e-ISSN: 3007-5297
2024: Vol 1, pp 1-23. https://doi.org/10.38140/ijms-2024.vol1.13
Interdisciplinary Journal of Management Sciences

# Amid and Beyond the COVID-19 Pandemic: Internet Costs for Remote Work by University Lecturers in Tanzania—Who Does the Cap Fit?

**Bikolimana G. Muhihi**[1*]

**AFFILIATIONS**

[1]Department of Community Development and Gender, Moshi Co-operative University, Moshi, Tanzania.

**CORRESPONDENCE**

Email: bikolimana2004@gmail.com*

**EDITORIAL INFORMATION**
Received: 03 June 2024
Revised: 10 August 2024
Accepted: 18 August 2024
Published: 26 August 2024



**DOI: 10.38140/ijms-2024.vol1.13**

**Abstract:** The global COVID-19 pandemic has greatly disrupted education worldwide, including in Sub-Saharan Africa, which was caught off guard. Remote work has become a viable option for maintaining social distancing, even after the pandemic. However, there is limited evidence on who should bear the cost of internet access for remote work. This paper focuses on three research questions: how lecturers perceive remote work, how internet costs hinder remote working, and who should be responsible for covering the cost of internet access. Using a phenomenological approach, the study involved three key informants and sixteen lecturers from four public universities. Data was collected through in-depth interviews and analysed thematically. The results revealed that university lecturers view remote work as important for professional growth. However, the high cost of internet access deters remote working as lecturers struggle to afford data bundles for their work responsibilities. Also, it was found that employers should bear the costs of internet for remote working because it enhances efficiency and job satisfaction. Universities should also revise their policies to provide financial support for lecturers who work remotely, including setting a minimum internet cost per week for all scholars working remotely.

**Keywords:** Internet cost, university lecturers, COVID-19, working from home.

## 1. Introduction

During one-on-one discussions with colleagues on academic issues at the campus, the topic of the challenges of remote working during and after the waves of the COVID-19 pandemic came up. The most commonly mentioned hurdles were the high Internet costs and the need for home office equipment. Some colleagues expressed concern about why remote working should continue if employees have to cover the cost of Internet. I then interjected and asked, in order for remote working to be sustainable and productive, who should be responsible for Internet costs? This sparked a lively debate and ultimately motivated the study.

Remote work, also known as Working from Home (WFH), is not a new phenomenon. However, during the COVID-19 recession, it has become a popular option among many public and private employees, including university lecturers (Asemah & Onyesom, 2021). COVID-19 has further increased its popularity, making it a lifestyle. According to Joo and Kim (2020), COVID-19 has led to academic disaster capitalism in many areas due to various dynamics. Based on experiences from Tanzania, Adebisi and Adetoro (2020) explain that working from home for university lecturers involves conducting online classes, both in real-time and recorded, outside of the traditional classroom setting. It also includes other academic activities such as project proposals, research, teleconferences, and consultations. In Tanzania, as well as in many other parts of the world, the culture of working from home, even after COVID-19, has become well-established, particularly among university lecturers (Felstead et al., 2019). Omodan and Ige (2021) emphasise that most universities in South Africa have shifted their traditional operational strategies to online teaching

**How to cite this article:**
Muhihi, B. G. (2024). Amid and beyond the COVID-19 pandemic: Internet costs for remote work by university lecturers in Tanzania—who does the cap fit? *Interdisciplinary Journal of Management Sciences, 1*, 1–23. https://doi.org/10.38140/ijms-2024.vol1.13

and learning, referring to it as the 'New Normal'. Given the significant changes in the provision of education at higher learning institutions, a similar situation may exist in other contexts. The question then arises: Who should be responsible for Internet costs, whether it's for online activities or working from home?

The modus operandi of university lecturers is unique because it is characterised by prolonged work hours, both on campus and off-campus (Chen & Wang, 2019). According to Alfes et al. (2022), lecturers can still work with or without internet access, as the pandemic has brought significant changes to the world of work, particularly in the field of education (UN, 2020). This shift has introduced both soft and hard dynamics (King, 2020). It is worth noting that working from home (off-campus) requires certain facilities (Sears, 2020). In addition to essential resources like furniture, mobile phones/computers, and alternative electricity installations (Muhihi & Lusambo, 2021), the primary cost lies in internet data bundles (Oliver & Thompson, 2018; Muhihi, 2024). Poor access to reliable and affordable internet services poses a great challenge and raises concerns about the future and sustainability of remote work (Anderson & Rainie, 2020).

Working from home has resulted in increased internet usage among university lecturers (Ram, 2020; Baker & Smith, 2018). Lecturers commonly rely on the internet to design lessons, access reference materials, and conduct real-time online classes (Akhtar & Khan, 2021). However, the equation regarding the cost of working from home remains unbalanced (Benitez & Perkman, 2020). In many developing countries, particularly in Sub-Saharan Africa, the high cost of internet connectivity burdens many lecturers, especially those who are not adequately compensated for working from home (Bello & Ige, 2021). Adams and Jones (2017) agree with Bello and Ige, highlighting internet connectivity as a major challenge for remote work, especially with the integration of new technologies in teaching (Sife et al., 2007).

Quacquarelli Symonds (2020) suggests that university staff worldwide are actively working from home, but face difficulties in accessing internet services due to affordability issues with data bundles (Davis & Thompson, 2020). This situation leads to decreased productivity and has a negative impact on the quality of education (Zickafoose et al., 2024). The report indicates that the number of people working from home had been steadily increasing prior to the pandemic, doubling approximately every 15 years (Bloom et al., 2015). For example, before the pandemic, only around 5% of the typical U.S. workforce worked from home, but at the outset of the pandemic, this percentage skyrocketed to 61.5%. Currently, approximately 30% of employees worldwide work from home (World Economic Forum, 2021).

More than ever in the history of education, university lecturers are increasingly utilising their resources to ensure a seamless online teaching experience (Patel & Sharma, 2019). This raises questions about the equitable distribution of the financial burden between individual lecturers and the institutions they serve (SimmonsSimmons, 2024; Garcia, 2021). Additionally, the lack of clear policies or guidelines on this matter further complicates the situation, leaving lecturers in a precarious position.

Previous studies on remote work (Bloom et al., 2015; Kazekami, 2020; Oakman et al., 2020) have explored various aspects of remote work and its impact on productivity. Bloom et al. (2015) argue that working from home (WFH) can lead to high job performance, increased working time, and reduced sick and break incidents. Felstead and Henseke (2017) also found that remote work improves work-life balance and has positive effects on effectiveness, quality of working life, and family life (Baruch, 2002; Hildred et al., 2024; Oakman et al., 2020). While existing research acknowledges the importance of technological infrastructure for remote work, there is limited information regarding Internet costs among specific worker groups such as university lecturers. Generalisable information in this context remains unclear (McKeown et al., 2022; Ahmad et al., 2022; Ober & Kochma´nska, 2022) due to differences in job or work policies between lecturers and medical doctors.

Therefore, this study aims to unpack and explore the issue of Internet costs from the critical perspectives of specific worker groups by examining lecturers' perceptions and determining who should bear the cost. This is relevant not only during the COVID-19 pandemic but also in post-pandemic times that involve restricted physical contact and social distancing measures. The disclosure of this phenomenon has policy implications and impacts the quality of education provision (Vyas & Butakhieo, 2021). The main objective of this study is to contribute to the current debate on who should pay for the Internet cost during remote working in the provision of quality education. In addition, the study aims to answer three key Research Questions (RQ):

- RQ1: How is the perception of lecturers on remote working
- RQ2: How is the cost of the Internet a barrier to remote working and
- RQ3: Who should bear the Internet cost for remote working

The logical flow of RQs is based on the procedures of scientific establishments in this study. First, whether university lecturers consider remote working as a positive approach that needs further embracement. Then, understanding and establishing the facts on whether Internet cost is a challenge for remote work needs clarity. Lastly, if the first and second RQ indicate negative outcomes, the last RQ loses its meaning. The execution of the last RQ is surely influenced by the first two. RQ3 forms the main foundation of the study.

## 2. Literature Review

The ability of most people to work from home has proved crucial to the resilience of labour markets and mobility during the world crisis of the COVID-19 pandemic (Syverson, 2011). Employees in occupations that offer low wages and those who are self-employed have a great chance of performing their duties from home (Oettinger, 2011). This is mainly due to the cost associated with working from home itself (Glaeser, 2013). The cost includes the Internet and devices that match the nature of work or business. This suggests that the issue of Internet cost for working from home is particularly relevant and concerning (Khawaja et al., 2023). However, the case of university lecturers in Tanzania is peculiar because working from home is overshadowed by a lack of Internet subsidies as a critical motivator.

During the COVID-19 pandemic, Internet access was and still is a critical factor in determining how long a person can remain socially distant; it also determines the level at which some individuals can work remotely (Nguyen & Tran, 2017). Thus, the Internet is considered a must-have for any individuals, including lecturers, planning to work remotely (Smith & Johnson, 2018). Tanzania is a country with a high level of telephone network essential for working from home using the Internet. The availability of the Internet has taken the process of teaching and learning to the next level. This is because reliance on the Internet for searching online resources and conducting online lessons through platforms like Zoom and Google Meet have become pivotal, especially when universities were deferred due to the ongoing pandemic.

