Does remote working exist on paper or in practice? Digital systems and job satisfaction risks in higher education institutions in Tanzania

Jovin John[1]
Kelvin M. Mwita[2]

[1]jovinjohn1@gmail.com

[1] Institute of Accountancy Arusha, [2]Mzumbe University, [1,2]Tanzania

Recommended Reference: John, J., & Mwita, K. M. (2026). Does remote working exist on paper or in practice? Digital systems and job satisfaction risks in higher education institutions in Tanzania. African Quarterly Social Science Review, 3(4), 303–316. https://doi.org/10.51867/AQSSR.3.4.25

ABSTRACT

Remote working in Tanzanian Higher Education Institutions (HEIs) is no longer difficult to see in practice. A lecturer may teach online, supervise a student from home, submit academic reports electronically using email, WhatsApp, Zoom platform, Microsoft Teams, Google Meet, and any other digital technologies and respond to institutional demands long after leaving campus; this is called Paper–Practice Paradox. Yet this growing digital way of working is not always clearly recognised or protected as a formal employment arrangement. The problem is that digital work has expanded faster than the rules that should guide workload, internet costs, working time, monitoring, institutional support and staff protection. This study examined whether remote work in Tanzanian HEIs exists mainly on paper or through everyday digital practice, and what this means for academic staff job satisfaction. A critical integrative systematic review of 40 indexed journal articles, including studies from African Journals Online (AJOL) and other recognised databases, together with relevant policy documents, was conducted. The findings show that academic work increasingly moves beyond campus, while many staff still face unreliable connectivity, limited technical support, personal internet expenses, increasing digital workload and unclear boundaries between work and personal time. The study concludes that the main risk to job satisfaction is not digital technology itself, but the gap between what institutions expect academic staff to do digitally and the support provided to make that work fair and sustainable. It recommends clear remote-work rules, recognition of digital workload, fair cost-sharing, reliable technical support, reasonable monitoring and clear limits on after-hours work.

Keywords: Academic Staff; Digital Systems; Higher Education Institutions; Job Satisfaction; Remote Work; Tanzania.

I. INTRODUCTION

Remote work is easy to see when a contract or policy says that an employee may work away from the office. In higher education, however, work can leave the campus long before policy gives it a name. A lecturer can prepare and upload course materials through a learning management system (LMS), supervise a dissertation through videoconferencing or messaging, respond to students from home, process academic records electronically and complete institutional tasks through digital platforms without ever being formally classified as a remote worker. This is the starting point of the present paper: in Tanzanian HEIs, the most important question is no longer simply whether technology is being used, but whether the employment conditions surrounding that digitally mobile work have developed at the same pace.

The Tanzanian setting makes this question especially urgent. The Tanzania Commission for Universities (TCU, 2022) formally provides guidance for online and blended delivery, while the Higher Education for Economic Transformation (HEET) project has supported institutional capacity, infrastructure and management reforms in higher education (World Bank, 2021). At the University of Dar es Salaam, the COVID-19 response demonstrated how quickly academic work could be reorganised around Moodle, Zoom and the Postgraduate Information Management System: 340 instructors were trained and 369 new courses were developed during the transition (Mtebe et al., 2021). These are signs of genuine institutional capacity. They also show that once digital systems become part of normal teaching and administration, academic work is no longer confined to the lecture room or office even when employment policy continues to be written around campus presence.

Later evidence shows that this digital expansion has not removed the conditions that make it difficult to sustain. Anasel and Swai (2023), drawing on 173 academic and ICT staff from nineteen Tanzanian universities, found willingness to adopt online teaching alongside deficits in capacity, technological knowledge, infrastructure and environmental support. Ambele et al. (2025), using evidence from 610 respondents across five universities, similarly found substantial growth in e-learning but continuing weaknesses in internet and technological infrastructure, digital

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literacy, learning materials and institutional support. Ndibalema (2025) reaches a related conclusion from two Tanzanian universities: LMSs create real opportunities for learning, but inadequate infrastructure, restricted connectivity and limited institutional support continue to constrain effective use. Read together, these studies do not describe a country resisting digital higher education. They describe academic staff and institutions trying to make digital higher education work while its support architecture remains uneven.

The pressure becomes more visible when the analysis follows the resources required to keep digital work alive. Muhihi (2024), studying lecturers in four public universities, found that the high cost of internet access could discourage remote work and that lecturers expected employers to share responsibility for connectivity costs. Minja et al. (2026), across MUHAS, UDOM, KCMCU and CUHAS, found unreliable internet, shortages of institutional devices and gaps in staff capability and policy application; some faculty consequently relied on personal devices for academic work. These findings convert an abstract infrastructure problem into an employment problem. When a university task can only be completed because an academic member supplies a personal device, buys data or works around unstable connectivity, the boundary between institutional infrastructure and private sacrifice becomes blurred.

A second Tanzanian reality is the uneasy coexistence of digital mobility and physical control. Digital teaching, supervision and administration increasingly make academic outputs possible beyond campus, yet accountability practices may still privilege physical presence. John and Mselle (2026) show this tension through the debate on biometric attendance in Tanzanian HEIs: attendance technologies can improve procedural accountability, but they are poorly suited to capturing the substance of work such as online teaching quality, virtual supervision, research productivity and digital academic administration. The result is a practical paradox. Academic work becomes more location-flexible, while some mechanisms used to judge academic staff remain location-bound. This can turn digitalisation from a source of flexibility into a source of double accountability: staff must produce digital outputs and still prove physical presence.

The unresolved problem therefore lies between two truths that are both visible in Tanzanian HEIs. First, digital systems are indispensable to the future of teaching, supervision, research collaboration and academic administration. Second, their expansion can create costs, hidden workload, continuous reachability and new forms of monitoring that are not automatically recognised in employment rules. Existing Tanzanian studies illuminate parts of this reality, but the strands are often treated separately as e-learning adoption, infrastructure, internet cost, LMS use or attendance control. This paper synthesises them as one employment-governance problem and asks a more difficult question: when academic obligations can follow staff beyond the campus, do institutional resources, protections and boundaries follow as well?

