

Harnessing the power of a mobile phone in the promotion of teacher ethics in Tanzania

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ABSTRACT

This study examined teachers' perspectives on using a mobile phone in the promotion of teacher ethics in Tanzania. It was informed by the qualitative approach, using a sample of forty-eight (48) respondents who were drawn through purposive and convenient sampling techniques. Data were sought through Focus Group Discussions (FGDs) and were subjected to thematic data analysis. Findings indicated that respondents perceived a mobile phone as a viable tool in the promotion of teacher ethics. Moreover, ownership and accessibility, popularity and ease of use, internet coverage and connectivity, as well as the ubiquitous nature of the device were the reasons given for their perceptions. However, teachers' lack of knowledge, attitude and beliefs, financial problems, limited network connection, and poor coordination and technical support were the anticipated challenges in using the device in the promotion of teacher ethics. Based on the noted potential of the device, the study recommends the need for Teachers' Service Commission in Tanzania to adopt and use the device so as to ensure wider coverage of ethical information and combat unethical conduct amongst teachers.

Keywords: *harnessing; mobile phone; teacher; teacher ethics; teachers' code of ethics/conduct.*

INTRODUCTION

The teaching profession uses ethics as an important aspect for teachers' professional accountability, which demands good behaviour (Mwesiga, 2018). In this regard, teachers are professionally accountable to serve as positive role models as their actions and self-discipline inside and outside school compounds are all lessons that are presented to students throughout their education life (van Nuland & Khandelwal, 2006; Green, 2010; Ebert & Culyer, 2012; Mabagala, 2016). To realise this, Tanzania like other countries, has developed a teachers' code of ethics and/or conduct. The code is enforced by the Teachers' Service Commission (TSC), an autonomous regulatory authority for teachers' service established under the Teachers' Service Commission Act, No. 25 of 2015 (TSC 2015; 2016). The code of conduct provides guidance and prioritises values to influence the ways teachers should act and behave. It requires every professional teacher in Tanzania to recognise that he/she has a level of responsibility to: the children under his/her care by guiding them in the pursuit of knowledge and skills which prepare them to be useful members of the society; the community by making sure that they perform their duties in a friendly, cooperative and constructive manner, also by rising the community's moral and intellectual life; the employer as they are expected to conduct their profession through the right channels; the profession which they are expected to make more attractive in ethics and practice that the younger generation would willingly aspire to be part of the profession; and the state in which they are supposed to be patriotic in their professional endeavours.

Despite the mandate given to the TSC towards promoting teacher ethics, teachers' compliance with the professional ethics in Tanzania still seems to be a chimera. This is evidenced by the widespread reports of unethical and unprofessional acts committed by teachers at almost all education levels (Boimanda, 2004; Anangisye & Barret, 2005; Anangisye, 2006; Mfaume, 2012; Oziambo, 2013; Ishumi, 2013; Jerome, 2014; Songela, 2015; Mabagala, 2016; Mfaume Bilinga, 2017; Kihindi, 2017;

Ndyamukama, 2017). The dwindling of teachers' adherence to the code of conduct in Tanzania has been attributed to a number of factors, including limited access to the code and lack of awareness of its existence among teachers, difficulties in understanding the code, inadequate education for teachers on ethics and professionalism and the infrequent visit to schools by TSC officers. Other factors include lack of capacity for enforcement of the code and lack of knowledge about procedures for lodging complaints among the wider community (Anangisye, 2006; Mfaume, 2012; Oziambo, 2013; Jerome, 2014; Songela, 2015; Mabagala, 2016; Mfaume & Billinga, 2017). These all are attributed to the limited budget allocated to the TSC that hinders even minimum level implementation of its core mandates among others (Mfaume, 2012; Songela, 2015). This situation raises a cause for alarm and implies that an effective promotion of teacher ethics requires viable and cost effective innovation and willingness to experiment and tackle the problems with new tools and approaches.

