of students in designated areas before and after exam sessions. Objective 2 (Explore Leadership Strategies) was addressed through semi-structured interviews with the purposively sampled administrative staff. An interview guide with open-ended questions and probes facilitated in-depth discussions covering themes such as roles and responsibilities, perceived strengths and weaknesses of current DSS, strategic vision and planning, decision-making processes, resource management, staff training, student communication and feedback mechanisms, challenges faced, and strategies for improvement and future development. These interviews were conducted face-to-face during the physical visits to every respondent, and respondents were met in their natural settings (i.e., offices) while exercising their duties. The interviews typically lasted between 30 and 45 minutes.

Data Analysis

Data analysis reflected the mixed-method approach. Quantitative data from the student questionnaires were cleaned, coded, and analysed using SPSS software. Descriptive statistics, particularly frequencies and percentages, were summarised for student demographics and their experiences across various DSS dimensions. Qualitative responses from the open-ended section were analysed thematically. Qualitative data from the staff interviews were transcribed verbatim. Thematic analysis, following the steps outlined by Braun and Clarke (familiarisation, generating initial codes, searching for themes, reviewing themes, defining/naming themes, producing the report) (Braun & Clarke, 2022), was applied to identify key patterns, strategies, challenges, and insights related to DSS leadership and management. This involved comparing, contrasting, and synthesising the quantitative patterns of student experience with qualitative insights into leadership strategies and management contexts to develop a holistic understanding addressing the overarching research aim.

Validity, Reliability, and Trustworthiness

Rigour in this study was ensured through a combination of methodological and procedural strategies appropriate to the quantitative and qualitative components. For the quantitative strand, the questionnaire's content validity was established through a careful review of relevant literature, ensuring that the instrument adequately captured key constructs related to digital student services. In the qualitative component, trustworthiness was addressed using multiple strategies. Credibility was enhanced through prolonged engagement

during data collection, the potential use of member checking with key staff informants, and triangulation by comparing staff perspectives with student data to verify consistency and depth of understanding. Transferability was supported by providing detailed, context-rich descriptions of the research setting, participants, and procedures, enabling readers to assess the applicability of the findings to similar contexts. Confirmability was strengthened by the researcher's reflexivity, particularly in acknowledging positionality as an OUT-staff member, and by peer debriefing sessions that challenged interpretations and supported analytical transparency. Importantly, the use of a mixed-method design further enhanced the study's validity by enabling methodological triangulation.

Ethical Considerations

The study strictly adhered to ethical principles. A research clearance letter for data collection was obtained from the Open University of Tanzania on May 26, 2025, with the reference number OUT/DRPI/Staff No. 70/2025. Informed written consent was obtained from all participants (students and staff) after a clear explanation of the research purpose, procedures, potential risks/benefits, confidentiality measures, and their right to withdraw at any time without penalty. Confidentiality and anonymity are paramount: student questionnaires were anonymous and collected no personally identifiable information. Staff interview data was anonymised during transcription and reporting, using codes or pseudonyms instead of real names or specific titles where necessary to protect identities; all raw data (transcripts and questionnaires) was stored securely on password-protected and encrypted devices. Data was used solely for this research and potential academic publication. Care was taken to minimise disruption to students during their critical examination period.

Limitations

The study acknowledges some limitations. As the study focused on one Regional Centre during a specific timeframe (June 2025), the findings possess highly contextual richness but limited generalisability to other Higher Learning Institutions (HLIs) or even other OUT centres without further research; however, the insights were valuable for similar contexts. The data represents a snapshot in time, and DSS experiences or leadership strategies may evolve. Both data sources rely on self-reported information (student perceptions, staff perspectives), which may be subject to recall or social desirability bias. The researcher's position as an OUT-staff member introduces potential positionality bias, mitigated through reflexivity, rigorous methodology, and triangulation. While the purposive staff sample aims for depth and saturation, its small size limits the broad generalisation of leadership perspectives.