1.1 Statement of the Problem

The problem addressed in this paper is not that Tanzanian HEIs lack digital policy or digital ambition. The problem is that the architecture for delivering education digitally is becoming clearer than the architecture for governing the academic labour that makes such delivery possible. TCU guidelines specify expectations for online and blended education, HEET supports digital and institutional transformation, and universities have expanded LMSs, videoconferencing, postgraduate information systems and other electronic processes (TCU, 2022; World Bank, 2021; Mtebe et al., 2021). Yet the questions most closely connected to the employee experience remain less settled: who finances recurring connectivity when work is performed away from campus; how online preparation, virtual supervision and digital administration are counted in workload; when an academic member is entitled to become unavailable; and how digital traces or attendance data should be used without eroding professional autonomy.

The seriousness of the gap is visible across different types of Tanzanian HEIs and different research designs. Evidence from nineteen universities shows that willingness to teach online coexists with constraints in skills, infrastructure and technological conditions (Anasel & Swai, 2023). A five-university study involving 610 respondents reports continuing weaknesses in internet infrastructure, digital literacy and institutional support (Ambele et al., 2025), while a two-university LMS study similarly identifies restricted connectivity, device limitations and support gaps (Ndibalema, 2025). In four medical universities representing both public and private ownership, leaders reported unreliable internet, shortages of devices and uneven policy implementation (Minja et al., 2026). At the same time, lecturers in four public universities reported that personal internet costs could deter remote work (Muhihi, 2024). These findings converge on a deeper reality: the academic worker may be digitally connected to the institution while materially carrying part of the institution on their own shoulders.

What makes this a job satisfaction problem is that digital systems are excellent at recording completion but poor at recording what completion costs the worker. A platform can show that a lecture was uploaded, a supervision meeting held or a form submitted; it does not show the private data bundle, personal device, repeated reconnection, interrupted evening or additional administrative labour behind the record. Nor does a biometric timestamp necessarily show the quality of teaching, supervision, research or digital service performed during the day (John & Mselle, 2026). Without clearer employment governance, HEIs risk treating visible digital outputs as evidence that the system is working while the invisible burden is absorbed by academic staff. The study therefore addresses a policy-practice gap in which digital

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education is increasingly institutionalised, but remote work as an employment relationship remains only partly recognised and protected.

1.2 Research Objectives

i. To synthesise how Tanzanian higher-education and digital-governance frameworks enable work beyond campus while defining - or leaving undefined - the employment conditions that should accompany it.
ii. To examine how digital workload, personal technology costs, platform multiplicity, monitoring and continuous connectivity combine to create or intensify job satisfaction risks among academic staff.
iii. To explain how the gap between digital flexibility as an institutional promise and system-dependent remote work as an everyday practice is experienced through autonomy, fairness, workload and work-life boundaries.
iv. To determine whether the dominant job satisfaction risks are better explained by technical system limitations or by wider governance, work-design and implementation gaps.

II. LITERATURE REVIEW

2.1 Conceptual and Theoretical Framing

2.1.1 Remote Work as a Location, Time and System Relationship

Remote work is often defined by where an employee is located, but location alone cannot capture digitally mediated academic work. New ways of working alter not only place but also time, technology, coordination and control (Alfes et al., 2022), while public-sector flexibility increasingly depends on digital infrastructures that make work portable (OECD, 2023). In an HEI, a lecturer may remain formally campus-based while teaching materials, student supervision, research communication and administrative approvals are completed elsewhere. The relevant unit of analysis is therefore not simply 'home versus campus', but the relationship between location, digital systems and institutional expectations.

Accordingly, this paper defines remote work as institutionally required or institutionally recognised academic labour performed wholly or partly away from the conventional campus through digital technologies. It uses the term system-dependent remote work for situations in which platforms make off-campus work possible or necessary even though remote work is not fully codified as an employment arrangement. This concept helps separate two questions that are often collapsed: whether technology enables work beyond campus and whether policy governs that work as remote employment. The first can advance quickly; the second can lag behind.

2.1.2 Policy–Practice Gap as an Analytical Lens

The policy-practice lens explains why digital work can become normal before its employment meaning becomes explicit. Tanzania's TCU guidelines and HEET investments create a visible architecture for online and blended education, while national digital-government strategy supports connected systems and electronic service delivery (TCU, 2022; World Bank, 2021; United Republic of Tanzania, 2022). These instruments establish legitimate digital practice, but they do not automatically answer who bears remote-work costs, how digital labour is counted, when staff may disconnect or how far monitoring should extend. The gap is therefore not between policy and no practice; it is between policy that governs the service and policy that governs the worker delivering it.

Policy silence matters because systems do not wait for employment rules to become complete. Once a platform becomes part of teaching, supervision or administration, it begins to shape when work can be done, what counts as completion and how employees are seen by management. The implementation problem is thus produced jointly by formal rules and system routines. In this paper, a policy-practice gap exists when digital systems organise remote academic labour more clearly than employment policy protects, resources or limits that labour.

2.1.3 Job Demands–Resources Theory

Job Demands-Resources (JD-R) Theory explains why the same digital arrangement can improve satisfaction for one employee and exhaust another. Job demands require sustained effort, whereas job resources help employees meet those demands, preserve energy and remain motivated (Bakker et al., 2023). Digital academic work contains both. Reduced commuting, location flexibility and faster access to students can be resources; constant connectivity, platform switching, troubleshooting, hidden administrative tasks and personal expenditure can be demands. The relevant question is therefore not whether remote work is 'good' or 'bad', but whether the resources attached to it are sufficient for the demands it creates.