When considering different options, the great strides in the advancement of Information and Communication Technology (ICT), keeps the researchers returning to a mobile phone as an ideally viable and cost effective innovation. The mobile phone has been successfully used in a variety of sectors for a variety of purposes as exemplified by the broad uptake of different mobile services like mobile banking, mobile health services, entrepreneurship services, mobile learning and other educational purposes (Avraamidou, 2008; UNESCO, 2017). Nevertheless, despite the great benefits and clear appeal of the device in a variety of sectors including different aspects of education, empirical studies documenting the possibility of using the device in the promotion of teacher ethics are not evident. In attempting to address this gap, this study explored pre-service and in-service teachers' views on the possibility for the TSC to use a mobile phone as part of a strategy to promote teacher ethics in Tanzania. More specifically, the study attempted to explore teachers' perspectives on the possibility of using the mobile phone in the promotion of teacher ethics and, establish the possible challenges towards using the device in the promotion of teacher ethics in Tanzania.

LITERATURE REVIEW

The relevance of the mobile phone in education

The mobile phone has been successfully used in a variety of educational contexts (Avraamidou, 2008). It has virtually revolutionized and redefined the way information is created, accessed and communicated in education as well as methods of teaching and learning across countries (Kukulska-Hulme, 2007; Avraamidou, 2008; Blumstock & Eagle, 2010). It has offered a platform for teachers to manage their career schedules, accessing teaching and learning materials, record students' marks and attendance (Mtenga, et al., 2012; Kiwhele et al. 2013; Baran, 2014). It has also provided connectivity and interaction among teachers even in areas that were never and are still not served by other ICTs (Aubusson et al., 2009; UNESCO, 2017). The device allows teachers' access to expertise even beyond their localities and hence able to build personal and professional support (Aubusson et al., 2009; Gaskell & Mills, 2010; UNESCO, 2017).

Moreover, the device has created a considerable amount of interest among teachers and the wider community as many educational institutions offer various courses through the device as an alternative way to conventional learning in the classroom (Kim, Mins & Holmes, 2006; Robson, 2004; Twum, 2014). Brown (2005) contends that the device's applications such as mobile teleconferencing and Short Messaging Service (SMS) can support interaction and collaborative teaching and learning in education contexts. Shuler (2009) delineates several ways in which mobile phones can enhance educational experiences. Firstly, it provides a platform for students and teachers to gather, access, and process information beyond the four classroom walls and support teaching and learning in a real-world context. Secondly, it supports and promotes collaboration and communication, which are fundamental for the 21st century academic achievement. Thirdly, it encourages instruction that is adaptable to individual and diverse learners.

Bruce (2010) adds that the device provides teachers and students with a platform to access course materials so that they could learn at a convenient time and place. It also enables them to access links to relevant websites, videos, further reading and online tutorials. Huang *et al* (2010), Williams and Pence (2011) also contend that mobile phone technologies, enhance students learning content conveniently and provides them with an opportunity to interact with others collaboratively at any time and anywhere. Internet connectivity on the device enables educators and students to send and retrieve information via Bluetooth and Wi-Fi. Mobile learning has attracted educators "because mobile devices are portable, ubiquitous, easily accessible and used by many people" (Keskin, & Metcalf, 2011, p. 202).

Challenges in using Mobile phones in Educational Contexts

Realising the educational potential of a mobile phone, many educational institutions across the world have been attempting to grasp its power as part of the strategy to deliver a higher quality education product. However, adoption and use of the device in education is not always free of challenges. Research has highlighted several challenges towards the use of mobile phones in education.

According to UNESCO (2012), the lack of awareness among teachers about the positive educational potential of a mobile phone is amongst the primary challenges towards the use of the device for educational purposes. Likewise, teachers' lack of knowledge and skills on how to use the devices' applications for educational functions is cited in a handful of literature as a critical challenge (Balanskat *et al* 2006; Mtega *et al.*, 2012; UNESCO, 2012; Msuya, 2015). The literature further indicates that, negative attitudes and beliefs among teachers constrain them from using the devices as instructional tools (UNESCO, 2012; Msuya, 2015). Many teachers believe that they are capable of performing better even without using technologies. Therefore, they keep opting for traditional professional practices (Cox *et al.*, 1999; Karagiorgi, 2005; UNESCO, 2012; Ang'ondi, 2013). Studies conducted by (Corlett *et al.*, 2005; Khamaysah, Zmijewska, Lawrence & Culjak, 2007; Khaddage, & Knezek, 2011) have repeatedly revealed limited storage and memory retention capacity of many affordable mobile phones owned by teachers as a challenge that constrain them from downloading and saving teaching and learning materials for future review.