In countries like Uganda, there has been less of a switch to working from home by university lecturers, especially in teaching. This has caused prolonged years of schooling among enrolled individuals. One of the impeding factors might be the poor leveraging of Internet connectivity for that course (Kim & Lee, 2019). In other words, remote working, which many universities have resorted to, was crucial in helping learners to excel. To ensure that working from home is efficient, the speed of the Internet matters, as substantiated by Chen and Yang (2021). This is well achieved in Europe, where around 20 of the top 30 countries in the world for Internet speed are found, creating a favourable Internet status for working from home.

In Tanzania, the quality of internet connection is different because the peripheral areas of towns can experience internet blockades and unreliable connectivity at any time (Jones & Brown, 2020). This can interrupt the online classes conducted from home by lecturers and result in a significant loss of

learning opportunities, negatively impacting the academic performance of students. In Kenya, the remote and hybrid work model is embraced more than in any other country in the region. This aims to bring more inclusion and broaden the talent pool by allowing companies to attract employees from across the country and globally (ITM Kenya 2024). However, the reality remains the same regarding who should be paying for internet costs for remote work, especially for university lecturers

While the speed of the internet is questionable in many countries in Sub-Saharan Africa, its cost at the global level is alarming, though it varies from one country to another (Johnson & Smith, 2022). For example, according to Cable UK (2023), the five most expensive countries in terms of the average cost of 1GB of mobile data are Zimbabwe (USD 43.75), the Falkland Islands (USD 40.58), Saint Helena (USD 40.13), South Sudan (USD 23.70), and Tokelau (USD 17.24). Similarly, the five cheapest countries in terms of the average cost of 1GB of mobile data are Israel (USD 0.02), Italy (USD 0.09), Fiji (USD 0.09), San Marino (USD 0.10), and Cambodia (USD 0.12). The status of internet costs for lecturers who work from home in Sub-Saharan Africa varies widely compared to Europe. Thus, it is essential to examine the issue from a critical perspective of the African context, with Tanzania in particular.

Analysis of the internet cost and who should pay for WFH by university lecturers is complex because lecturers in Tanzania are not subsidised, unlike in some developed countries (Wilson & Thompson, 2022). Scholars like Johnson (2023), Smith (2022), Doe (2023), and Garcia (2021) argue convincingly that the internet cost for working from home should be borne by employers. This is imperative because it is unfair to exploit employees who already purchase internet for WFH and are sometimes underpaid. In the same vein, Smith (2022) argues that internet costs should not be shared between employers and employees. The author advocates for employer coverage of remote work expenses, including internet. However, this argument cannot be put into practice without a critical and clear analysis of the governing policy for education in higher institutions and communication policy (Brown & Davis, 2022)

Information shows that in some countries, if a broadband internet connection is required for working from home, the employer can reimburse the employee for the broadband fee, and this reimbursement will be non-taxable (Qureshi, Khawaja, and Zia, 2020). It is worth noting that the rules regarding who should pay for internet access for working from home may vary depending on the country and the specific circumstances of employment (Patel, 2022; Annamalah, 2023). For example, in the United Kingdom, the government introduced a safe harbour threshold of £6 per week for general expenses related to working from home, including the cost of internet access (First Information UK, 2024; Adisa et al., 2023). Additionally, there is the cost of energy for heating and electricity bills (Muhihi & Lusambo, 2022), which are likely to increase when someone stays at home for an extended period. The mortgage rent is 20% of the annual rental cost on the tax return (First Information UK, 2024).

According to SimmonsSimmons (2024), in Germany, employers have a responsibility beyond the Internet to ensure that those who WFH are fully equipped with a good home environment. In China, according to China Briefing (2020), employers are required to provide Internet and all necessary equipment and services to ensure efficient WFH. The necessary equipment includes furniture and shared housing bills, in addition to the Internet. In Sub-Saharan Africa, specifically Tanzania, there has been a paradigm shift towards telecommunications and the Internet (Marcus, 2023). In these areas, the cost of the Internet needs to be scrutinised, especially in cases where lecturers are not compensated. The increasing reliance on remote work, particularly among university lecturers in Tanzania, has highlighted a significant challenge. This is because the burden of Internet costs for working from home falls on the employees' earnings. Therefore, it needs to be addressed.

The demand for digital life among university lecturers is evident, even in the post-COVID-19 period. The academic landscape, like other fields, is adapting to the demands of the digital age. Educators find themselves heavily dependent on Internet connectivity to fulfil their teaching responsibilities

(Matias et al., 2023; Troup & Rose, 2012). With many university lecturers needing reliable and high-speed Internet for virtual lectures, online meetings, and research activities, the economic implications of these expenses become a pressing concern. The issue is complex, encompassing both the financial strain on individual educators and the broader question of institutional or ministerial support through established compensation policies (Sahut & Lissillour, 2023).

In Tanzania, there are various dominant mobile network and Internet providers, especially telecommunication companies such as Tigo, Vodacom, Halotel, and Airtel. The companies have stiff competition in the provision of Internet services. Factors such as the cost of Internet bundles, the amount of data, and the Internet speed trigger the choice of mobile Internet providers (Mrema, 2019). Among these factors, cost is the most important consideration and has direct implications for consumers' expenditure. Temu (2018) noted that the competition among network providers in attracting customers has led to innovation and adjustments in the pricing and distribution of Internet bundles for different periods. The cost of these bundles may change, but the changes are not significant (Mrema, 2019).

While the country has witnessed a substantial increase in internet penetration, concerns regarding the affordability of data plans for a significant portion of the population linger. One of the notable developments in Tanzania's internet landscape is the expansion of 4G and 5G networks and increased competition among service providers (Samson & Ndati, 2022). This has led to improved connectivity in urban areas, fostering a more connected and digitally engaged society. However, challenges persist in rural and remote regions, where infrastructure development remains a hurdle. The cost of internet services also varies across providers, with some offering more competitive rates than others (Tungaraza, 2017). This diversity in pricing underscores the importance of a thorough review to ensure fair and affordable access for all Tanzanians. The cost of the internet in Table 1 presents a broader picture of what internet cost entails and this cuts to lecturers in Tanzania who supposedly teach online classes and work remotely amid the COVID-19 and conditioning thereafter.

***Table1:*** *Cost of Internet bundles for major network providers*

| **TIGO** | | **VODACOM** | | **HALOTEL** | | **AIRTEL** | |
|---|---|---|---|---|---|---|---|
| **Bundle (GB)** | **Cost (TZS)** | **Bundle (GB)** | **Cost (TZS)** | **Bundle (GB)** | **Cost (TZS)** | **Bundle (GB)** | **Cost (TZS)** |
| 0.95 | 2000 | 1.434 | 3000 | 1.475 | 3000 | 1.024 | 2000 |
| 1 | 2100 | 2.46 | 5000 | 2.46 | 5000 | 1.229 | 3000 |
| 1.4 | 3000 | 4.92 | 10000 | 4.925 | 10000 | 2.56 | 5000 |
| 2.4 | 5000 | 7.38 | 15000 | NA | NA | 6.114 | 10000 |
| 4.8 | 10000 | 9.852 | 20000 | NA | NA | 12.288 | 15000 |
| 7.2 | 15000 | NA | NA | NA | NA | NA | NA |

Notes: TZS=Tanzanian Shillings

Source: Compiled from mobile network providers ( March 2024)

Despite the progress made, there is a pressing need for a review of Internet costs because affordability remains a barrier for a significant portion of the population, hindering their ability to fully harness the benefits of the digital era (Malekani, 2018). The government and industry stakeholders must collaborate to implement measures that promote fair competition, incentivise infrastructure development in underserved areas, and ensure that Internet costs are reasonable for all citizens in urban and rural areas. A holistic approach that considers both urban and rural contexts will be crucial in shaping Tanzania's digital future and fostering inclusive economic growth (Mtui & Munubi, 2020). While the level of connectivity or Internet access is not an issue in urban areas, it is the prices that remain a pressing issue, especially for specific groups of users who were forced to work remotely during and in the post-COVID-19 era.

## 3. Methodology

The study used a qualitative design to explore the experiences and perceptions of university lecturers in Tanzania regarding Internet costs associated with working from home during the COVID-19 pandemic. Qualitative design allows for a rich understanding of the complex issues surrounding Internet expenses (Bliss, 2016; Yin, 2017). The study was guided by the phenomenological approach, aiming to capture the essence of lecturers' experiences and perspectives on Internet costs while working remotely during and after the COVID-19 pandemic (Bliss, 2016). Delve and Limpaecher (2022) explain that phenomenology emphasises the subjective and interpretive nature of human experience. It is particularly useful when the goal is to understand the meanings people attribute to their experiences without imposing preconceived theories or frameworks (Delve & Limpaecher, 2021).