Findings And Discussion

This section presents and discusses the findings of the study about the two specific objectives: (1) to assess students' experiences with digital student services (DSS) at the Open University of Tanzania, and (2) to explore leadership strategies employed by staff responsible for the day-to-day management of DSS. The presentation begins with the respondents' demographic characteristics, followed by an integrated discussion of the quantitative and qualitative findings, interpreted in light of relevant literature.

Demographic Characteristics of Respondents

A total of 300 students at the Open University of Tanzania (OUT) completed the Digital Student Services Survey. Table 1 summarises the demographic characteristics of the respondents, including their programme of study, year of study, age range, and self-reported digital literacy.

Table 1:
Frequency Distribution of Student Characteristics (n = 300)

Variable	Category	Frequency	Percent
Programme of Study	Foundation	44	14.7
	Certificate	9	3
	Diploma	50	16.7
	Bachelor	165	55
	Masters	28	9.3
	PhD	4	1.3
Year of Study	Year 1	94	31.3
	Year 2	114	38
	Year 3	63	21
	Year 4+	29	9.7
Age Range	18–25	35	11.7
	26–35	124	41.3
	36–45	101	33.7
	46+	40	13.3
Digital Literacy	Beginner	83	27.7
	Intermediate	125	41.7
	Advanced	92	30.7

The demographic profile of the survey respondents provides critical insights into the student population engaging with the OUT's digital student services, informing leadership and management strategies for these services. As shown in Table 1, a majority of the respondents were Bachelor's students (55.0%), with a significant proportion in their second year of study (38.0%). This indicates that digital student services, such as Moodle, SARIS, and ARMIS,

must be designed primarily to support undergraduate learners at the early to middle stages of their academic journey. This pattern likely reflects broader enrolment trends in open and distance learning (ODL) institutions, where undergraduate programmes account for the bulk of student enrolments (Carvalhaes *et al.*, 2023).

The age distribution of respondents, 41.3% aged 26–35 and 33.7% aged 36–45, indicates a predominantly mature student population, likely consisting of working adults balancing professional, academic, and family responsibilities (Smith, 2023). This demographic tends to value flexibility and convenience, making accessible digital services essential. Features such as 24/7 access to course materials, online examination registration, and streamlined fee payment systems are especially critical for supporting their learning needs in an open and distance learning (ODL) environment.

The distribution of digital literacy levels, 27.7% of students identifying as beginners and 41.7% as having intermediate skills, reveals that a substantial segment of the student population may face difficulties navigating complex digital platforms. This presents a leadership and management challenge in designing digital student services that are both user-friendly and inclusive for individuals with limited technical proficiency (Madhubhashini, 2022). For instance, platforms such as the student portal may require simplified interfaces and the integration of targeted training resources to support these users effectively.

Findings on Students' Experience with Digital Student Services

This section presents findings related to the first objective of the study, which was to assess students' experiences with digital student services (DSS) at the Open University of Tanzania. To address this objective, students responded to four key areas: (i) identifying the digital services they used during the current academic year, (ii) indicating their level of agreement with statements concerning the quality and effectiveness of these services, (iii) outlining the main challenges they encountered when accessing or using DSS, and (iv) suggesting possible solutions to improve digital service delivery at the university.

The analysis captures students' interactions with key platforms, including Moodle, SARIS, ARMIS, and the university's student portal. These services included student registration, examination registration, fee payment, access to course materials, and viewing of academic results. The responses provide a comprehensive overview of the university's digital service infrastructure, including its strengths and limitations. The summary of these findings is presented in Table 2.

Table 2:
Usage of Digital Student Services (N = 298)

Digital Service	Responses (N)	Per cent of Responses	Per cent of Cases
Course registration	219	19.5	73.5%
Exam registration	241	21.4	80.9%
Fee payment	210	18.7	70.5%
Accessing course materials	260	23.1	87.2%
Checking results	194	17.3	65.1%
Total	1124	100.0	377.2%

The data in Table 2 indicates that accessing course materials was the most frequently used digital service, with 260 responses (23.1%) and 87.2% of students reporting usage. This was followed by exam registration (241 responses; 21.4%) and course (studentship) registration (219 responses; 19.5%), used by 80.9% and 73.5% of respondents, respectively. Fee payment services were accessed by 70.5% of students, while checking results was the least used service, accounting for just 17.3% of responses and 65.1% of respondents.