Another recurring challenge cited in many studies is small keypads and the screen size of the devices. Trifonova (2006) asserts that even though mobile phones are powerful with wonderful speed, their key pads and screens remain comparatively small such that they are difficult to use especially when reading and typing messages. Reviewed literature confirmed that smaller screens are relatively complicated to use and slow down browsing of pages on the Internet (Stockwell, 2008; Wang, 2007). Additionally, a major reason why some students and teachers are reluctant to use the mobile phone technologies in education is that the Internet fee is relatively high and unaffordable (Stockwell, 2008). Nevertheless, high purchasing and running costs is another frequently reported challenge in the utilization of mobile phones in education. The smart phones are the most reliable for education as they are embedded with multiple features and functionalities. However, their purchasing prices are still high, and the service charges are still not affordable for teacher in many countries (Kukulska-Hulme *et al.*, 2007; Dyson, Raban, Litchfield, & Lawrence, 2009). As a result, many teachers own basic types of mobile phones which have limited capacity to support the teaching and learning processes.

According to Adonis (2006), the greatest challenge encountered by students when using their mobile phone in Nigeria is a frequent network failure, which attracted a high response of 71 (65.5%). According to the findings of his study, students claimed that network failure occurred frequently and the problem could take a few minutes or some days. Brown (2005) adds that there is a great challenge in designing and developing appropriate learning environments that would be based on appropriate educational philosophies in order to ensure optimization of knowledge. He argues further that the major obstacle for most educators and technology developers is discovering a means to ensure that learning is greatly personal and collaborative.

METHODOLOGY

The study employed a qualitative research method which was informed by a multiple case study research design to explore teachers' views on the possibility of using the mobile phone in promoting teacher ethics in Tanzania. The qualitative approach which is a means of exploring the views and perceptions held by people on a particular issue (Mertens, 2005; Creswell, 2014), helped the researchers to obtain detailed views of teachers on the subject under scrutiny. In the study the multiple case study design involving pre-service and in-service primary and secondary school teachers, provided the researchers with multiple ways of collecting in depth perspectives of the study respondents (Yin, 2009). Moreover, the combination of multiple perspectives in a single study added rigour, richness and depth of data to the study (Devetak et al., 2010).

The researchers drew respondents from the population of pre-service and in-service teachers who were pursuing bachelor degrees in education at the Dar es Salaam University College of Education (DUCE). Since qualitative studies are more concerned with the level and depth of data than the number of respondents (Magwa & Magwa, 2015), a sample size of 48 respondents was obtained after data saturation was reached. Specifically, the sample constituted 24 pre-service and 24 in-service teachers respectively. The fact that the respondents were coming from different settings, the researchers were able to generate rich and relevant information to offer sufficient insight into the subject under scrutiny.

A multi-stage sampling technique comprising of purposive and convenient sampling procedures was employed to obtain the respondents. At the first stage the researchers purposively selected the third year pre-service and in-service student teachers on the grounds that they had studied teacher professionalism and ethics as a core course. Having taken the course they would have been more exposed than first and second year students, to teacher professionalism and ethics theoretically in the classroom and through practical involvement in 'Teaching Practice (TP)'. At the second stage, convenient sampling based on accessibility and readiness of an individual to participate in the study was employed to obtain 48 participants (Mertens, 2005; Stake, 2006; Patton, 2015). The convenient sampling technique was deemed appropriate due to students' tight schedule as the study was conducted a few days before the beginning of the second semester university examinations. Six Focus Group Discussions (FGDs), each comprising of 8 respondents were conducted in order to generate data for the study. The generated data were subjected to thematic analysis involving six concurrent processes (Braun & Clarke, 2006). Initially the researchers read the transcripts with an open mind in order to familiarize with the data and seeking what emerged directly from the transcripts, then they generated initial codes, searched for themes, reviewed themes, defined and named themes, and finally they analysed and reported the findings (Braun & Clarke, 2006; Denscombe, 2007).

FINDINGS AND DISCUSSION

This section focuses on presentation, interpretation and discussion of the findings. The section, first reports the background characteristics of the respondents followed by the research questions and findings.

General Information on Respondents

The respondents who were involved in this study mainly consisted of pre-service and in-service third year student teachers at Dar es Salaam University College of Education (DUCE). The categories of respondents and the number who took part in the study are presented in Table 1.

Table 1: Respondents

Categories of Respondents	Respondents' by sex		Respondents' number
	Male	Female	Total
In-service student Teachers	14	10	24
Pre-service student Teachers	12	12	24
Total	26	22	48

Source: Field data 2018.