The phenomenological approach differs from quantitative research in that it is not primarily concerned with broad generalisation (Qutoshi, 2018). Instead, phenomenological studies aim to gain a deep understanding of the experiences and perspectives of a specific group of individuals who have encountered a particular phenomenon directly (Neubauer et al., 2019). In this paper, the phenomenon being studied is "working from home by university lecturers". Wojnar and Swanson (2007) explain that the phenomenological approach seeks to explore the richness and uniqueness of individual experiences, providing a detailed and contextually rich description of those experiences. Consequently, the findings of a phenomenological study are often limited to the specific context and may not easily be generalised to broader populations (Moran, 2000). However, this does not diminish the value or applicability of phenomenological research. The insights gained from such studies can contribute to a better understanding of the phenomenon being investigated within the specific context of the study (Stewart & Shamdasani, 2014).

The study participants were lecturers from four public universities in Tanzania: Moshi-Co-operative University, University of Dodoma, University of Dar es Salaam, and Muhimbili University of Health and Allied Sciences. The purposive selection was used to obtain participants who have firsthand experience with remote teaching during the COVID-19 pandemic and thereafter. The participants involved a total of 16 university lecturers of varying academic ranks. While this study adopted a qualitative study design using a phenomenological approach, it necessitates a small sample size that is rich in information. For example, Omodan (2020) used a sample size of 15 respondents with thematic analysis, while Olawale et al. (2021) used a sample size of 50 respondents. Fowler (2014) argued that sample size determination should be based on the data analysis plans, specifically thematic analysis in this context. Similarly, Creswell and Poth (2018) explained that sample size determination depends on the qualitative design used, with narrative approaches involving one or two individuals and phenomenology involving a range of 10-20 participants. In grounded theory, the sample size ranges from 20-30 participants.

The process of selecting study participants adhered to three steps. First, I randomly selected the public universities, which was followed by a random selection of departments within each university. Then, communication was established with the respective heads of departments, who volunteered to identify lecturers with experience in remote teaching. The sample size of 16 participants was determined using the principle of data saturation and adequacy (Low, 2019), where new information becomes redundant. This approach ensures a comprehensive exploration of the research question from a broad spectrum of perspectives (Fusch & Ness, 2015; Hennink & Kaiser, 2022; Yang et al., 2022). In their study, Rahimi and Khatooni (2024) explained that saturation in qualitative research is a context-dependent, subjective process that requires detailed systematic analysis. Saturation is used to understand four dimensions: theoretical saturation, code or thematic saturation, data saturation, and meaning saturation.

While the approach of data or information saturation is commonly used to determine sample sizes for qualitative approaches (Hennini & Kaiser, 2022), this study raises valid criticisms about how previous scholars have used and reported the concept of saturation. The question remains: How can researchers determine if saturation has been achieved? Unfortunately, the literature lacks clear answers to this question, although Hennink, Kaiser, and Marconi (2017) argue that saturation is often based on subjective judgment. This idea has been further examined by Kerr et al. (2010), who suggest that saturation cannot simply be determined by stating that codes or themes have been repeated and no new codes or themes have been found. Rahimi and Khatooni (2024) build on this by stating that achieving meaningful saturation requires an iterative and cyclical process of sampling, data collection and analysis, continuous monitoring, and diversity in the clarity and depth of the data. In this study, a partial analysis of the information was conducted to identify trends or indications of saturation within the context. It is challenging to determine data saturation without comparing responses and understanding the extent of saturation itself.

To explore individual experiences related to perceptions of remote working and Internet costs in-depth, Key Informant Interviews were conducted to gather relevant data in line with the research questions. These interviews provided participants with an opportunity to share personal narratives and elaborate on the impact of Internet expenses on their professional and personal lives. The data analysis approach employed was thematic, aiming to identify patterns, recurring themes, and variations in the collected data, following the guidance of Creswell, W., and Creswell, D. (2017). Thematic analysis involved generating codes, categories, and themes in a stepwise manner using NVivo, as shown in Figure 1. The process began with organising and compiling the data into one main file for importation into the software. Coding was then enhanced to facilitate the clear identification of key themes and guide the meaningful categorisation and interpretation of the themes.

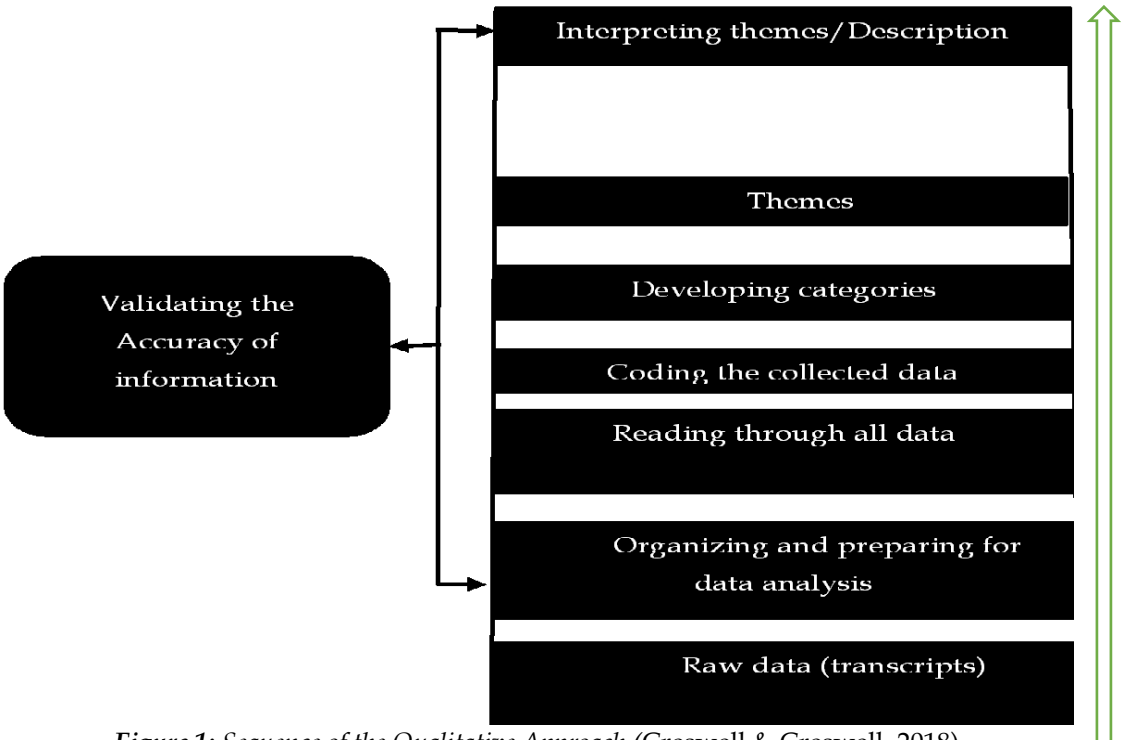


***Figure 1:*** *Sequence of the Qualitative Approach (*Creswell & Creswell, 2018)

Throughout the research process (Figure 1), rigour was enhanced through different strategies, including checking with respondents to establish their experience and interest in remote working

during and post-COVID-19. Peer debriefing and verification of collected data were conducted, and feedback on the results was given to study participants with the purpose of establishing the credibility of the findings.

## 4. Results and Discussion

### 4.1 Analysis of participants

Analysis of study participants (Table 1) reveals that working from home attracts a diverse range of lecturers. Both junior and senior academic-rank lecturers find working from home to be a no-escape zone. The preference for working from home is not segregated and is driven by the significant benefits it offers, such as job satisfaction resulting from reduced interruptions with peers (Lautsch, 2023). Rank does not play a role in determining whether working from home is the best option; it is also pursued to achieve career growth.

***Table 1:*** *Participants distribution and their ranks*

| S/N | Institution | Academia rank of study participants | | | | |
|---|---|---|---|---|---|---|
| | | Assistant Lecturer | Lecturer | Senior Lecturer | Professor | Total |
| 1 | Muhimbili University of Health and Allied Sciences | 1 | 1 | 1 | 1 | 4 |
| 2 | Moshi Co-operative University | 1 | 1 | 1 | - | 3 |
| 3 | University of Dodoma | - | 1 | 2 | 1 | 4 |
| 4 | University of Dar es Salaam | - | 2 | 2 | 1 | 5 |
| **Total** | | **2** | **5** | **6** | **3** | **16** |

While this study's participants do not aim to make comparisons or generalisations but rather to accrue qualitative data, it was found that the landscape of academic staff who prefer working from home is wide. Workers prefer to harness the benefits and flexibility of this approach. The diversity of information from this sample distribution is important, especially in providing a glimpse of how individuals of different ranks feel about working remotely.

### 4.2 Cumulative perception of lecturers on remote working (RQ1)

There is empirical evidence that university lecturers perceive remote working as something of importance in several dimensions, as indicated in the thematic results (Table 2). The positive perception is evidence that in the changing world and due to COVID-19, remote working serves the purpose of social distancing while fulfilling professional duties such as research and teaching among university lecturers. The expression of this positive perception signals that, despite the possible challenges that come along with remote working, job satisfaction at an overall level is likely. This suggests that many educators find value and fulfilment in the flexibility and adaptability that remote work provides.