These findings underscore a strong reliance by students on digital platforms for core academic processes, particularly access to learning resources and registration services, which aligns with the central role of these functions in open and distance learning (ODL) settings (Alenezi, 2024; Mejeh & Rehm, 2024). The predominance of course material access suggests that students view the digital ecosystem as integral to their academic success, reinforcing arguments by Chen and Wen (2024) that effective digital content delivery remains the backbone of learner support in ODL institutions.

However, the relatively low use of digital platforms for fee payments and checking academic results raises questions about the accessibility, usability, and perceived reliability of these services. As noted by Al-Mamary (2022), low engagement with administrative digital services often signals challenges in system design, a lack of user orientation, or the presence of alternative service channels outside the digital system. At the Open University of Tanzania, some students may still rely on offline methods for fee payments (e.g., bank deposits or mobile money) or access academic results through informal communication channels, reducing the perceived need to use official digital portals.

Moreover, the high usage rates of exam registration (80.9%) and student registration (73.5%) highlight that administrative functions are a substantial part of students' digital interactions. This affirms previous studies by Sule (2024), who argues that well-functioning academic registration systems are critical to student satisfaction and institutional credibility. These services, especially when accessed by large cohorts during peak periods, require robust

infrastructure, user-friendly interfaces, and timely support mechanisms to reduce system errors and delays (Cuéllar *et al.*, 2025).

The comparatively lower engagement with fee payment (70.5%) and result-checking services (65.1%) may also reflect structural barriers, such as limited digital literacy, connectivity issues, or irregular service updates. As highlighted by Madhubhashini (2022), ensuring the usability of student portals for all proficiency levels is essential in preventing digital exclusion. Leadership must therefore adopt a student-centred approach to service design, incorporating regular feedback loops, simplified user interfaces, and support tools such as tutorials or live help desks (Gottschalk & Weise, 2023).

These findings have important implications for the leadership and management of digital student services at OUT. The high average usage (3.77 services per student) indicates a strong reliance on multiple platforms, underscoring the need for integrated, interoperable systems. Effective leadership must ensure that platforms such as Moodle, SARIS, and ARMIS work cohesively to streamline the user experience (Ngulube & Ncube, 2025).

The uneven usage across services suggests that management should strategically allocate resources, prioritising improvements in high-demand areas, such as course material access, while addressing barriers in underused services, such as result checking (Ikwuanusi *et al.*, 2022). This requires data-driven decision-making, user feedback mechanisms, and a commitment to inclusive digital design (Chigbu & Makapela, 2025). Ultimately, enhancing digital service delivery at OUT will depend on leadership that is both adaptive and student-centred, capable of aligning technology, institutional priorities, and the realities of distance learners.

Students' Experiences with Digital Student Services

To gain a deeper understanding of how students interact with DSS at the Open University of Tanzania, respondents were asked to share their experiences across a range of service-related dimensions. This included accessibility, user-friendliness, reliability, responsiveness to support systems, and overall satisfaction with the digital platforms used for academic and administrative purposes. The purpose of this inquiry was to assess the extent to which these services meet student needs, especially during critical academic processes such as registration, coursework submission, and examination access. A summary of the responses is presented in Table 3.