The Tanzanian policy-practice problem sharpens this balance. A weak connection is a technical demand, but a weak connection that the lecturer must privately finance becomes a financial and fairness demand as well. An online supervision session can save travel time, yet the same session can erode recovery time if it is scheduled or expected without boundaries. JD-R Theory therefore links the institutional problem to job satisfaction: policy clarity, cost support,

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manageable workload, autonomy and technical assistance function as resources; ambiguity, unreimbursed costs, unrecognised labour and permanent reachability intensify demands.

2.1.4 Organisational Control and Digital Surveillance

The control lens explains a second transformation: when physical visibility declines, digital visibility can rise. Remote work in bureaucratic organisations encourages managers to redevelop control practices around outputs, communication and digital traces (Hartner-Tiefenthaler et al., 2021). At the same time, digital surveillance research shows that traceability can improve accountability while also increasing psychosocial strain when employees experience monitoring as excessive, opaque or intrusive (Ball, 2021; Grisold et al., 2024). The issue is therefore not whether digital systems produce data - they inevitably do - but how institutions convert that data into supervision.

For Tanzanian HEIs, this creates a delicate exchange. Digital systems can free academic work from place while making it more continuously observable. That exchange may support fair accountability when monitoring is transparent, proportionate and tied to legitimate outputs; it may weaken job satisfaction when visibility becomes behavioural suspicion or when system traces substitute for professional judgement. Academic autonomy and digital accountability are therefore not opposites, but they require governance rules that prevent one from consuming the other.

2.1.5 Analytical Framework

The three lenses form one explanatory chain rather than three parallel theories. The policy-practice lens identifies where employment rules lag behind digitally enabled work; the control lens explains how systems fill part of that gap by structuring visibility, accountability and behaviour; and JD-R Theory explains how the resulting combination of demands and resources is translated into job satisfaction outcomes. The framework therefore follows a simple logic: digitalisation changes where and how academic work is performed; governance determines who carries the resulting costs, workload and control; and that balance shapes whether remote work is experienced as flexibility or strain.

Table 1

Analytical framework for system-dependent remote work in Tanzanian HEIs

Institutional layer	What digitalisation enables	Employee experience question	Job satisfaction pathway
Policy and regulation	Online/blended delivery, digital quality assurance, electronic services	Are remote-work rights, costs, hours and monitoring boundaries explicitly defined?	Clarity and fairness can operate as job resources; ambiguity can become a demand.
Digital systems	LMS, videoconferencing, information systems and digital administration	How many platforms must staff navigate, and can work be completed beyond campus?	Efficiency may rise, but platform multiplicity and constant reachability can increase strain.
Work design	Remote teaching, supervision, research collaboration and administrative processing	Is digital work recognised in workload and performance expectations?	Recognised workload supports fairness; hidden labour weakens satisfaction.
Resources and costs	Connectivity, devices, electricity, technical support and training	Who pays, who provides, and who is disadvantaged when resources are weak?	Institutional support buffers demands; personal cost transfer intensifies strain.
Control and accountability	Digital traces, workflow records, login data and performance visibility	Is monitoring transparent, proportionate and compatible with academic autonomy?	Accountability can support trust; excessive surveillance can reduce autonomy and satisfaction.

***Source**: Authors' synthesis from the reviewed literature and policy documents.*

2.2 Empirical Review

2.2.1 What Structured Remote Work Can Offer

Evidence in favour of remote work is strongest when flexibility is structured rather than improvised. Bloom et al. (2024) show that a defined hybrid arrangement can increase job satisfaction and reduce quit rates without harming performance, while OECD (2023) treats flexibility as an important component of modern public employment. These findings converge on a condition often lost in debates about remote work: the benefit does not come from physical distance alone. It comes from legitimate discretion, predictable rules and an organisational design that allows employees to use flexibility without losing access to resources or managerial trust.

That condition matters in higher education because academic work is naturally portable. Supervision, course preparation, marking, research collaboration and some administrative tasks can be performed away from campus, and

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Tanzanian institutions have already demonstrated that digital platforms can preserve continuity at scale (Mtebe et al., 2021). The potential resource is therefore real: less travel, wider access and continuity can improve the experience of work. Yet the literature implies that these gains should be attributed to supported flexibility, not to technology by itself.

2.2.2 Digital Work Can Also Become a New Form of Demand

The literature on digital strain reveals the other side of the same mechanism. Platform-intensive remote work can create technostress and technology exhaustion, particularly when work and personal digital use overlap (Singh et al., 2022). Electronic monitoring can add a second layer of pressure by converting routine system activity into continuous visibility, with excessive monitoring associated with stress, resistance and lower job satisfaction (Ball, 2021). Read together, these findings show that digital systems do not merely carry work across space; they can also carry institutional demands across time and into private life.

Higher education can magnify that accumulation because digital work is layered onto already heterogeneous roles. Teaching, supervision, research, meetings and administration may each acquire separate platforms, notifications and reporting routines. The resulting burden is not captured by counting the number of systems or by measuring system uptime alone. It emerges from switching, duplicate entry, troubleshooting, interrupted recovery time and the need to remain responsive across several channels. This is the point at which a technical architecture becomes a job-demand architecture.

2.2.3 Tanzanian Higher Education: Rapid Adoption, Uneven Support

Tanzanian evidence is strikingly consistent once it is read as a body rather than as isolated studies. Mtebe and Raphael (2018) identified internet access and lack of support among the most persistent constraints in a review of Tanzanian e-learning research. During the COVID-19 disruption, UDSM demonstrated that rapid institutional mobilisation was possible by training hundreds of instructors and moving courses and postgraduate administration onto Moodle, Zoom and PGMIS (Mtebe et al., 2021). Yet later studies show that the same structural pressures did not disappear when emergency teaching ended. Anasel and Swai (2023), Ambele et al. (2025), Ndibalema (2025), Minja et al. (2026) and Tossy (2026) continue to report combinations of connectivity problems, infrastructure gaps, uneven skills and limited institutional support. The synthesis is therefore not 'Tanzanian lecturers resist technology'; it is 'digital participation has expanded faster than the conditions required to make it consistently sustainable.'