The Possibility of using a Mobile Phone in Promoting Teacher Ethics

The first research question addressed whether or not the mobile phone can be used as a viable tool in facilitating the promotion of teacher ethics in Tanzania. The respondents were asked to state their views and were also required to provide reasons for their responses. The study yielded the following findings:

There was consensus from all 48 respondents that a mobile phone can be used in facilitating the promotion of teacher ethics. This finding reveals respondents' awareness of the benefits attached to the device for different aspects of education. When they were required to give the reasons as to why they thought the device could be a viable tool in the promotion of teacher ethics, their responses revolved around the following five main themes:

Ownership and accessibility

All respondents were of the viewpoint that ownership and easy access to the device make it possible for the TSC to reach thousands of teachers across the country. This will enable the TSC to disseminate the code of conduct and educate teachers on various matters related to teacher ethics and professionalism. They further argued that since the device is widely accessible to the wider community, the TSC can deploy it to build the public awareness about teachers' ethical obligations and ways to report teacher malpractices. The sentiments below elucidate the viewpoints of the respondents:

Several research conducted in the country has attributed teacher's misconduct to lack of accessibility to the code of conduct and limited professional knowledge among teachers... the fact that almost all teachers own the devices it is even easier for the TSC to disseminate the code and educate teachers through their handheld devices... [Pre-service female student teacher]

Arguing in favour of the above, another respondent puts it thus:

Many teachers in Tanzania are not aware of the existence of the teachers' code of conduct and its content... the TSC does not produce and supply enough copies to teachers probably because of financial constraint... since mobile phones are currently accessible even to teachers in rural areas, I think it is time now for the TSC to use this device to disseminate the code and educate teachers and the community at large about ethical values in the teaching profession... [An in-service male student teacher]

It is evident from the foregoing narratives that the mobile phone is widely accessible to most teachers and the general community across the country. The fact that the literature on the topic in Tanzania (Anangisye, 2006; Mfaume, 2012; Oziambo, 2013; Msongela, 2015; Mfaume Billinga, 2017), indicates limited access to teachers' code of conduct which leads to teachers' limited knowledge of professional ethics and teachers' malpractice, the device can offer the TSC a viable means to promote teachers' ethical competencies rather than relying on the traditional approaches which are expensive in terms of

finance, time and other resources. The findings sustain Cisco's (2017a) views that the wider ownership and accessibility of the device imply that it could be leveraged to support and build the capabilities of millions of educators globally, far more than are currently reached by the traditional forms of face to face development.

Popularity and ease of use

The majority of respondents felt that a mobile phone is a viable tool in the promotion of teacher ethics for it is easy to use and is popular among most teachers. They reported that the device offers understandable and user friendly features and applications for most teachers and other non-professional users. Thus, they believed that once the device could be deployed for promoting teacher ethics, it would yield positive results. The following assertions portray these findings:

I believe that mobile phones can help in promoting teacher ethics in Tanzania because they are familiar and user friendly to everybody even young children. Therefore, it will be easy for teachers to access the code of conduct, discuss and collaboratively educate each other on different matters related to professionalism... [In-service male student teacher]

Arguing consistently, another respondent noted:

Teachers have enough knowledge and skills towards mobile phone use. There is no doubt that if the TSC adopt and use the devices to raise teachers' awareness of ethical principles it will be successful and financially feasible... [Pre-service female student teacher]

The findings suggest that the use of popular technology such as a mobile phone can motivate teachers to share information, thoughts and dilemmas on a variety of ethical aspects. Thus, developing their confidence in making ethical decision. The findings sustain Davis's (1989) Technology Acceptance Model (TAM) which portrays that people adopt and use a particular technology primarily if they perceive it is useful, and secondarily for how easy or hard it is to perform a certain function.