Table 3:
Satisfaction with OUT's Digital Services (n = 300)

Statement	Response	Frequency	Percent
Digital services (e.g. registration, exams) are easy to access	Strongly Disagree	10	3.3
	Disagree	24	8
	Neutral	49	16.3
	Agree	114	38
	Strongly Agree	103	34.3
The platforms (website, student portal) are user-friendly and easy to navigate	Strongly Disagree	9	3
	Disagree	23	7.7
	Neutral	59	19.7
	Agree	113	37.7
	Strongly Agree	96	32
Technical support (e.g. helpline, email) is available when I encounter problems.	Strongly Disagree	9	3
	Disagree	46	15.3
	Neutral	79	26.3
	Agree	102	34
	Strongly Agree	63	21
I received timely confirmations after completing transactions (e.g. exam registration, payments)	Strongly Disagree	9	3
	Disagree	25	8.3
	Neutral	56	18.7
	Agree	89	29.7
	Strongly Agree	121	40.3
Overall, I am satisfied with OUT's digital student services.	Strongly Disagree	12	4
	Disagree	29	9.7
	Neutral	51	17
	Agree	102	34
	Strongly Agree	106	35.3

The findings presented in Table 3 offer important insights into students' interactions with the Open University of Tanzania's (OUT) digital student services (DSS), revealing both operational strengths and critical gaps in leadership and service delivery. These insights have implications for improving digital service design, enhancing student engagement, and promoting equitable access in open and distance learning (ODL) environments.

Strengths in Transactional Efficiency and Platform Accessibility

A notable strength emerged in transactional feedback, with 70.0% of students agreeing or strongly agreeing that they received timely confirmations for key processes such as exam registration and fee payment ($M \approx 3.96$). This suggests that OUT has established effective systems for managing routine

administrative functions, contributing to reliability and trust in digital transactions. Such efficiency reflects robust digital leadership and managerial oversight, which are vital in ensuring continuity and credibility of services in ODL institutions (Mapolisa, 2022). According to Suazo-Galdamés and Chaple-Gil (2025), timely feedback mechanisms are foundational for student satisfaction and operational excellence in digital education systems.

Likewise, students reported favourable experiences with system accessibility (72.3% positive, M ≈ 3.92) and platform user-friendliness (69.7% positive, M ≈ 3.88). These findings indicate that platforms such as Moodle, SARIS, and ARMIS are generally navigable and support students' academic needs. High usage rates for services such as accessing course materials (87.2%) and exam registration (80.9%) further corroborate these perceptions. As emphasised by Vlasenko *et al.* (2023), intuitive platform design and consistent access are vital for supporting student learning in digital environments. In the context of ODL, where learner autonomy is critical, seamless access to digital tools can enhance student engagement and academic persistence.

However, despite these positive trends, a closer look reveals underlying challenges. For example, 11.3% of respondents expressed dissatisfaction with ease of access, and 10.7% reported that the platforms were not user-friendly. These issues appear to disproportionately affect students with low digital literacy, notably, 27.7% of the sample self-identified as beginners. This subgroup may struggle with platform navigation or complex interface elements, highlighting a digital divide that could undermine inclusive access. As noted by Amjad *et al.* (2024), digital equity in higher education demands that platforms cater to users with diverse levels of technological proficiency. OUT's leadership should therefore consider user-centred design and universal usability principles to ensure that all students, regardless of digital background, can effectively utilise DSS platforms.

Gaps in Technical Support Services

The data show that technical support availability received relatively favourable ratings, with 55.0% of students expressing satisfaction (M ≈ 3.55), and only 18.3% indicating dissatisfaction. These results suggest that, overall, students perceive OUT's digital support services as adequate, particularly considering the high engagement with digital platforms, with an average of 3.77 services used per respondent. This reflects positively on the university's efforts to maintain essential user support mechanisms within its digital service infrastructure.

However, while the majority expressed satisfaction, the data also indicate room for improvement. A significant proportion of respondents (approximately

27%) neither agreed nor disagreed, possibly reflecting inconsistent experiences with support services. As Yu (2022) highlights, consistent and accessible technical support is vital for student success in digital learning environments, especially for students with limited digital proficiency.

To build on existing strengths, institutional leaders should adopt a proactive approach to support enhancement, focusing on increasing responsiveness, expanding service hours, and offering tiered support for users with different needs. Innovative solutions, such as AI-powered chatbots for routine queries or peer-support forums, as recommended by Malviya and Rajput (2025), could further improve user experience and reduce system bottlenecks. Ensuring dependable technical assistance not only strengthens system usability but also reinforces student confidence and engagement with digital learning tools.