That distinction is important for job satisfaction. When academics remain willing to use online systems but repeatedly confront weak connectivity, insufficient equipment or limited support, dissatisfaction cannot be reduced to poor attitude or low technological acceptance. The evidence points instead to a mismatch between employee effort and institutional readiness. Minja et al. (2026) make this especially visible across both public and private medical universities, where the existence of e-learning initiatives coexists with unreliable connectivity, device shortages and uneven policy application. Digital commitment by the employee cannot substitute indefinitely for missing institutional resources.

Muhihi (2024) adds the financial dimension that many adoption studies leave hidden. Lecturers from four public universities described internet cost as a practical deterrent to remote work and argued that employers should carry at least part of that cost. This finding changes the meaning of 'access'. A lecturer who can technically connect but must repeatedly purchase personal data to fulfil institutional duties is not experiencing the same remote-work resource as a lecturer whose institution supplies reliable connectivity. When combined with Minja et al. (2026), who report reliance on personal devices in resource-constrained medical universities, the evidence points to a quiet transfer of infrastructure from the institution to the individual.

2.2.4 From Digital Education Policy to Remote-Work Employment Policy

Tanzania's policy landscape is therefore better described more unevenly complete than absent. TCU formally recognises and regulates online and blended course delivery, HEET strengthens institutional capacity and digital infrastructure, and national digital-government reforms normalise electronic service systems (TCU, 2022; World Bank, 2021; United Republic of Tanzania, 2022). These frameworks are important achievements because they make digital higher education legitimate, scalable and quality-assurable. The unresolved issue is that they are clearer about how education should travel digitally than about how the employment relationship should change when academic work travels with it.

This distinction is visible in ordinary academic work. Quality-assurance guidance can specify how an online course should be designed without determining who pays for the lecturer's off-campus connection. A university can require virtual supervision without defining reasonable response windows. An information system can make approvals possible from home without deciding whether after-hours processing counts as workload. An attendance system can verify presence without capturing the value of remote teaching, research or supervision (John & Mselle, 2026). The

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policy asymmetry is therefore concrete: service obligations have become increasingly portable, while employment rights, costs and boundaries remain more place-bound.

This asymmetry also connects the present study to emerging Tanzanian work on staff wellbeing. John (2026) argues that digital-education policy can advance faster than protections for academic staff workload and wellbeing. The present paper extends that argument by treating the gap as a remote-work governance problem: once digital systems allow institutional obligations to travel beyond campus, policy must govern not only the quality of the service delivered but also the conditions under which the employee delivers it.

2.2.5 Digital Monitoring and the Autonomy Question

Digitalisation reshapes supervision at the same time that it reshapes location. International evidence shows that managers often replace physical visibility with digital visibility when work moves out of sight (Hartner-Tiefenthaler et al., 2021; Grisold et al., 2024). In Tanzanian HEIs, the problem is sharper because digital academic work can coexist with attendance systems designed around physical presence. John and Mselle (2026) argue that biometric attendance may strengthen procedural accountability but cannot, on its own, capture substantive academic outcomes such as online teaching quality, research productivity, virtual supervision or digital administration. This is not an argument against accountability. It is an argument that the measure should fit the work being measured.

The autonomy question is therefore not abstract. Academic work contains periods of visible activity and periods of deep, less visible intellectual labour: reading, writing, designing assessment, analysing data and giving detailed feedback. A system log or biometric record can verify a transaction or presence, but it cannot automatically distinguish professional discretion from inactivity. The Tanzanian reality thus calls for output-sensitive accountability: use digital records where they genuinely demonstrate completion, but avoid allowing presence or raw platform activity to become a substitute for academic value. Where monitoring is transparent and proportionate it can support trust; where it is excessive or poorly aligned with academic work it can become a job demand.

III. METHODOLOGY

3.1 Research Design

The study adopted a critical integrative systematic review combined with documentary analysis. This design was suitable because the issue examined in this paper cuts across several areas that are often discussed separately, including remote work, digital higher education, online teaching, virtual supervision, digital academic administration, technostress, electronic monitoring and job satisfaction. Bringing these areas together made it possible to examine the central question of the study: whether remote work in Tanzanian Higher Education Institutions (HEIs) exists as a formally recognised employment arrangement or mainly as a practice created through digital systems. The review focused on the everyday reality of academic work in Tanzanian HEIs. Particular attention was given to the way learning management systems, videoconferencing, online supervision, institutional information systems and other digital platforms allow academic work to continue beyond the physical campus. At the same time, the review examined whether institutional rules on workload, internet costs, working time, monitoring, staff support and protection have developed at the same pace. The integrative review approach was appropriate because it allows evidence from different but related bodies of literature to be brought together and interpreted around a common problem rather than reported as separate summaries (Snyder, 2019).

A total of 40 indexed journal articles formed the main empirical evidence base of the review. These articles were drawn from African Journals Online (AJOL) and other recognised academic databases and journal platforms. Relevant policy and institutional documents were also reviewed separately to understand how online and digital work is formally addressed within Tanzanian higher education. The policy documents were not counted among the 40 journal articles. The study did not convert the reviewed evidence into artificial percentages. The 40 studies differed in design, sample, institution, location and outcome. Some focused on online teaching, others on infrastructure, academic staff experiences, digital support, technostress or job satisfaction. The analysis therefore relied on convergence, contrast and synthesis of evidence, rather than attempting to produce a statistical prevalence of remote-work risks from studies that were not designed to be pooled.

3.2 Search Strategy and Data Sources

The search covered literature published mainly between 2018 and September 2026, while earlier methodological and theoretical sources were retained where they were necessary to support the research design and analysis. The search was organised around the main ideas contained in the study title and objectives. Search terms included combinations of “remote work,” “higher education,” “Tanzania,” “academic staff,” “online teaching,” “virtual supervision,” “digital academic administration,” “learning management systems,” “e-learning,” “internet costs,” “technostress,” “job satisfaction,” “digital monitoring,” “electronic surveillance,” “workload,” “academic autonomy,” and “institutional

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support." Boolean combinations such as *remote work AND higher education AND Tanzania*, *online teaching AND academic staff AND Tanzania*, and *technostress AND university employees* were used to improve the relevance of the search.