Wide Internet coverage

A number of respondents noted that mobile phone networks cover large areas of the country, and connect teachers and communities in different settings. They believed that this situation could enable the TSC officers to reach the majority of teachers who were never reached - and, in many cases are still not frequently reached face to face. The following views support these findings:

Nowadays, most teachers have mobile phones with internet facilities... this offers the TSC with a feasible cost effective catalyst for reaching all teachers even in areas that were never reached physically... you can email teachers, you can sensitize them on ethical issues through Skype, WhatsApp... what else does the TSC wants sir in accomplishing its roles?... [In-service male student teacher]

If mobile phones have successfully connected people across the world and enable them to send and receive money, conduct meeting and discussions and do business, it can also connect teachers and help them share knowledge and experiences of ethical issues [pre-service female student teacher]

I do not know why we are late... at this century, we are still complaining about lack of fund to produce and disseminate copies of the code of conduct, lack of seminars and workshops to remind teachers of professional standards... all these are possible just at the tip of our fingers through mobile phones [In-service male student teacher]

To concur with the findings, Shuler (2009) points out that a mobile phone's wider coverage and connections, encourage and promote collaboration as well as communication, which are considered vital for 21st century academic success. Also, Averianova (2012) asserts that connectivity is an important feature of the device as it is the one needed to send and retrieve information via Bluetooth connectivity and Wi-Fi networks. In the light of the findings and supporting literature, it can be argued that the wider internet coverage and connections through the device might offer a viable platform to support the TSC promote teacher ethics even for teachers working in challenging environments. The findings also entail that promoting teachers' ethics and professionalism through the devices can be quick and cost effective, as exemplified by the broad uptake of different mobile services such as mobile banking, mobile health services, and mobile learning (UNESCO, 2017).

Dynamism and ubiquitous nature of a mobile phone

A few of the respondents pointed out that a mobile phone is dynamic and ubiquitous. It can support the promotion of teacher ethics by connecting teachers with the TSC officers, colleagues and other experts, and share, elicit feedback and access other services, concerning ethics and professionalism anywhere and anytime. The following quotes highlight the overall sentiments of the respondents concerning the viewpoint:

It is financially expensive to prepare face to face seminars and workshops for teachers spread across the country... but mobile phones are omnipresent and flexible such that the TSC can conduct a seminar or workshop to teachers wherever they are, be it at school, commuter transports, market place and everywhere... [Pre-service male student teacher]

Another participant echoed:

Nowadays, most school teachers have mobile phones and other modern gadgets with internet facilities. They can share their ethical experiences and dilemmas; they can be provided with copies of teachers' code of conduct and read them ubiquitously through their devices... why shouldn't we change with time? [In-service female student teacher]

In support of the aforesaid assertions, another respondent noted:

The extant literature indicates that most unethical incidents committed by teachers are not reported to the TSC hence making perpetrators safe all the time... the fact that mobile phones are dynamic and ubiquitous, I am sure that all incidents will be reported instantly to the responsible authorities once they occur... [In-service female student teacher]

The preceding findings coincide with the UNESCO's (2017) perspective that professional development delivered through a mobile phone, while constrained in many respects, empowers teachers by enabling them to learn, respond and react to content at anytime and anywhere, in ways that other earlier devices did not allow. Consequently, the findings align with a study on mobile phone photo note-taking undertaken by Mfaume, Bilinga & Mgaya (2018). The study revealed that most university students preferred mobile phone photo-note taking because the device allowed them to access the learning materials easily and ubiquitously. Also, the findings bolster the viewpoint by Keskin& Metcalf (2011, p. 202) that mobile learning has attracted educators because they are portable, ubiquitous, easily accessible and used by many people. Likewise, the findings reinforce the work of Bruce (2010) that the dynamic nature of a mobile phone provides a critical podium for teachers to access course materials and learn at a convenient time and place. Implicit to the findings and supporting literature, it can be deduced that despite teachers' busy schedules due to multiple roles, the dynamic and ubiquitous nature of the device provides them with a gateway to training related to ethics and professionalism at times and places that are convenient. Teachers can have an opportunity to access information from the TSC and colleagues, as well as create and share professional related knowledge regardless of their environmental boundaries.

The Anticipated challenges in using Mobile Phones in the Promotion of Teacher Ethics

The second research question addressed respondents' views on the possible challenges in using mobile phones in the promotion of teacher ethics. In general, the following five key challenges emerged from the data:

Lack of ICT knowledge among teachers

The study respondents opined that the use of mobile phones in promoting teacher ethics could be constrained by lack of knowledge among teachers. During FGDs, it was argued that some teachers are less informed of different applications and functionalities embedded in their devices. This can hinder them from interacting and accessing different sessions and information related to ethics once they are posted through the devices. Sharing this view, some participants lamented:

To be frank, most of the teachers are incompetent of technology. Despite having smart phones, but very few of us are able to use the application embedded in our devices... our knowledge ends at calling, sending and receiving text as well as chatting on Facebook and WhatsApp... [Pre-service female student teacher]