Overall Satisfaction and Implications for Inclusive Leadership

Overall satisfaction with DSS was relatively high, with 69.3% of students reporting a positive experience ($M \approx 3.87$). However, the 13.7% who expressed dissatisfaction suggest that certain service gaps persist. These findings underscore the importance of adaptive and inclusive leadership that can address diverse student needs. A deeper analysis of the demographic data reveals that a large proportion of students fall into mature age groups (41.3% aged 26–35, and 33.7% aged 36–45), who may have different digital expectations or challenges compared to younger cohorts.

Leadership must therefore adopt differentiated management strategies, including targeted digital literacy training for beginners, while also maintaining advanced features for more digitally competent users (30.7% advanced). According to Alenezi *et al.* (2023), a blended, personalised approach to service delivery is essential in digital higher education to enhance relevance and usability for diverse learner groups. Moreover, transformational leadership, as advocated by Assefa and Mujtaba (2025), is important for motivating both staff and students to embrace digital change, while ensuring that support systems are responsive, inclusive, and student-centred.

Challenges With Digital Student Services

The qualitative data from Question 11, in which the respondents were asked to identify the most challenging issue they faced with the OUT digital services. The findings are shown in Figure 1.

Figure 1:
Most Challenging Issues with Digital Student Services (N = 300)

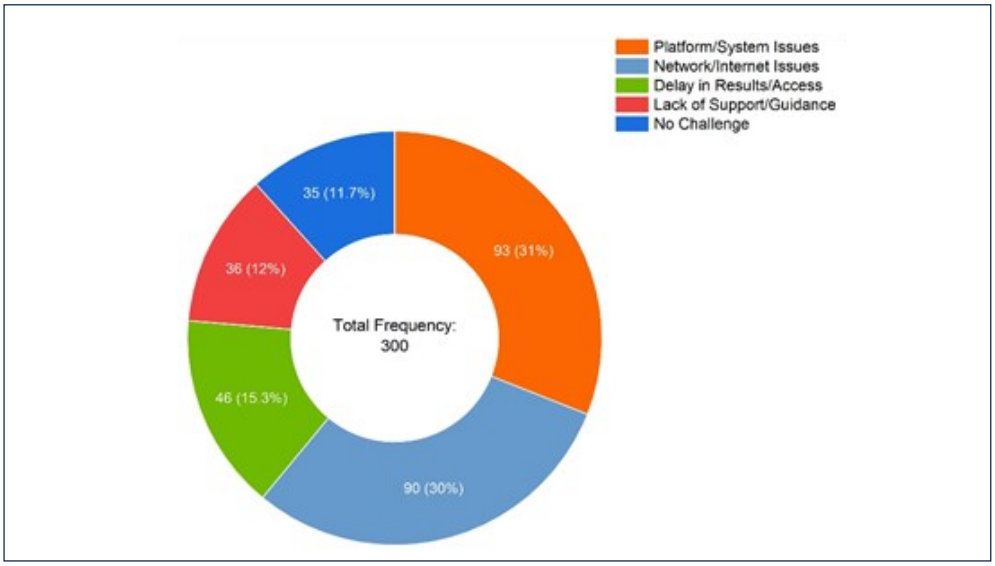

Figure 1 reveals that platform/system issues were the most frequently reported challenge (31.0%), suggesting persistent technical problems such as slow performance, bugs, or complex navigation, especially in systems like Moodle, SARIS, and ARMIS. This finding is consistent with the satisfaction rating for platform user-friendliness ($M \approx 3.88$), where a notable 10.7% of students expressed dissatisfaction. Such challenges may disproportionately affect 27.7% of students with beginner-level digital literacy, underscoring what Yaşara and Sarıtaş (2024) term the "second-level digital divide", where access exists, but usability remains a barrier.