The search prioritised African Journals Online (AJOL) because of its importance in providing access to African scholarship. Other recognised academic databases, journal platforms and research search systems were also used to identify relevant indexed studies. These included Scopus-indexed and Web of Science-indexed journal sources, ERIC, Google Scholar for supplementary discovery, publisher platforms and recognised institutional repositories.

In addition to the 40 indexed journal articles, relevant official documents from Tanzanian higher education and government institutions were reviewed. These documents were used to examine how digital teaching, online and blended delivery, digital infrastructure and institutional expectations are formally presented. The documentary analysis was important because the paper does not ask only what academic staff experience in practice; it also asks what is formally recognised in policy. Retrievability was treated as an important quality requirement. A journal article was retained only when its bibliographic details could be independently confirmed through a DOI, stable publisher webpage, recognised academic repository or other reliable retrieval route. Official documents were retained only when they could be traced to an official government, regulatory or institutional website. Sources that could not be independently retrieved were excluded.

3.3 Inclusion, Exclusion and Selection of the 40 Studies

The review included studies that addressed at least one aspect of the relationship between digital work and academic staff experience. These included studies examining remote or hybrid work, online teaching, learning management systems, virtual academic activities, digital administration, institutional support, digital infrastructure, internet and equipment costs, technostress, electronic monitoring, workload, autonomy or job satisfaction. Priority was given to studies involving Higher Education Institutions and academic staff, particularly evidence from Tanzania. Tanzanian studies formed the main analytical foundation because the purpose of the paper is to understand the reality of remote work in Tanzanian HEIs rather than to generalise from foreign settings. African studies were used to show comparable institutional conditions, while selected international studies were used mainly to explain broader mechanisms such as technostress, monitoring, autonomy, work boundaries and job satisfaction.

A source was excluded when it could not be independently retrieved, duplicated another version of the same study, focused only on students without a meaningful connection to academic staff work, or discussed technology without relevance to remote work, workload, institutional support, monitoring or job satisfaction. Private-sector studies were used only when they provided concepts that were directly useful in understanding academic work under digital systems. Following the screening of titles, abstracts and full texts against these criteria, 40 indexed journal articles were retained for the final synthesis. The final sample therefore reflected relevance to the title, methodological credibility, retrievability and direct contribution to understanding whether remote work in Tanzanian HEIs exists mainly on paper or in practice.

3.4 Data Extraction and Thematic Synthesis

Information was extracted from each of the 40 journal articles using a common analytical structure. The extracted information included the country and institutional setting, study population, digital work practice examined, reported benefits, reported constraints, institutional support conditions, workload implications, employee experiences and implications for job satisfaction. The policy and institutional documents were examined differently. They were analysed for what they clearly addressed and for what remained less clearly defined. Particular attention was given to whether the documents addressed workload recognition, internet and equipment costs, working hours, availability outside campus, digital monitoring, staff autonomy, technical support and employee protection. The analysis followed an iterative thematic process of coding, comparison and synthesis consistent with thematic analysis principles (Braun & Clarke, 2006). Initial codes included digital work beyond campus, online teaching, virtual supervision, institutional systems, connectivity, devices, personal internet costs, technical support, digital competence, workload, monitoring, autonomy, technostress, work-life boundaries and job satisfaction.

These codes were not presented as isolated findings. Instead, they were compared across the 40 studies to identify where the evidence agreed, where it differed and what those differences meant for Tanzanian HEIs. The synthesis therefore focused on relationships between the themes. For example, online teaching was examined together with internet access and institutional support; flexibility was considered alongside workload and after-hours availability; and digital monitoring was examined together with autonomy and job satisfaction. This process allowed the study to move beyond simply describing what individual authors reported. It helped reveal the wider pattern at the centre of the paper: academic work can increasingly be performed beyond campus, while the institutional rules and support surrounding that work do not always move with it.

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3.5 Ethical Considerations

The study relied entirely on published academic literature and publicly available policy and institutional documents. No new human participants were recruited, no interviews were conducted and no confidential personal information was collected. Ethical responsibility therefore centred on the accurate use of existing evidence. Sources were cited according to their original findings, unsupported claims were avoided and only references that could be independently retrieved were retained. Particular care was taken not to present review findings as statistical facts where the underlying studies did not support such interpretation. The study therefore sought to present the reality of digital work in Tanzanian HEIs fairly, clearly and in a manner that could be traced back to the evidence used.

Table 2

Cross-evidence synthesis of the policy-practice problem

Evidence cluster	Tanzanian evidence	Comparative evidence	Synthesised inference
Digital adoption versus employment governance	TCU (2022); Mtebe et al. (2021); World Bank (2021)	OECD (2023); Haug et al. (2024)	Tanzania has increasingly formalised digital delivery and institutional transformation, but employment rules for work beyond campus remain less explicit.
Willingness versus institutional readiness	Anasel & Swai (2023); Ambele et al. (2025); Ndibalema (2025); Minja et al. (2026); Tossy (2026)	Harunavamwe et al. (2025)	Academic staff willingness can coexist with unreliable connectivity, device shortages, skills gaps and limited support; employee readiness does not substitute for institutional readiness.
Flexibility versus personal resource transfer	Muhihi (2024); Minja et al. (2026)	Bloom et al. (2024); Singh et al. (2022)	Remote work becomes less equitable when institutional continuity depends on staff-funded internet, personal devices or unrecognised time.
Physical presence versus digital academic output	John & Mselle (2026)	Hartner-Tiefenthaler et al. (2021); Ball (2021); Grisold et al. (2024)	Attendance and digital traces can support accountability, but presence is an incomplete proxy for teaching quality, virtual supervision, research and digital administration.
Support versus job-satisfaction risk	Ambele et al. (2025); Ndibalema (2025); Minja et al. (2026); Muhihi (2024)	Bakker et al. (2023); Harunavamwe et al. (2025)	The same digital tool can function as a resource or a demand depending on support, autonomy, workload recognition, cost sharing and recovery boundaries.