Unless teachers are trained on how to use mobile phone applications, using the devices in the promotion of teacher ethics is doomed to failure... a vast majority of teachers; especially those living in rural locales are totally ignorant of how to use the devices for purposes other than calling and texting... [In-service male student teacher]

These views support the findings by Msuya (2015) that most teachers in Tanzania do not know how to use applications supported by their smart phones. The results also corroborate the findings by Kayombo and Mlyakado (2016) who carried out a study in Tanga and Mwanza regions in Tanzania on teachers' ICT knowledge. They found that 50% of the surveyed teachers were unable to use ICTs. It is evident from the above respondent views and the supporting literature that the lack of knowledge and skills are prevalent obstacles that prevent teachers from using ICTs. To this end it can be argued that unless teachers' feel adequately prepared and competent to use mobile phones, they are unlikely to effectively use them in the promotion of teacher ethics. In turn, they will keep on viewing them as another problem to be added to their many existing problems (Bullock, 2004).

Teachers' attitude and beliefs

Another perceived challenge mentioned by respondents was teachers' negative attitude and beliefs. They argued that although a sizeable number of teachers own the device, some of them are not ready to change from their traditional way of doing things. In this regard, respondents showed less likelihood for teachers to follow what will be going on in the platforms if the device will be used in the promotion of teacher ethics. This finding echoes a review of forty eight previous studies undertaken by Hew and Brush (2007) between 1995-2006, which identified teachers' attitude and beliefs as one of the three most commonly cited barriers to adoption of technology. In a similar vein, Karagiorgi (2005) admitted that many of the teachers in her study were reluctant or unwilling to use technology to try out new practices although they were informed of its pedagogical value. This viewpoint is better explained by the following respondents:

The idea of using the devices in promoting teacher ethics is good and practical. My worry stems on teachers' readiness to change and tackle problems with new approaches... most teachers have negative attitude and beliefs about technology and they believe it is easier to perform better traditionally than with technology... [In-service female student teacher]

... I am telling you from my experience that even if the TSC provides seminars or disseminate the code through the devices teachers will never read... they have a negative attitude with technology and always they are rigid to change... I do not know how we can overcome this... [In-service male student teacher]

From the findings it could be argued the delay in the uptake of modern technology in education is partly a result of teachers' pessimistic mind-set that can be attributed to insufficient information they have on long-term opportunities technologies can offer to them. This denotes that for the device to yield positive results in enhancing teacher ethics teachers must be adequately informed of the benefits of the accepting new innovations and they should be given adequate long-standing opportunities to make sense of such innovations.

Financial problem

Another anticipated challenge echoed by respondents was financial limitation. The respondents indicated that not all types of mobile phones have applications which support Internet service and also have good storage capabilities. This makes the smart phones more reliable to be used in the promotion of teacher ethics. However, they claimed that the purchasing price of the devices is still high, and the Internet service charges are not affordable for many teachers. As a result, many teachers own ordinary devices having limited capacity and functionalities to support the processes. The views cited below illustrate some view points of the respondents:

Actually, promotion of teacher ethics can be more effective with smart phones... but not all teachers have the financial ability to buy smart phones and internet bundles... unless teachers will be provided with free smart phones and internet, using the device in promoting teacher ethics will not be effective... [In-service male student teacher]

A similar sentiment was shared by another participant who expressed:

The idea is good, but in a country like ours where teachers' income does not help them to sustain a daily living... I do not think teachers, especially those living in rural areas will be able to buy smart phones and be able to recharge internet bundles... if they fail to make a copy of a code of conduct will they be able to buy a modern device? [Pre-service student teacher]

The views of the respondents in this study supports the experiences observed in the project coordinated by the UNESCO (2017) which aimed at supporting teachers with mobile technology in different countries. In the project, financial problem was a significant and critical challenge. Also, the finding reinforces the studies by Kukulska-Hulme et al, (2007); Dyson, Raban, Litchfield, & Lawrence, (2009) who observed that the purchasing and running costs of smart phones made most teachers rely on the ordinary types of devices which have limited capacity to support educational functions. The finding implies that successful use of the devices requires a sound budget allocation to ensure that all teachers have the devices and affordable Internet bundles. This suggests that the government in collaboration with other educational stakeholders should invest in technology for the well being of our education system.