***Table 2:*** *Thematic results for lecturers' perceptions of remote work*

| Perceptional statements | Expanded summary of thematic ideas | Findings/interpretations |
|---|---|---|
| I have the necessary technology to work remotely. | Computers and Smartphones are useful tools for my online classes with students. Bill was on me for all the devices I had. | Lecturers state that they have relevant technology for remote work. This portrays that they have |

| | | |
|---|---|---|
| | However, some of my colleagues do not use Smartphones, thus limiting their flexibility in remote working. | a positive perception of remote work although they use their funds to buy resources for effective online teaching. |
| There is a seamless collaboration with students in the remote working environment. | Virtual collaboration tools have facilitated smooth communication with colleagues and students and thus enhanced learning and sharing of ideas and experiences. | Remote communication and collaboration among lecturers and students are vital for expanding the horizon of skills. |
| I find it easy to adapt my teaching methods to an online platform. | Initially, it was a challenge to conduct an online class while at home. With time, it became usual and very promising. Remote working is very positive and transformative, given the technological growth and restricted physical contact due to COVID-19. | Lecturers are positive about remote work due to its flexibility, which is caused by technological growth. Also, there is an easy-to-use online platform. |
| The support I receive from the institution for remote working is enough. | The institutional support I receive from my university is not feasible, especially on the financial side, or compensation for the money I used to buy an Internet bundle and other facilities. | While lecturers consider remote work to be beneficial, it is still a challenge for institutions to support them, especially with regard to Internet data bundles. |
| Remote work has allowed for a better work-life balance. | With remote working, there is flexibility in setting friendly schedules that benefit students. Also, remote working offers a balance between work and personal commitments at home. | Remote working offers the best balance of personal life and work. Its flexibility energises both lecturers and students. |
| I find it easy to adapt my teaching methods to an online platform. | There is a challenge in adapting to new remote working because there must be some conducive environment at home for efficient outcomes. | Online platforms are challenging to adapt due to infrastructure demands. Whose phone, computer, and Internet should be used for online classes? |
| I believe that students can engage effectively in remote learning. | Students can engage in online learning, but they are facing the same fate as those faced by lecturers: a shortage of Internet bundles, given their income volatility. | Online learning is very interesting for students but not always. This is especially due to the cost of Internet bundles and willingness to go online. |
| I have encountered challenges in maintaining student engagement during online lectures. | Sometimes, students are not online, and often, they share gadgets to save interment bundles. This is geared at reducing Internet costs on their side. | Internet bundles are a common challenge to students. Economic hurdles are all over. |
| The institution's training and resources for remote teaching are helpful. | The experience regarding remote working is self-paced. There is no training in remote or online teaching; a few depend on the efforts of an experienced person. | Lecturers can self-train in the absence of institutional support or training. |
| I feel connected to my students even though we are not physically in the same lecture room. | Regular virtual classes create behaviour and a sense of connection between lecturer and students, this comes as the result of close interaction cultivated by regular coursework. | There is always a sense of connection, but this will depend on the lecturer's ability to socialise with students. |

| | | |
|---|---|---|
| Remote teaching can be as effective as in-person teaching. | With quality Internet and a home environment, remote work can be effective in attracting the attention of learners, the same as in-person classes. However, this does not happen overnight. | For remote work to be effective, it needs conducive Internet services and a better home environment. |
| I believe that students can engage effectively in remote learning if they are well-motivated. | Students need the motivation to understand how remote classes work. This can bring up a high level of engagement. Students need time to acclimatise to online classes through shared efforts. | Unless students are not motivated or given time to experience, they cannot easily engage effectively in remote classes. |

Remote working gives university lecturers an avenue to engage students in learning while maintaining a high level of collaboration with peers and participating in international conferences for professional growth. The ability to engage in academic activities from diverse locations other than the actual class contributes to a more gratifying professional experience while also enabling the best work-life balance. For example, there was a common idea among the respondents that:

*Remote work melts the demands and pressure of campus duties, which are filled with interruptions from peers and bosses who can, at any given time, assign you some ad-hoc duties. Further, remote work has provided us university lecturers with room to balance work and life. While at home or any other location, multiple duties can be carried out without compromising the quality. We do not need to travel long distances; we can jump online and conduct a lesson, then get back to some other social business once an online class ends. On the other hand, we can record a lesson and share it through our well-established learning system so that students can access it on their own time.*

This statement provides a strong call for university lecturers to agree that their professional lives need to be checked to spare room for personal or social lives. This is only possible with remote working. Academia is significantly demanding because teaching, research, consultancy, and administrative responsibilities can, in different ways, affect work-life balance if predominantly conducted on campus and in real-time only. It is timely to understand that employees need time not only for work but also for social life matters. Kossek et al. (2023) advocate for the need for work-life balance policies, and this is viable through remote work. Moreover, the positive perception extends to the confidence lecturers have in their ability to adapt teaching methods to an online platform. Many educators express ease in transitioning their pedagogical approaches, suggesting a level of comfort and proficiency with remote teaching tools.

Nonetheless, respondents' further comments that:

*In the meantime, without policy support in terms of payment and because of the love for remote working, almost all university lecturers have the necessary technology and compacts for remote work. This is because we are trying to break a few barriers to remote work. Further, the self-financing for remote work is due to hidden benefits such as minimising interruptions at the campus and increasing efficiency in research activities. We also need to be promoted from one rank of academic to another. All these cannot be attained by working while on campus alone. Also, we cannot wait for university funds to capacitate research and publications. It is one's efforts that determine how you will excel in research and career.*

Despite the notable challenges of remote working, there is a prevailing adaptability that is crucial for maintaining the quality of education during periods of remote instruction. The positive responses in this regard underscore the resilience and resourcefulness of university lecturers in embracing technological advancements for effective teaching in virtual environments. Anasel and Swai (2023) argue that embracing technology is cultivated by preconceived perceptions, mainly those associated with the ability to prepare and achieve goals.

In conclusion, the positive perception of university lecturers on remote working is multifaceted, encompassing job satisfaction, work-life balance, and adaptability in teaching methods. In support of this, Coenen and Kok (2014) posit that telework offers workplace flexibility and flexible work schedules. It also boosts productivity and eliminates unkind interruptions (Farooq & Sultana, 2022). The findings of this study not only shed light on the advantages of remote work in academia but also emphasise the importance of continued support for lecturers aiming to improve their performance and career growth. This was also narrated by Lee and Kim (2022), who found that remote work easily boosts the academic performance and satisfaction of workers.

### 4.3 Internet cost as a barrier to remote work (RQ2)

While university lecturers loudly promote remote working as a useful experience, it remains important to find answers to the research question, "How does the cost of the Internet stand as a barrier to remote work?" As training institutions adapt to hybrid work models of both physical and remote working, the most alarming challenge calling for close attention is the cost of the Internet. In Table 3, the information shows that in some instances, respondents have failed to conduct online classes due to unaffordable Internet bundles. This is an alarming occurrence that requires procedural and policy intervention. The unbearable cost has a negative effect on productivity, as the speed of conducting or engaging in academic work at the local and international levels is limited.

***Table 3:*** *Thematic results on whether Internet cost is a hurdle to remote work*

| S/N | Questions | Thematic response | Interpretation of Themes |
|---|---|---|---|
| 1. | How is the cost of the Internet a barrier to your remote work during and after COVID-19? | University lecturers have their efficiency reduced when it comes to personal funding of the work they are employed to do by the government. There is a high cost of Internet bundles coupled with a high rate of data depreciation, which restricts access to reliable Internet for remote work. | The Internet cost is unbearable for remote working, yet the speed at which the data bundles depreciate is unthinkable. |
| 2. | How did you face challenges in affording high-speed and reliable Internet services for remote work? | There has been repeated disruption during online classes. This was due to the little bundle of Internet that is not reliable in terms of speed. Likewise, the speed of the Internet depended on the supplier subscribed to by lecturers and the location where one resides. | The cost of the Internet is an outcry of lectures for remote working. The high-speed connection is limited due to the location. |
| 3. | In what ways has the financial responsibility on Internet expenses negatively affected you in remote working | Due to a lack of financial plans for remote work, on several occasions, I opted for a lower tier of Internet bundle, which sometimes resulted in lesson postponement and regular disconnection due to bundle expiration. | Productivity is always compromised due to Internet costs. |

| | | | |
|---|---|---|---|
| 4. | How is it true that the cost of Internet services has led to disproportions in remote working experiences among university lecturers? | The cost of the Internet creates disparities, especially for those workers with lower incomes. Individuals with lower incomes have limited access to remote work opportunities, widening the gap in career growth. | Lecturers have varying capacities to afford Internet costs. |
| 5. | What kind of solutions do you suggest in dealing with financial responsibilities caused by Internet costs for remote working during and post Covid19 | Employer-sponsored Internet subsidies would be immensely helpful. Initiatives to provide affordable Internet options for remote workers would ease the financial burden. There can be collaborations between Universities and providers who can waive some costs for lecturers. | Employer assistance to alleviate financial burdens related to Internet costs is the best option. Collaboration with providers is also important. |
| 6. | Did it happen that you compromised the quality of teaching due to the cost and speed of Internet service while working remotely? | I have had to opt for a cheaper Internet bundle plan. This compromise has affected my ability to attend virtual meetings without disruptions and has slowed down my overall work tasks because I must rush the lecture to ensure that I cover a few key subject matters. | Lecturers can hardly afford Internet costs for remote work. A cheaper option for data bundles is not a sustainable solution. |
| 7. | Has the cost of the Internet affected your participation in various online training and collaboration during and after the COVID-19 pandemic? | The cost has led to connectivity issues during virtual meetings, causing frequent disconnections. This has hindered my active participation and collaboration with colleagues, impacting teamwork. Sometimes, I must select cheap options from different mobile network providers. | The cost of the Internet is still a challenge for lecturers' effective participation in online classes and virtual meetings. |
| 8. | Do you think some other colleagues failed to work remotely due to Internet costs during and after the COVID-19 pandemic? | Some colleagues have had to postpone or opt for a cheap approach of sharing materials through email. This was caused by the high cost of the Internet, which went hand in hand with a low survival rate of Internet bundles from different mobile network suppliers. | Internet cost remains a challenge across the context of remote working. |
| 9. | How is it true that the cost of Internet services has caused a digital divide among university lecturers who prefer to work remotely? | For sure, the digital divide is evident among many university lecturers. Those who can afford the Internet have more opportunities for professional growth. The cost barrier limits access to online training and career growth. | The cost of the Internet limits the opportunities for professional growth among lecturers. |