Source: *Authors' synthesis of verified peer-reviewed studies and official documents.*

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Digital Education Is on Paper; Remote Employment Is Less Explicit

The first finding is a policy asymmetry rather than a policy absence. Tanzania clearly has digital higher-education policy: TCU provides standards for online and blended delivery, HEET supports institutional transformation, and universities have demonstrated the ability to deploy LMSs, videoconferencing and electronic academic systems (TCU, 2022; World Bank, 2021; Mtebe et al., 2021). The gap appears when the lens shifts from the course to the academic worker. Across the reviewed frameworks, there is much greater clarity about digital delivery, quality and infrastructure than about the employment consequences of work performed beyond campus. Digital education is therefore visibly 'on paper'; remote employment remains less explicitly codified.

The Tanzanian evidence gives this asymmetry a human form. Anasel and Swai (2023) show that academic and ICT staff across nineteen universities was willing to engage with online teaching despite capacity and infrastructure constraints. Ambele et al. (2025) and Ndibalema (2025) show that digital systems are expanding while internet, device, digital-literacy and support gaps persist. Minja et al. (2026) find the same tension in four medical universities, including both public and private institutions. These studies collectively show that digital work is not waiting for perfect conditions. It is already being performed inside imperfect ones.

The synthesis therefore supports the paper's central proposition: remote work can be created operationally before it is named institutionally. Once a lecturer can teach through an LMS, supervise through a video call, process academic information electronically or complete institutional work from another location, the workplace boundary has already

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changed. Policy may still describe the employee as campus-based, but the obligation has become mobile. This is why the question 'does remote work exist?' cannot be answered only by searching for a document labelled remote-work policy; it must also be answered by following where academic duties actually travel.

4.1.2 Digital Systems Extend Academic Work Beyond the Campus

The second finding is that Tanzanian digital systems have widened the spatial reach of academic labour beyond a temporary emergency response. At UDSM, technology-enhanced teaching continued in blended form after face-to-face classes resumed (Mtebe et al., 2021). Across nineteen universities, staff willingness and online-teaching capability were evident even though organisational constraints remained (Anasel & Swai, 2023). More recent evidence from five universities and from LMS users in two universities shows continued institutional use alongside infrastructure and support gaps (Ambele et al., 2025; Ndibalema, 2025). The trajectory is therefore one of normalisation: digital academic work has become part of how HEIs operate, not merely a memory of lockdown.

That normalisation extends beyond classroom delivery. Remote academic labour includes virtual supervision, online consultation, course preparation, digital marking, research collaboration, committee communication and electronic administrative processing. Muhihi (2024) explicitly situates Tanzanian university lecturers within remote-work arrangements, while John and Mselle (2026) show that online teaching, research, virtual supervision and digital administration complicate attendance-based notions of accountability. The practical reality is that some academic tasks are now location-portable even when institutional expectations remain built around a fixed workplace.

4.1.3 Flexibility Is Real, but It Is Conditional

The third finding is that flexibility is real, but it is conditional on resources and work design. Tanzanian studies show that digital delivery can preserve continuity, widen access and make academic tasks more portable (Mtebe et al., 2021). International evidence similarly shows that structured hybrid work can improve satisfaction and retention (Bloom et al., 2024). These benefits are credible, but they do not cancel the Tanzanian evidence on connectivity, devices, skills and support. Rather, they reveal a threshold: flexibility becomes a job resource only when the employee has enough control and enough institutional support to use it without carrying disproportionate cost or strain.

When that threshold is not met, the same flexibility changes character. The ability to work from anywhere can become an expectation to work from wherever the employee happens to be. A system that saves a trip to campus can also extend work into evenings; a self-service platform that shortens a queue can transfer clerical work to the lecturer; a virtual supervision channel can make student support more responsive while making the academic member continuously reachable. JD-R Theory explains why the effect is conditional: technology is not automatically a resource or a demand; its job-satisfaction consequences depend on the surrounding balance of autonomy, workload, support and recovery time (Bakker et al., 2023).

4.1.4 Hidden Costs and Hidden Workload Are Central Risks

The fourth finding is that some of the most important burdens of digital higher education remain institutionally invisible. Muhihi (2024) shows that internet cost can deter remote work among Tanzanian university lecturers. Minja et al. (2026) report shortages of university-owned devices and unreliable connectivity in four medical universities, conditions that can push faculty towards personal equipment. Ambele et al. (2025), Ndibalema (2025) and Anasel and Swai (2023) repeatedly identify infrastructure and support limitations. Synthesised together, these findings reveal a quiet transfer: the institution retains the digital output, while part of the cost of producing that output can move to the academic worker.

The same transfer can occur with time and task volume. Digitalisation may remove paper from a process while adding uploading, formatting, troubleshooting, password recovery, duplicate data entry, online follow-up and repeated checking across systems. Because these fragments of labour are small and dispersed, they can disappear from formal workload models even as they accumulate across a semester. The issue is therefore not simply 'more technology equals more work'. It is that new digital tasks can be added without an equally deliberate removal, recognition or redistribution of old tasks.

This is where the statistics acquire their human meaning. A system can record that a course shell exists, a file was uploaded, a supervision meeting took place or an approval was completed. It cannot show the lecturer moving between a weak campus connection and personal mobile data, using a private device because institutional equipment is unavailable, or returning to a platform after hours because a daytime connection failed. The evidence does not justify dramatising every digital task as hardship; it does justify refusing to confuse successful system completion with absence of employee burden.