Delays in accessing examination results (15.3%) point to inefficiencies in academic data flow and digital responsiveness. This is particularly problematic given that only 65.1% of students reported using the results-checking service. While services like fee and exam registration received high ratings ($M \approx 3.96$), the lag in results undermines students' ability to make timely academic decisions. As Berezi (2025) argues, timely feedback is a pillar of effective digital learning environments; hence, administrative or technical delays here are not merely procedural; they impact academic outcomes.

The lack of technical support or user guidance, reported by 12.0% of students, mirrors the low satisfaction with support availability (55.0%, $M \approx 3.55$). This deficiency is critical for students with beginner or intermediate digital skills, who make up the majority (69.4%) of respondents. Without sufficient support structures, these students risk digital exclusion, which Mutisya and Makokha (2021) warn can lead to reduced academic engagement and increased attrition

in e-learning settings. In this context, leadership needs to rethink support models, including proactive onboarding, live chat help, and user-centred platform improvements.

Notably, 11.7% of students reported no challenges, likely due to stronger digital skills, reflected in the 30.7% with advanced literacy. However, this should not lead to complacency. As Memon and Memon (2025) emphasise, equity in digital environments depends not just on access but also on adaptive support and design that cater to diverse user abilities.

These findings call for strategic leadership that goes beyond infrastructure provision to ensure platform reliability, user-centric design, and inclusive technical support systems. Without this, OUT's digital transformation risks leaving behind a segment of its student population.

Leadership Strategies for Managing Digital Student Services

This section presents the findings, analysis, and discussion related to the second objective of the study: to explore the leadership strategies employed to manage digital student services at the Open University of Tanzania (OUT), particularly at the Dodoma Regional Centre. Data were gathered through semi-structured interviews with five staff members, including administrative officers and the Director of the Regional Centre, all of whom are directly involved in the delivery and oversight of digital student services.

The findings reveal that leadership at the Centre employs both formal and informal strategies to manage digital student services effectively. These include system monitoring, informal communication through digital platforms, direct student support, staff redeployment, escalation of unresolved issues to higher authorities, and active collaboration with technical teams. The section is structured into thematic subsections that highlight time-consuming service demands, common student complaints, leadership responses, and institutional resource strategies.

Time-Consuming Digital Tasks During Exam Periods

Respondents reported that tasks related to student exam registration, payment procedures, and control number generation consumed the most time during examination periods. One administrator explained:

> *During exam periods, the tasks that consume most of my time include managing student exam registration and issuing control numbers. A major reason is that many students skip the orientation programme and lack digital literacy. They often get confused when systems change or face challenges using platforms like SARIS and ARMIS.*

This finding aligns with transformational leadership theory, particularly the role of individualised consideration, in which leaders must attend to students' specific needs (Sliwka *et al.*, 2024). Transformational leadership for deeper learning: shaping innovative school practices for enhanced learning. Instead of relying solely on system efficiency, staff step in to offer one-on-one support, often at the expense of other responsibilities.

Student Complaints on Digital Student Services

Three common categories of complaints emerged:

i) System failures, especially with ARMIS, where students struggle to generate control numbers.
ii) Missing or delayed result uploads, particularly on SARIS.
iii) Non-intuitive platform design, resulting in a heavy reliance on Centre staff for basic digital tasks.

An administrator noted:

> *Many students visit the centre for help with course registration and control numbers, even though these services are meant to be accessed online. This reflects how non-user-friendly the systems are.*

This suggests that, though technically available, digital student services are not entirely accessible in practice. The Technology Acceptance Model (TAM) (Ozil, 2025) can help explain this gap. If users perceive the systems as difficult to use, they will be less likely to adopt them independently, increasing the administrative burden and leading to the underutilisation of digital platforms.