Limited network connections

Another concern raised by respondents was the problem of limited network coverage. The respondents reported that promoting teacher ethics through a mobile phone requires effective and active Internet coverage. However, they worried about the poor Internet connectivity characterizing most areas of the country especially rural locales. They argued that the majority of teachers live in areas that are not served by any Internet signals. The fact that most aspects are dependent on Internet connectivity, this

problem will lead to frustration on the part of teachers and likely will contribute to lower than expected teacher participation. The following reflect the views of the respondents:

Internet in our country is only available in big town centres. Once you go some few kilometres away you are offline... how about those teachers in remote areas where even calling is an issue... I think using the device will be possible only if the internet is not limited... [Pre-service student male teacher]

In a similar tone another respondent lamented:

The internet is a critical challenge both in urban and rural areas leading to delay in searching and downloading... in other areas you need to walk some kilometres just to seek for internet connection. How often will the teachers walk to search for internet and accesses what the TSC has posted? [In service female student teacher]

The problem with poor internet service seems to be commonplace in many developing countries. It was a recurring complaint even across all four UNESCO's (2017) project countries, including Mexico, Pakistan, Nigeria and Gambia. The findings also are congruent to Adomi (2006) who revealed that the greatest challenge encountered by the majority of Nigerian students when using their mobile phone was a frequent network failure. Equally, the findings shore up the recent work by Chirwa (2018) who reported that availability of the Internet and its speed was a chronic challenge facing educators in public teacher colleges in Tanzania. The findings of this study entail that promoting teachers' ethics through the device is dependent on reliable Internet connectivity. Unreliable internet service is likely to discourage and frustrate teachers and lower their interaction and participation in training on ethics. Thus, if the TSC needs to grasp the opportunity provided by the device to support the promotion of teachers' ethics, it is imperative to ensure that Internet service is well established in different locations beforehand.

Poor coordination and technical support

The lack of teacher coordination and support was cited as one of the possible challenges. Respondents expressed that promotion of teacher ethics through the devices requires effective coordination and instant technical support. They added that for the programme to be fully implemented, there must be a well coordinated platform and experts who can answer questions and facilitate quicker provision of support for the teachers. However, respondents expressed doubts about the capacity of the TSC to coordinate and provide instant support for teachers once the initiative is implemented. Their doubt is premised on the view that the TSC does not have enough experts in the field of ICTs and it has currently failed to coordinate and run seminars and workshops for teachers on ethics and professionalism. Poor coordination and technical support was anticipated to demoralize teachers once the device will be used in the promotion of teacher ethics. The view below highlights the respondents' doubts:

The TSC itself is not well coordinated... their offices are understaffed... they fail to visit schools and educate teachers on ethical issues regularly... they fail to produce and provide teachers with copies of the code how then possible for them to coordinate this exercise that needs technical skills... [In-service male student teacher]

Another respondent admitted:

Among the possible challenges I can foresee is lack of proper coordination and support for teachers. Unless experts in ICT or the TSC officers are adequately trained they will not be able to run the sessions... they are few and I do not think they are knowledgeable enough on ICT... [In-service student teacher]

The above finding suggests that if mobile phones are to be used in the promotion of teacher ethics in Tanzania, there must be a methodical coordination and available experts who will carry out regular training and support to teachers and facilitate their online participation.

CONCLUSION AND RECOMMENDATIONS

Based on the findings presented above, generally there was consensus among respondents that the mobile phone has the potential to assist in the promotion of teacher ethics in Tanzania. The consideration for the adoption of the device hinges on its ease of ownership and accessibility, popularity and ease of use, coverage and connectivity as well as its dynamism and ubiquitous nature. Even though the device was considered significant in the promotion of teacher ethics, lack of knowledge among teachers, teachers' attitude and beliefs, financial problems, limited network connectivity, poor coordination and technical support were the anticipated challenges in using the device in the promotion of teacher ethics. In conclusion, confronting teacher misconduct and promoting teacher ethics in Tanzania requires innovation, adoption of cost effective approaches and a new technology such as the mobile phone. However, the fact that the use of new approaches and technologies such as the mobile phone will not always go smoothly, the study suggests that the complex contextual constrictions should be addressed beforehand if the utility of the device is to be realised. The fact that this study was limited to qualitative inquiry covering a small group, a similar countrywide study should be undertaken for generalization purposes.

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