The experiences of university lecturers regarding whether internet costs negatively affect remote working from excelling. The financial constraints posed by internet costs during and in the post-COVID-19 era have dramatically affected university lecturers' ability to pay for internet costs, especially for bulk use in most remote works. Lecturers have had repeated disruptions of the internet during online classes and conferences, and sometimes a failure to access some potential resources for research.

Many factors commonly cause disruptions of the internet, but in this firsthand scenario, the limited internet bundles and sometimes unreliable internet connection caused chaos and long-time disruptions. Likewise, the speed of the internet depended on the supplier subscribed to by lecturers, which also affects the remote work sessions. Tanzania is known for its slow internet and is ranked 162nd in the world (Cable UK, 2023). This is evidence that the internet cost is a limiting factor and remains a prevalent concern that needs acute intervention. The narrations from users who have experience in remote work highlight that:

*University lecturers have different ranks and benefits that come not only along the ranks but also as the results of the managerial position. To some lecturers, especially those in high ranks, purchasing Internet bundles at their expense can hardly be a case to debate because they are endowed. On the contrary, some lecturers are facing the greatest financial challenges to the level that accessing the Internet at private expense becomes a challenge. That is why you will find that those in high ranks can access Internet sources now and then, and in so doing, they are likely to excel by being exposed to different opportunities such as teleconferences and collaborations in terms of research. Thus, the cost of the Internet creates disparities, especially for those workers with lower incomes. Individuals with lower incomes have limited access to remote work opportunities, widening the gap in career growth.*

The cost of the Internet is felt negatively, as information from respondents strongly shows that remote work cannot be smooth if the cost is still high, limiting online operations. The staff in high ranks sound like they are subsidised for various benefits that come along. This sentiment is further underscored when participants describe facing challenges in affording high-speed or reliable Internet services. Instances of compromised Internet quality leading to disruptions during virtual meetings and slower task completion emerge as common themes. The financial burden of Internet expenses is highlighted as a hindrance to productivity, impacting the quality and timeliness of work.

In a similar context, synthesised information from a combination of responses has a significant impact:

*Due to high Internet costs, we university lecturers have our efficiency reduced when it comes to personal funding for the work we are employed to do by the government. Even before or after the COVID-19 pandemic, the cost of the Internet has always been on lecturers. Even while on campus and the Internet is dwindling, the university is still far from making this scenario a concern, especially if the lecturers are using their own out-of-pocket. There is a high cost of Internet bundles, and this restricts access to reliable Internet for remote work.*

The statement is evidence that concerns about the cost of the Internet are directly affecting and causing inefficiency among lecturers. This inefficiency can be seen in various ways, such as limited access to academic conferences, a narrower range of online sources and databases, and reduced time and content for online classes, which negatively impact students. The effects of Internet costs extend beyond remote working, as the Internet on campus is sometimes unreliable, leading university lecturers to spend their own money on purchasing Internet bundles from mobile providers. The information synthesised from participants states the following:

*There is a bad norm at my university and of course, in all Universities in Tanzania as I know, the norm itself is that sometimes our immediate supervisors can schedule an online meeting while he/she understands that there is no Internet connection at the campus, leave it alone when I am at home. This means that the concerned person should ensure that he/she has purchased enough data bundles for the online schedule. There are so many*

*inconveniences when lecturers should work from home, "I have sent you an email with an attachment, please! read and work on it" the immediate supervisor can be heard on the telephone instructing the junior staff during the after-job hours. It has become automatically known that my Internet can be used for public work. Sometimes I never go online while ensuring that my Internet bundle is not exhausted. Unless there is a friendly mechanism, the university lecturers will fail to reach their academic and institutional goals.*

Participants raised concerns about how the cost of Internet services contributes to disparities in remote working opportunities across different socioeconomic groups. The belief that higher income levels are linked to access to high-speed Internet suggests that a digital divide is widening. This divide goes beyond remote work, potentially limiting opportunities for professional development and service provision. The challenges faced by individuals in choosing between allocating funds to Internet expenses or other work-related necessities highlight the complexities of navigating a remote work environment with limited resources. Despite these challenges, participants offer insights into potential measures and support systems that could help alleviate the financial constraints posed by Internet costs for university lecturers.

Potential solutions to consider include employer-sponsored Internet subsidies and governmental initiatives to provide affordable Internet options. Recognising the importance of collaboration between employers and policymakers is crucial in addressing the digital inequalities that have emerged as a result of widespread remote work. The discussion underscores the multifaceted impact of Internet costs on the post-COVID-19 remote work landscape. While remote work offers unprecedented flexibility, the financial burden of Internet expenses creates challenges that extend beyond the individual and may contribute to broader professional disparities. The results highlight the need for proactive measures and collaborative solutions to ensure that all university lecturers have access to the benefits of remote work for fair and quality education. As organisations and policymakers navigate the changing work landscape, addressing these challenges becomes imperative for fostering an inclusive and equitable remote work environment.

## 4.4 Bearer of Internet cost for remote work in Universities (RQ3)

While it is widely agreed that the cost of the Internet poses significant challenges and barriers to working from home, an important question arises: 'Who should bear the cost?' The significant themes extracted from key informants and in-depth interviews, as presented in Table 4, shed new light on this fundamental question. Seven categories were identified, including the university as an employer and university lecturers as employees. The overall description of the generated theme reveals that university lecturers emphasise the responsibility of the university and the government (employers) to address issues related to Internet costs through governing policies and regulations. The Internet is a crucial tool for remote work, and it should be the employers' responsibility, rather than the employees', to ensure its affordability. University lecturers need relief from the burden of balancing income for their dependents and government work.

***Table 4**: Response on who should pay the Internet cost for remote working*

| Codes | Category | Theme | Description/Interpretation |
|---|---|---|---|
| Financial cost | University or employer. | Financial responsibility for universities. | The University/employer should take the lead in ensuring that all dues regarding the Internet are paid. Whenever lecturers incur costs on the Internet, compensation should be sought under a well-established process. |
| Financial cost | University lecturers | Financial responsibility for lecturers | The lecturers' responsibility for incurring Internet costs is not sought. |

| | | | |
|---|---|---|---|
| | | | There is financial suffering that comes along when they purchase Internet using their income. This means that the employers should bear the responsibility. |
| Responsibility | Shared responsibilities | Equitable Distribution | Equitable distribution is hard to attain because employees can hardly agree to spend from their pockets to fulfil the duties assigned by the employer. The duty remains on the employers to ensure that the work environment is smooth, especially by ensuring that the Internet as an important tool is available to smoothen remote work. |
| Fair distribution of financial responsibilities | Individual responsibilities | Equitable distribution of financial resource | The university should avoid delegating financial responsibilities to its employees. Instead, there must be enough funds allocated to individual lecturers to sustain Internet costs in remote work. Yet, a refund program should be sought for those who happen to use their resources. Fair distribution of funds should be sought from the employers' basket to all workers in academia. |
| Policy Concerns for Universities | University Policies | Policy and Guidelines | The universities have no existing policies that provide conducive support for remote work. It is imperative to include remote work coverage in policies and regulations that govern teaching activities. |
| Policy concerns for the government | Government regulations | Policy and Guidelines | The government intervention in imposing special Internet offers for university lecturers is important. The process should be stipulated in a respective policy and offering guidelines. University lecturers are on duty throughout the year and the holidays might sound less realistic because they might be on holiday for a special research project or authorship geared at a person and professional growth. |
| Financial burden | Financial burden | Impact on Lecturers | University lecturers have reported a prolonged financial burden that is placed on them when it comes to Internet costs even after COVID-19. Exhausted by daily communication |

on the Internet where information is sent on social media and email. Yet, the cost of accessing them is entirely on lecturers especially when Internet access is not possible at the campus.