Leadership Strategies to Address Digital Challenges

The staff revealed a mix of formal escalation protocols and creative and informal practices to overcome challenges:

Escalation to HQ and ICT departments

One admin said:

> *When I encounter problems outside my control, especially technical ones, I report them to the central ICT support team or the relevant departments at HQ.*

Informal communication through WhatsApp

> *I use WhatsApp to send students instructions on how to resolve system issues. I prepare step-by-step messages that can help them without having to come to the office.*

Account log-ins for student assistance

> *Sometimes, I log into students' accounts to make corrections or complete registrations when they cannot do it themselves.*

Use of personal resources

> *When the university's internet is down, I use my data to serve students to avoid delays.*

These practices demonstrate adaptive leadership (Sott & Bender, 2025), in which Centre staff go beyond standard procedures to address student challenges in real time. While such flexibility helps students, it also signals systemic gaps in user orientation and training.

Institutional Leadership and Support

The Director of the Regional Centre (DRC) provided insights into how the university's top leadership supports the Centre's digital services. He noted:

> *OUT prioritises digital student services. We now have stable internet connectivity, paid through university contracts, and two ICT officers to support staff and students.*

The DRC further elaborated on steps taken during digital service failures:

> *We respond quickly when systems are down, especially during registration periods. If the issue can't be handled by local ICT staff, we escalate it to the IEMT team at headquarters. Sometimes, our staff work beyond normal hours to ensure everything runs smoothly.*

The deployment of an additional ICT officer reflects strategic capacity-building, a hallmark of effective managerial leadership (Kawure *et al.*, 2025). This also resonates with distributed leadership theory, which emphasises the importance of redistributing resources and providing support across roles to enhance institutional performance.

A Leadership Commitment

The DRC emphasised that university management is responsive to student complaints, especially regarding access to digital platforms such as MOODLE and SARIS. He stated:

> *While we used to experience more system failures, the situation has improved. The technical team monitors the systems and even responds outside working hours, demonstrating management's commitment.*

This approach aligns with the principles of servant leadership, in which leaders prioritise the needs of service users and students, in this case, above their own convenience (Maloles, 2024). It also highlights a transition from reactive to proactive leadership in digital service governance.

Despite persistent student complaints, the leadership strategies in place have significantly mitigated service disruptions. However, the frequent reliance on informal strategies and personal interventions suggests that formal system

enhancements (e.g., better user training and system interface improvements) are still needed to reduce reliance on Centre staff.

These results support previous studies on digital governance in higher education (Doğan & Arslan, 2025; Fernández *et al.*, 2023), which emphasise the need for user-centred design, leadership agility, and capacity investment to enhance the functionality and uptake of digital student services in African universities.

Conclusions

From the findings, it is evident that while DSS platforms such as SARIS, MOODLE, and ARMIS are widely used and moderately well received by students, notable challenges persist. These include platform/system-related issues, delays in accessing academic results, and insufficient technical support, particularly affecting students with beginner to intermediate levels of digital literacy. Despite general satisfaction with core services like course registration and exam payments, usability barriers continue to limit equitable access and user satisfaction.

On the leadership side, the study revealed that staff responsible for DSS have adopted various strategies to mitigate challenges and enhance service delivery. These include the deployment of additional ICT personnel, the use of WhatsApp groups for communication, personalised student assistance, and collaboration with central offices. These efforts illustrate adaptive leadership practices and reflect elements of distributed leadership, which support institutional efficiency and responsiveness.

Recommendations

Based on the study's findings, it is recommended that the Open University of Tanzania prioritise enhancing its Digital Student Services (DSS) platforms. This includes improving the user interface, addressing recurring system glitches, and ensuring timely access to key services such as academic results and course registration. Continuous system upgrades informed by user feedback and regular technical assessments will help improve functionality and reliability.

Secondly, targeted support should be provided to students with limited digital literacy. Establishing help desks, producing user-friendly guides, and offering periodic orientation sessions, especially at the beginning of academic terms, can help bridge the digital divide and promote more inclusive access to DSS.
Lastly, the leadership strategies that have proven effective at the Dodoma Regional Centre, such as the deployment of additional ICT staff and the use of communication platforms like WhatsApp for student support, should be

documented and scaled across other regional centres. Institutionalising these practices through formal guidelines and capacity-building programmes will strengthen service delivery and promote consistent DSS management across the university.

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