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4.1.5 Digital Visibility Can Strengthen Accountability and Weaken Autonomy at the Same Time

The fifth finding is that accountability and surveillance are not separate products of digitalisation; they are competing possibilities created by the same visibility. Electronic records can make teaching and administration easier to trace and can reduce ambiguity about whether tasks were completed. Yet the Tanzanian debate on biometric attendance demonstrates that visibility can become misaligned with the nature of academic work. John and Mselle (2026) show that presence-based monitoring may support procedural accountability while failing to capture substantive outputs such as online teaching quality, virtual supervision, research productivity and digital administration. International evidence reinforces the risk that excessive or opaque monitoring can reduce job satisfaction and increase stress (Hartner-Tiefenthaler et al., 2021; John, 2026).

The synthesis therefore rejects a simple choice between 'monitoring' and 'freedom'. HEIs need accountability, but the measure must fit the work. A biometric timestamp can verify arrival; it cannot evaluate the quality of a supervision discussion. A login can prove access to a system; it cannot establish the intellectual value of a research contribution. The more academic work becomes output-based and digitally portable, the less defensible it becomes to treat physical or continuous digital presence as a complete proxy for performance. For academic staff, this distinction is central to job satisfaction because professional work depends on discretion as well as accountability. Transparent, proportionate monitoring can create fairness when expectations are clear and applied consistently. Monitoring becomes a job demand when staffs do not know what is collected, how traces will be interpreted or whether being continuously visible is becoming an unofficial condition of being judged committed. In Tanzanian HEIs, the challenge is therefore to modernise accountability alongside work itself, rather than digitising old presence assumptions and attaching them to new forms of academic labour.

4.1.6 Job Satisfaction Risks Arise Mainly from Misalignment, Not Technology Alone

The sixth and most important finding is that job satisfaction risk is best explained by institutional misalignment rather than by technology alone. Connectivity failures, platform complexity, digital-skill gaps and weak support remain real in Tanzanian HEIs (Anasel & Swai, 2023; Ambele et al., 2025; Ndibalema, 2025; Minja et al., 2026; Tossy, 2026). Yet the same technical problem becomes more damaging when the institution has not clarified who bears the cost, how extra time is recognised, what happens when systems fail, or whether staffs are expected to remain continuously available. Technology creates friction; governance decides where that friction lands.

The strongest Tanzanian evidence is therefore relational rather than technological. Internet cost becomes a job-satisfaction issue when connectivity is necessary for institutional work but financed privately (Muhihi, 2024). Device shortages become an employment issue when faculty must supply their own equipment (Minja et al., 2026). Attendance systems become an autonomy issue when presence is treated as a stronger performance signal than digitally delivered academic output (John & Mselle, 2026). JD-R Theory helps connect these realities: institutional support, adequate resources, autonomy and clear expectations can buffer digital demands, while uncertainty and resource transfer intensify them (Bakker et al., 2023; Harunavamwe et al., 2025).

The findings converge on one answer to the research problem. Digital systems are not the principal threat to academic staff job satisfaction; asymmetry is. The same platform can save time when it replaces travel, impose cost when it depends on personal data, support accountability when monitoring is proportionate, and undermine autonomy when presence or raw digital traces are treated as performance. Remote work becomes risky when duties travel farther than resources, workload recognition and protection. That is the lived policy-practice gap emerging from Tanzanian HEIs.

Table 3

Main job satisfaction risk pathways and practical safeguards

Risk pathway	How it appears in digital academic work	Likely employee consequence	Recommended safeguard
Personal cost transfer	Staff use personal internet, electricity, devices or home space to complete institutional work.	Financial strain, perceived unfairness, unequal ability to work remotely.	Clear reimbursement or allowance rules; institution-provided devices and connectivity support.
Platform multiplicity	Teaching, supervision, communication and administration occur across several systems.	Cognitive overload, digital fatigue and time lost to switching or duplication.	System integration, single sign-on where feasible, elimination of duplicate reporting.
After-hours reachability	Messages, approvals, supervision and digital deadlines extend beyond normal working time.	Boundary erosion, recovery loss and work–life conflict.	Response-time norms, protected non-working periods and a right-to-disconnect principle.

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Hidden digital workload	Uploading, troubleshooting, documentation and self-service tasks are not fully recognised.	Workload intensification and perceived inequity.	Digital-workload audits and explicit inclusion in workload/performance models.
Opaque monitoring	System traces are used without clear explanation or proportional limits.	Reduced autonomy, stress, distrust and resistance.	Transparent monitoring purposes, data-minimisation and participatory governance.
Weak support and infrastructure	Connectivity failures, limited digital skills or insufficient helpdesk support.	Frustration, interruptions, exhaustion and reduced confidence.	Reliable infrastructure, training, rapid technical support and backup procedures.

Source: Authors' synthesis based on verified Tanzanian HEI evidence (Muhihi, 2024; Ambele et al., 2025; Ndibalema, 2025; Minja et al., 2026; John & Mselle, 2026) and comparative job-demands and monitoring literature.

4.2 Discussion

4.2.1 The Paper–Practice Paradox

The central paradox is not that Tanzania has failed to digitalise higher education. The evidence shows substantial movement in the opposite direction. TCU has formalised online and blended delivery; HEET has strengthened the transformation agenda; UDSM demonstrated rapid platform mobilisation; and multi-university studies show that e-learning is now embedded in the practical vocabulary of Tanzanian higher education (TCU, 2022; World Bank, 2021; Mtebe et al., 2021; Ambele et al., 2025). The paradox is that the academic task has become more mobile faster than the employment relationship around it has become explicit.

This is why a synthesis of Tanzanian realities produces a different picture from a conventional technology-adoption review. The same institutional environment can simultaneously have an LMS, formal online-delivery guidance, staff willing to teach online, unreliable connectivity, shortages of devices, personal data expenditure and attendance rules still oriented to physical presence. None of these facts cancels the others. Together they reveal the problem. Digital transformation is occurring, but its benefits and burdens are not always allocated through a coherent employment framework.