Information shows that, although the current trend places financial responsibility on lecturers who are not in harmony with such practices, it furthers financial stress on their living. Study participants confessed that:

*It is an unpleasant practice, anytime students can check on you and establish Internet-demanding communication. It is not only students but also immediate supervisors who can take on Internet demand duties. They do so know that they have not contributed to the Internet cost on my mobile phone. Most of the time I may be online for the Internet bundle that I have purchased for private use. Interruption by the inflowing duties always cultivates the exhaust of my Internet. This is hurting financially. Leave alone the Internet cost and the burden it places upon lecturers, there is another unspoken cost based on normal reach out where all communication between students and lecturers is financed by lecturers and students on the other end. While this may seem out of context, I want to make it clear how an employer can pay for work-related communication.*

Working from home is a popular trend in education provision and development, and it is likable and very productive. However, its suitability, sustainability, and productivity can be assured if there is a new rethinking on how the government and the universities at large can accommodate the cost of Internet in their plans. This will ultimately reduce the financial pressure on lecturers, allowing them to concentrate on teaching and professional growth through research and consultancies. Information from study participants shows high levels of dissatisfaction with being delegated the sole responsibility of purchasing the Internet for working from home. Equitable distribution of financial resources among lecturers can be easily achieved if employers and universities provide adequate financial resources for remote work. Faculty members have different personal financial capabilities, and there is a diversity of income status between senior and junior members of staff. Under current practices, junior members are unlikely to spend more of their income on the Internet to fulfil remote work responsibilities. Additionally, there is a disparity in the quantity and quality of Internet bundles caused by affordability issues stemming from income volatility among workers in academia. These differences in access to the Internet will often result in differences in access to opportunities in the work environment. It is important to ensure inclusivity and that all faculty members have access to the best environment and Internet resources to excel equally in remote teaching and other related activities geared toward academic excellence. Respondents infer that:

*In some circumstances, I missed online gatherings, especially those that took a long time. This is not my wish, but I find it hard to fetch money from my basket of expenditures. One thing our immediate supervisors are not aware of is that we workers might have Internet bundles on our mobile phones, but the bundles are not meant to cater to government work. Cost on Internet bundles should be treated the same way as our duty-based journey. If I travel for some official duties, I never use my resources such as money and car. The employer has specific means to accommodate my requirements for the trip. If I use my resources, especially money, there is a special way of claiming for refund. I hope now you understand what I was communicating. A similar approach should be used when it comes to Internet bundles for remote work. There are inclusivity and equitable resources for lecturers who travel on official duties, and we need the same for Internet services.*

The respondents' feelings are genuine, and they directly reflect the belief that employers should bear the brunt of internet costs, especially in the modern approaches to teaching in higher education, where classroom contact between students and lecturers is decreasing. However, researchers engage in a range of academic activities through remote workspaces. These activities include attending international conferences, collaborating on research projects, and pursuing professional growth through consultancy and community services. With a positive attitude towards remote work, it is

clear that this approach helps to reduce costs such as travel expenses and time, as well as eliminate road risks. This observation was also reported by Farooq and Sultana (2022), who concluded that remote work offers employees in many organisations benefits such as flexibility, autonomy, time savings, and improved efficiency.

University lecturers have already made significant efforts to ensure that remote work is a reality. This is evident through their substantial contribution of resources beyond just financial support. For example, information obtained from in-depth interviews, as reported by the respondents, indicates that:

*We are already spending a lot on electricity and a home working (office) environment. These all are to ensure a conducive working environment in our home places. These efforts are not recognised by our employers, just like they do on Internet costs. We are employees and not employers; we need facilities to relieve ourselves from the cost that comes with remote work. Universities as employers should stand on their feet and bear the Internet cost. It is their responsibility to recognise our deep efforts to provide quality education.*

This information portrays a complex and significant meaning. It is certain that the employers have not done their part. It is crystal clear that there is a division of responsibilities between employers and employees. The employees are responsible for creating a home office, ensuring electricity connection, and paying for the supply and general maintenance bills using their own resources. On this topic, some scholars have indicated that working from home easily comes with added expenses. High-earning workers are better equipped to handle these mounting expenses compared to workers with unstable incomes. Employees who work from home are likely to increase household expenses by up to 20% more than those who work full-time in a physical office (International Labour Organization, 2021). However, this claim can be contested. In the context of this study, it is evident that there are certain one-time expenses that can increase office maintenance costs at home. On the other hand, costs related to commuting to the workplace, such as transportation fare, will be eliminated, allowing for a large sum of money to be saved for other purposes.

There was a commonality in the responses of the key informants. Their responses recorded similar themes during the in-depth interview. One key informant with a managerial position concluded that:

*It is the university's financial responsibility to ensure that lecturers are provided with secure Internet for both on and off-campus duties. However, the challenge is how to manage and control the way the Internet can be used, especially in this era of multiple social media platforms.*

While the above thematic response is valid, other informants agreed with the cost of the Internet. In these narrations, it was clear:

*Issues of Internet cost for remote work are a genuine demand given our current modality of teaching, where lecturers sometimes need not be on campus to execute some duties, especially those related to teaching. It is crystal clear that universities need to take that it account, but it should be through well-established financial policies and guidelines.*

The managerial position is that the university can bear the internet costs. However, there are still some worrisome ideas on how internet resources will be managed. Personal use of public resources is an alarming risk if lecturers are provided with Internet for remote working. However, this can rarely be the case because estimates can be made to arrive at possible average costs. The purpose should not be to meet the total actual cost or the true internet bundle someone can use for remote working because it is difficult and probably impossible to calculate that. The provision of the Internet is geared towards increasing managerial and policy concerns in the provision of education. The question remains: how long can these demands be put into practice? It is paramount to ensure that there is quality and sustainability concern for employees to continue using their income to run government or employer's businesses.

## 5. Conclusion

This study was conducted to answer three research questions. RQ1 was based on the perception of lecturers regarding remote working. RQ2 focused on how the cost of the Internet acted as a barrier to remote working. Finally, RQ3 investigated who should bear the cost of Internet for remote working. It was evident that for RQ1 and RQ2, there was a positive perception of the importance of remote working among university lecturers. Remote working is seen as highly valuable due to the dynamic work environment it offers, as well as the opportunities for personal and professional growth. However, the study also found that the cost of Internet is a significant concern that needs attention for sustainable remote work among university lecturers, who are typically remote workers. The high cost of Internet inhibits fairness and equity in accessing professional opportunities, as it consumes a significant portion of workers' income. Universities, as employers, should prioritise addressing Internet costs. It is crucial to create incentives for remote working by ensuring that lecturers have access to Internet at home, which could be achieved through subsidies. This would elevate remote working to a higher standard of quality and sustainability compared to the current conditions. Supportive measures create higher efficiency and job satisfaction among workers.

## 5. Recommendations

The universities, through the Ministry of Education, Science, and Technology, should establish policies that address the financing of remote work, specifically the cost of internet access. Modern education is shifting from traditional classes to online platforms, allowing for flexibility in where lecturers can work. It is crucial for universities to collaborate with private partners to ensure lecturers have reliable and high-speed internet access. Mobile internet providers can enrol all university lecturers in the country and provide subsidised internet services through responsible organisations. Additionally, universities should consider including individual internet packages for lectures in their annual budgets to encourage the transition to digital teaching and learning applications.

## 6. Declarations

**Funding:** This research did not receive any external funding.

**Acknowledgements:** Respondents who took part in this study are acknowledged for providing timely responses.

**Conflicts of Interest:** The author declares no conflict of interest.

**Data availability:** The data for the study can be found in the body of the work. However, more information is available from the corresponding author upon reasonable request.

## References

Adams, R. L. & Jones, P. Q. (2017). Challenges and opportunities of remote work during the COVID-19 pandemic: A qualitative study. *Journal of Occupational Health Psychology*, *25*(3), 112-125.

Adebisi, Y.A., & Adetoro, N. (2020). The impact of COVID-19 on remote teaching: A case study of university lecturers in Tanzania. *Journal of Educational Technology and Society*, *23*(34), 118-131.

Adisa, T. A., Ogbonnaya, C., & Adekoya, O. D. (2023). Remote working and employee engagement: a qualitative study of British workers during the pandemic. *Information Technology & People*, *36*(5), 1835-1850. https://doi.org/10.1108/ITP-12-2020-0850

Ahmad, N. S., Ismail, A., & Husain, Z. (2022). Psychological well-being impacts among university students on online learning during the COVID-19 pandemic. *International Journal of Public Health Science*, *11*, 1037–1045.

Akhtar, R., & Khan, M. S. (2021). Digital divide and the challenges faced by university lecturers in remote teaching. A case of Tanzania. *International Journal of Educational Technology in Higher Education*, *18*(1), 1–20.

Alfes, K., Avgoustaki, A., Beauregard, T. A., Cañibano, A., & Muratbekova-Touron, M. (2022). New ways of working and the implications for employees: a systematic framework and suggestions for future research. *The International Journal of Human Resource Management, 33*(22), 4361–4385. https://doi.org/10.1080/09585192.2022.2149151

Anasel, M. G., & Swai, I. L. (2023). Factors to determine the adoption of online teaching in Tanzania's Universities during the COVID-19 pandemic. *PLoS ONE*, *18*(10), e0292065. https://doi.org/10.1371/journal.pone.0292065

Anderson, K. J., & Rainie, L. (2020). *The future of remote work after COVID-19*. Pew Research Center.

Annamalah, S., & Paraman, P. (2023). The economic impact of remote work: Unpacking regional transformations and economic multipliers. *Journal of Applied Economic Sciences*, *3*(81), 160–168. https://doi.org/10.14505/jaes.v15.3(81).03

Asemah, E.S. & Onyesom M. (2021). Remote working and the COVID-19 pandemic: A case study of university lecturers in Tanzania. *International Journal of Education Research and Development*, *6*(1), 1-10.

Baker, E. K., & Smith, F. G. (2018). Internet accessibility and remote work: A case study of university faculty. *Journal of Education Technology and Society*, *21*(4), 87-98.

Baruch, Y. (2002). Teleworking: Benefits and pitfalls as perceived by professionals and managers. *New Technology, Work and Employment, 15*(1), 34–49. https://doi.org/10.1111/1468-005X.00063

Bello, R. S., & Inge, I. A. (2021). Assessing the challenges of Internet connectivity for university lecturers in Tanzania during the COVID-19 Pandemic. *International Journal of Emerging Technologies in Learning*, *16*(23), 181-194.

Benitez, J. L., & Perkman, M. (2020). Remote working: Examining the impact of COVID-19 on Internet use among university lecturers in Tanzania. *Journal of Information Technology and People*, *34*(4), 1024-1040.

Bliss, L. (2016). Phenomenological Research: Inquiry to Understand the Meaning of People's Experiences. *International Journal of Adult Vocational Education and Technology,* 7(3), 14–26.

Bloom, N., Liang, J., Roberts, J., & Ying, Z. J. (2015). Does working from home work? Evidence from a Chinese experiment. *The Quarterly Journal of Economics, 130*(1), 165–218. https://doi.org/10.1093/qje/qju032

Brown, L., & Davis, C.(2022). Internet reliability and interruptions: Implications for online teaching and learning in Africa. *Journal of Information Technology in Education*, *15* (3), 178–191.

Cable, U. K. (2023). Worldwide mobile data pricing: The cost of 1GB of mobile data in 237 countries Measured from June to September 2023. https://www.cable.co.uk/mobiles/worldwide-data-pricing/#resources?trk=article-ssr-frontend-pulse_little-text-block

Chen, L., & Wang, M. (2019).The digital divide in higher education: Implications for remote work among university lecturers. *Computers and Education, 132*, 112-125.

Chen, Y., & Wang, L. (2021). Internet speed and remote work: A comparative analysis of Europe and Africa. *Journal of Comparative Telecommunications*, *15*(2), 89-102.

China Briefing. (2020). Securing your China remote work strategy against internet vulnerabilities. https://www.china-briefing.com/news/china-remote-work-strategy-it-challenges-solutions/

Coenen, M., & Kok, R.A.W. (2014). Workplace flexibility and new product development performance: The role of telework and flexible work schedules. *European Management Journal*, 32 (4), 564-576. https://doi.org/10.1016/j.emj.2013.12.003

Creswell, J. W. & Creswell, J. D. (2018). *Qualitative, quantitative, and mixed methods approaches* (5th ed). London: SAGE Publications Inc.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approach* (4th ed.). Sage Publications

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: Sage.

Davis, S. H., & Thompson, L. P (2020). Internet affordability and remote work: A survey of university lecturers in Tanzania. *International Journal of Education Development*, 78, 270–279.

Delve, H., & Limpaecher, A. (2021). The practical guide to grounded theory: Practical guide to grounded theory research. https://delvetool.com/groundedtheory

Delve, H., & Limpaecher, A. (2022). What is phenomenological research design? Essential guide to coding qualitative data. https://delvetool.com/blog/phenomenology

Doe, J. (2023). Examining the financial ethical dilemma: Should employees shoulder the burden of Internet expenses for remote work? *Journal of Employment Ethics*, *12*(3), 167–180. https://doi.org/10.1177/1049732316665344

Farooq, R., & Sultana, A. (2022). The potential impact of the COVID-19 pandemic on work-from-home and employee productivity. *Measuring Business Excellence*, *26* (3), 308-325. https://doi.org/10.1108/MBE-12-2020-0173

Felstead, A., & Henseke, G. (2017). Assessing the growth of remote working and its consequences for effort, well-being, and work-life balance. *New Technology, Work and Employment, 32*(3), 195-212. https://doi.org/10.1111/ntwe.12097

Felstead, A., Henseke, G., & Jewson N. (2019). The expansion of remote working and implications for the UK's decarbonisation ambitions. *Journal of Carbon Management*, 10(1), 41–52.

First informations. (2024). Working from home expenses you should be claiming. https://www.1stformations.co.uk/blog/working-from-home-7-expenses-you-should-be-claiming/

Fowler, F. J. (2014). *Survey research methods* (5th ed.). Thousand Oaks, CA: Sage.

Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report*, *20*(9), 1408-1416. https://doi.org/10.46743/2160-3715/2015.2281

Garcia, C. (2021). Internet cost in remote work: A comparative analysis for employer responsibility across countries. *International of workplace policies, 8*(2), 55–68.

Gerald, O. (2011). The incidence and wage consequences of Home-Based Work in the United States, 1980–2000. *Journal of Human Resources, 46*(2011), 237–260.

Glaeser, E. (2013). Employees belong in cities, not just in cubicles. *Bloomberg News*.http://www.bloomberg.com/news/2013-03- 06/employees-belong-in-cities-not-just-in-cubicles.html

Hennink, M., & Kaiser, B. N., (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, *292*, 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017). Code saturation versus meaning saturation: how many interviews are enough? *Qualitative health research, 27*(4), 591–608.

Hildred, K., Piteira, M., Cervai, S., & Pinto, J. C. (2024). Strategic career behaviours among hybrid workers: testing a general European model. *Frontiers in Psychology*, *15*, 1347352. https://doi.org/10.3389/fpsyg.2024.1347352

International Labour Organization. (2021). ILO Modelled Estimates and Projections (ILOEST). https://webapps.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/ travail/documents/publication/wcms_864222.pdf

ITM Kenya. (2024). The future of work: Trends shaping the workplace in Kenya. https://www.itm-kenya.com/news/the-future-of-work:-trends-shaping-the-workplace-in-kenya?_id=6661afb00242e9211a98dd19

Johnson, A. (2023). The case for employer responsibility: Internet cost in remote work. *Journal of Telecommunicating Studies*, *7*(2), 123-135

Johnson, K., & Smith, P. (2022). Internet connectivity issues and their impact on online education in Africa. *Journal of African Studies in Education, 6*(2), 78-91.

Jones, R., & Brown, M. (2020). Remote working and its impact on education: A global perspective. *International Journal of Education and Development*, *78*, 102345.

Joo, Y., Oh, Y., & Kim Y., (2020).The impact of Covid-19 on Teachers's Working conditions; Academic disasters and capitalism? *Journal of Education Policy Archives*, 28(149), 1-28.

Kazekami, S. (2020). Mechanisms to improve labour productivity by performing telework. *Telecommunications Policy, 44*(2), 101868. https://doi.org/10.1016/j.telpol.2019.101868

Kerr, C., Nixon, A., & Wild, D., (2010). Assessing and demonstrating data saturation in qualitative inquiry supporting patient-reported outcomes research. Expert review of Pharmacoeconomics & outcomes research, 10 (3), 269–281. https://doi.org/10.1586/erp.10.30

Khawaja, S., Anjos, E., & Qureshi, F. (2023). The impact of the pandemic (COVID-19) on higher education students: Challenges, adaptations, and future perspectives. *Creative Education*, *14*, 2207-2227. https://doi.org/10.4236/ce.2023.1411140

Kim, S., & Lee, H. (2019). Leaving Internet connectivity for remote teaching; Lesson from Uganda. *Journal of Educational Technology and Society*, *22*(4), 134-147.

King, Z. (2020). How COVID-19 has changed the way we work. *Harvard Business Review.* https://hbr.org/2020/10/how-covid-19-has-changed-the-way-we-work

Kossek, E. E., Perrigino, M. B., & Lautsch, B. A. (2023). Work-life flexibility policies from a boundary control and implementation perspective: A review and research framework. *Journal of Management, 49*(6), 2062-2108. https://doi.org/10.1177/01492063221140354

Lee, J., & Kim, S. (2022). Remote work and academic performance: A comparative study between Europe and Africa. *International Journal of Comparative Education and Development, 20*(2), 112-125.

Low, J. (2019). A pragmatic definition of the concept of theoretical saturation. *Sociological Focus, 52*(2), 131–139.