4.2.2 The Quiet Transfer: When Institutional Flexibility Becomes an Individual Cost

The 'quiet transfer' is the clearest expression of this gap. Muhihi (2024) shows that internet costs can discourage remote work among lecturers in four public universities. Minja et al. (2026) show that shortages of institutional devices can push faculty towards personal equipment, while Ambele et al. (2025) and Ndibalema (2025) document continuing infrastructure and support constraints. When these findings are read together, the issue is no longer merely that Tanzania needs 'better internet'. It is that institutional work can remain operational because the employee supplies inputs that would normally be understood as part of the workplace.

The transfer can be financial, temporal and spatial. The lecturer may provide the data connection; the evening may absorb the time lost to an unstable network; the home may become the space in which supervision, marking or administrative processing continues. These arrangements can be useful and even welcome when they are chosen, supported and bounded. They become risky when convenience for the institution quietly depends on unrecognised contributions by the employee. Job satisfaction is then affected not because academic staff reject flexibility, but because flexibility begins to feel one-sided.

4.2.3 Flexibility without Boundaries Can Become Permanent Availability

The contrast between Bloom et al. (2024) and Singh et al. (2022) is especially revealing. One shows improved satisfaction under structured hybrid work; the other shows exhaustion and reduced wellbeing under platform-intensive enforced remote work. These are not competing verdicts on remote work. They are evidence that work design matters. A bounded arrangement gives flexibility a beginning, an end and a legitimate place in the employment relationship; an under-specified arrangement allows digital accessibility to expand without a corresponding boundary around institutional demand.

For Tanzanian HEIs, this distinction turns the language of flexibility into a practical governance test. A digitally enabled academic arrangement is genuinely flexible when staff can match appropriate tasks to locations, receive adequate connectivity and technical support, know how digital work counts towards workload, and have reasonable limits around response time. It is less defensible to call the arrangement flexible when systems merely make staff reachable from home while presence controls, deadlines and workload expectations remain unchanged. In that situation, the institution becomes more flexible in accessing labour than the employee becomes flexible in organising work.

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4.2.4 Surveillance Is Not a Technology Problem; It Is a Governance Choice

The monitoring question follows the same logic. Digital traces are not inherently harmful; the risk depends on what an institution asks them to prove. John and Mselle's (2026) Tanzanian analysis of biometric attendance sharpens the issue by distinguishing procedural presence from substantive academic performance. Hartner-Tiefenthaler et al. (2021), Ball (2021) and Grisold et al. (2024) provide the wider mechanism: when physical visibility declines, organisations may intensify digital visibility. The policy challenge is therefore not whether HEIs should monitor work, but whether monitoring is proportionate to the kind of work academics actually perform.

A university has a legitimate interest in knowing whether classes occur, assessments are processed, students are supervised and institutional responsibilities are completed. But those outcomes are not equivalent to continuous visibility. Research may be produced in silence; thoughtful feedback may take longer than a platform log suggests; virtual supervision may occur away from campus; and digital administration may be completed outside conventional office space. Accountability that recognises these realities can protect both institutional performance and academic autonomy. Accountability that reduces performance to presence risks rewarding what is easiest to count rather than what matters most.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Digital teaching, online supervision, electronic communication and digital administration are now part of normal academic work in many Tanzanian HEIs. The main issue is no longer whether these systems should be used. The issue is whether the working conditions around them have developed at the same pace. Academic staff can teach, supervise students and complete administrative duties away from campus, but rules on workload, internet costs, availability, monitoring and institutional support are not always equally clear. This is the main problem identified in this paper. Work can move from the office or classroom to the home or another location, but the support needed to do that work may not always move with it. An academic staff member may use a personal device, buy internet data, work outside normal hours or solve technical problems in order to complete an institutional duty. These are practical issues already connected with digital work in Tanzanian HEIs and they can affect how staffs experience their jobs.

The study does not conclude that remote work is harmful or that Tanzanian HEIs should reduce the use of digital systems. Digital systems can make teaching, supervision and administration easier and more flexible when staff have the right support. The risk appears when expectations increase without clear workload rules, adequate resources and reasonable limits on availability. Tanzanian HEIs therefore need to treat remote and digital academic work as part of normal employment practice and provide clear rules that protect both institutional performance and staff job satisfaction.

5.2 Recommendations

Tanzanian HEIs should continue using digital systems, but the way academic staff are supported should improve alongside the technology. The recommendations below focus on common realities of digital academic work in Tanzania. Develop clear remote and hybrid work rules for academic staff. Institutional policies should explain which duties may be performed away from campus, who approves such arrangements, when staff are expected to be available, how supervision will work, how information will be protected and how performance will be assessed. Support the actual costs of remote academic work. Where academic staffs are required to work online away from campus, HEIs should provide reasonable support for internet access, institutional devices, maintenance and other basic digital needs. Staff should not routinely depend on personal resources to complete institutional duties.

Review workload when new digital systems are introduced. HEIs should consider the time academic staff spend uploading materials, teaching online, supervising students, solving technical problems, completing self-service tasks and entering the same information in different systems. Where digital systems create additional work, that work should be reduced, simplified or recognised in workload planning. Reduce unnecessary duplication between digital platforms. Where possible, HEIs should connect systems, use simple login arrangements and avoid asking staff to submit the same information more than once. Digital systems should save time and make academic work easier, not create extra steps that do not add value.

Set reasonable limits on after-hours availability. Academic work often requires flexibility, but online access should not mean that staff must always be available. HEIs should establish reasonable response times, clear arrangements for urgent matters and periods when staffs are not expected to answer routine messages or system requests. Use monitoring in a fair and clear way. Attendance records and digital system logs can support accountability, but they should not be treated as the only evidence of work. HEIs should explain what information is collected, why it is collected and how it is used. Assessment should also consider actual teaching, supervision, research and administrative outputs.

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Declaration of Interest

The authors declare that they do not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Funding Declaration

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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