Malekani, A. A. (2018). Access to, use and challenges of ICTs in secondary schools in Tanzania: A study of selected secondary schools in Morogoro municipality. *Journal of Information and Knowledge Management*, *9*(2), 44 – 57. https://doi.org/10.4314/iijikm.v9i2.4

Marcus, J. S. (2023). COVID-19 and the shift to remote work. In beyond the pandemic? Exploring the impact of COVID-19 on Telecommunications and the Internet. *Emerald Publishing Limited*, 71–102. https://doi.org/10.1108/978-1-80262-049-820231003

Matias, A. B., Falcão, M. T. C., Grosseman, S., Germani, A. C. C. G., & Silva, A. T. C. D. (2023). The COVID-19 pandemic and teachers' work: Perceptions of teachers from a public university in the state of São Paulo, Brazil. *Ciência & Saúde Coletiva, 28*, 537-546. https://doi.org/10.1590/1413-81232023282.11972022

McKeown, J. S., Bista, K., & Chan, R. Y. (2022). *Global higher education during COVID-19: Policy, society, and technology*. STAR Scholars.

Moran, D. (2000). *Introduction to phenomenology*. Routledge.

Mrema, E. (2019). Competition and Innovation in the Tanzanian Mobile Telecommunications Market. *International Journal of Scientific and Research Publications*, *9*(4), 1-7.

Mtui, J., & Munubi, E. (2020). Mobile money and financial inclusion in Tanzania: A case of Vodacom M-Pesa Service. I*nternational Journal of Innovative Research and Advanced Studies*, *7*(5), 18-25.

Muhihi, B. G. (2024). Affordability of electricity to rural consumers in Tanzania: An elephant in the room? *Interdisciplinary Journal of Rural and Community Studies, 6,* 1-20. https://doi.org/10.38140/ijrcs-2024.vol6.02

Muhihi, B. G., & Lusambo, L. P. (2022). PLS algorithm for estimating quality rural electricity on household income in Tanzania. *Technological Sustainability, 1*(2), 160-183. https://doi.org/10.1108/TECHS-01-2022-0004

Muhihi, B. G., & Lusambo, L. P. (2021). Electricity for information and communication technology adoption in rural areas, Tanzania. *Journal of Co-operative and Business Studies, 6*(1), 2714-2043.

Neubauer, B. E., Witkop C.T., & Varpio, L. (2019). How phenomenology can help us learn from the experiences of others. *Perspect Med Educ, 8*(2), 90-97. https://doi.org/10.1007/s40037-019-0509-2

Nguyen, H. H., & Tran, P. T. (2017). Internet access and its impact on remote work: A case study of university lecturers in Tanzania. *Journal of African Studies, 33*(2), 131-143.

Nicholas B., James L., John R., & Zhichun J.Y. (2015). Does Working from Home Work? Evidence from a Chinese Experiment. *The Quarterly Journal of Economics*, *130*(1), 165–218, https://doi.org/10.1093/qje/qju032

Oakman, J., Kinsman, N., Stuckey, R., Graham, M., & Weale, V. (2020). A rapid review of mental and physical health effects of working at home: How do we optimise health? *BMC Public Health, 20*(1), 1–13. https://doi.org/10.1186/s12889-020-09875-z

Ober, J.; & Kochma´nska, A. (2022). Remote Learning in Higher Education: Evidence from Poland. *International Journal of Environmental, Research and Public Health*, 19, 14479. https://doi.org/10.3390/ijerph192114479

Olawale, B. E., Mutongoza, B. H., Adu, E. O., & Omodan, B. I. (2021). COVID-19 induced psychosocial challenges in South African higher education: Experiences of staff and students at two rural universities. *Research in Social Sciences and Technology*, *6*(3), 179-193. https://doi.org/10.46303/ressat.2021.37

Oliver, R. K., & Thompson, S. B. (2018). The role of Internet infrastructure in facilitating remote work: perspectives from university lecturers in Tanzania. *Development Policy Review*, 32 (4), 520-530.

Omodan, B. I. (2020). The Vindication of Decoloniality and the Reality of COVID-19 as an Emergency of Unknown in Rural Universities. *International Journal of Sociology of Education, 8*(4), 1-26. http://doi.org/10.17583/rise.2020.5495

Omodan, B. I., & Ige, O. A. (2021). University Students' Perceptions of Curriculum Content Delivery During COVID-19 New Normal in South Africa. Qualitative Research in Education, 10(2), 204-227. https://doi.org/10.17583/qre.2021.7446

Patel, M. R., & Sharma, S. (2019). Understand the challenges of remote work: Perspectives from university lecturers in Tanzania. *International Journal of Educational Development*, *49*(4), 45–58.

Patel, R. (2022). Balancing act: employees' contributions to remote work expenses. *Journal of Telecommunicating Practices,* 5(4), 211–225.

Quacquarelli Symonds. (2020). How university staff are effectively working from home.https://www.qs.com/how-university-staff-are-effectively-working-from-home/

Qureshi, F., Khawaja, S., & Zia, T. (2020). Mature undergraduate students's satisfaction with online teaching during the COVID-19. *European Journal of Education Studies, 7,*456-475. https://doi.org/10.46827/ejes.v7i12.3440

Qutoshi, S. M. (2018). Phenomenology: A philosophy and method of inquiry. *Journal of Education and Educational Development, 5*(1), 215–222.

Rahimi, S. & Khatooni, M. (2024). Saturation in qualitative research: An evolutionary concept analysis. *International Journal of Nursing Studies Advances*, 6 (2024) 100174. https://doi.org/10.1016/j.ijnsa.2024.100174

Ram, S. (2020). Impact of COVID-19 on learning and teaching: The way forward. *University News; 58*(34), 24–26.

Sahut, J. M., & Lissillour, R. (2023). The adoption of remote work platforms after the COVID-19 lockdown: New approach, new evidence. *Journal of Business Research*, 154, 113345. https://doi.org/10.1016/j.jbusres.2022.113345

Samson, N., & Ndati, N. (2022). The Role of Regulatory Frameworks in Enhancing Journalism Training and Media Practice in Tanzania. *East African Journal of Arts and Social Sciences*, *5*(2), 129–144. https://doi.org/10.37284/eajass.5.2.938

Sears, G. J. (2020). *The impact of COVID-19 on Job loss and income: First results from the April 2020 labour force survey.* Statistics Canada.

Sife, A., Lwoga, E. T., & Sanga, C. (2007). New technologies for teaching and learning: Challenges for higher learning institutions in developing countries. *International Journal of Education and Development using Information and Communication Technology*, *3*(2), 57–67.

SimmonsSimmons. (2021). Germany: Who bears the costs for the workplace at home? https://www.simmonssimmons.com/en/publications/cklhtmgnn15eg0a060wm9dch9/germany-who-bears-the-costs-for-the-workplace-at-home-

Smith, B. (2022). Sharing the burden: Advocating for employer coverage of remote work expenses. *Journal of workplace policy*, *15*(4), 289-302.

Smith, J., & Johnson, L. (2018).The role of Internet access in enabling remote work: A case study of Tanzania. *Africa Journal of Information Systems*, *10*(2), 67-80.

Stewart, D., & Shamdasani, P. (2014). *Focus groups: Theory and practice* (3rd ed.). Sage Publications.

Temu, P. A. (2018). Factors influencing mobile internet adoption in Tanzania. *International Journal of Science and Research, 7*(10), 490-496.

Troup, C., & Rose, J. (2012). Working from home: Do formal or informal telework arrangements provide better work–family outcomes? *Journal of Community, Work & Family*, *15*(4), 471–486. https://doi.org/10.1080/13668803.2012.724220

Tungaraza, C. (2017). The Role of Mobile Telecommunications in Economic Growth: Evidence from Tanzania. *African Journal of Economic Review*, *5*(2), 1-16. https://doi.org/10.29338/ajer.2017.5.2.399

Vyas, L., & Butakhieo, N. (2021). The impact of working from home during COVID-19 on work and life domains: an exploratory study on Hong Kong. *Policy Design and Practice, 4*(1), 59–76.

Wilson, E., & Thompson, A. (2022).Internet accessibility and online learning during COVID-19: A case study of Tanzania. *Journal of Education Technology and Research*, *30* (1), 56-68.

Wojnar, D.M, Swanson K.M. (2007). Phenomenology: An Exploration. *Journal of Holistic Nursing, 25*(3), 172-180. https://doi.org/10.1177/0898010106295172

World Economic Forum. (2024). A new study shows how much more productive a hybrid workforce can be. https://www.weforum.org/agenda/2021/07/work-form-home-hybrid-working-covid-pandemic-us-office/

World Economic Forum. (2020). *Working from home has doubled in the U.S. Since 1980 and quadrupled in the UK.* World Economic Forum Agenda.

Yang, L., Qi L., & Zhang, B. (2022). Concepts and evaluation of saturation in qualitative research. *Adv Psychol Science*, *30*(3), 511. https://doi.org/10.3724/SP.J.1042.2022.00511

Yin, R. K. (2017). *Case study research and applications: Design and methods* (6th ed.). Sage Publications.

Zickafoose, A., Ilesanmi, O., Diaz-Manrique, M., Adeyemi, A. E., Walumbe, B., Strong, R., ... & Dooley, K. (2024). Barriers and challenges affecting quality education (Sustainable Development Goal# 4) in Sub-Saharan Africa by 2030. *Sustainability*, *16*(7), 2657. https://doi.org/10.3390/su16072657