

Factors influencing the attitudes of rural Zimbabwean high school teachers towards remote online teaching and learning in Chivi district, Zimbabwe.

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Abstract

Curriculum change is not a haphazard affair and requires systematic planning on the part of the planners and the user system. If the user system is not in-serviced for the envisaged change, the change is most likely to be met with resistance. For instance, teachers form either positive or negative attitudes based on the perceived ease of use and perceived benefits of any planned change. The Technology Acceptance Model was employed in the study to explore teachers' attitudes towards remote online teaching and learning in three selected rural secondary schools. This research adopted the qualitative approach and online questionnaires were employed to establish the attitudes of 15 Zimbabwean rural high school teachers towards online learning. The teachers were sampled from one rural district in Chivi North of Masvingo Province. The participants were sampled from three rural council schools which are not homogeneous in terms of staffing and material resources. The study found that the majority of the purposively sampled teachers had negative attitudes towards remote online teaching due to lack of internet access. It also established that the negative attitude emanated from lack of institutional support and resources as well as little teacher capability and readiness. The study recommends in-serving and e-resourcing of teachers to foster positive attitude towards remote online teaching and learning.

Keywords: *online remote teaching, attitudes, curriculum, Covid-19, technology.*

Introduction

The closure of schools across the globe in response to the Covid-19 pandemic is no longer news. The pandemic has ravaged the whole world and its impact has disturbed not only the health systems but the education systems as well. What is more disturbing is that there is no recent historical incident of this nature. At present, it is also difficult to predict when the pandemic will end. The pandemic has pushed teaching and learning to the virtual space in order to safeguard the lives of both students and teachers. Teachers are grappling with online remote teaching as the only mode of instruction which is safe amidst the pandemic. This

paper explored teachers' attitudes towards remote online learning based on two variables of perceived usefulness and perceived ease of use.

Background to the study

According to the UNESCO Report(2020), in December2019 a novel corona virus disease emerged in the Chinese city of Wuhan. The pandemic spread so rapidlythat in less than two months it had spread to Europe, America and Africa. The highly contagious disease was declared a global pandemic of international concern on 11 March 2020 by the World Health Organisation as most European and Asian countries had reported a significant rise in the Covid-19 disease and deaths. The Covid-19pandemic was (and is still) spreading and very difficult to control. By virtue of being China's trading partners, most African countries were prone to the deadly virus, particularly South Africa and Zimbabwe (Makurumidze,2020). Most countries however responded to the pandemic by imposing travel bans and closing non-essential businesses. Strict lockdown regulations, including the closure of schools in order to safeguard the lives of students and staff (UNICEF, UN, Zimbabwe Situation Report,2020), were implemented. Likewise, Zimbabwe's government followed suit, declaring the deadly virus a national disaster on 19 March 2020.

Zimbabwe's Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development which is coordinated under the risk, communication and community engagement pillar at national level, leads the education related Covid-19 preparedness and response activities(Shumba, Muntanga &Macha, 2020). According to the African Bulletin (2020) the Ministry of Health heightened vigilance among Zimbabweans including their rigorous observance of the enhanced prevention measures which were announced by the president of Zimbabwe on the 30th of March 2020 which banned all non-essential movements and social gatherings. Consequently, all schools were closed ostensibly to safeguard the health of teachers and students alike. The Covid-19 pandemic ignited an already volatile and fragile situation in Zimbabwe, which was already struggling with socio-economic and political unrest. The pandemic in Zimbabwe is evolving against the backdrop of a difficult macro-economic environment and climate shocks. These early indicators show that the health system will be stretched further (UN Report, 2020). It is therefore clear that the Zimbabwean education system was already stretched before the Covid-19 pandemic.

The Zimbabwean government directed that all school going pupils be allowed to continue learning using the available online platforms in June 2020 (UNICEF,2020). The supposed replacement of face-to-face by online remote teaching meant that the teachers had to adapt to the new mode of instruction. By definition, adaptation is changing to suit the peculiar circumstances. Although unexpected and unplanned, the intensive use of different technological platforms such as Google Classroom, E-mails, WhatsApp and Facebook to ensure learning continued was the boldest experiment in the history of curriculum planning and implementation (UNESCO, 2020). The decision to move to online remote teaching/learning was to safeguard public health during the pandemic. It was however very risky to assume that all teachers had sufficient connectivity, particularly in the rural areas where such variables as power supply and internet connectivity are not guaranteed.

The combined effect of the humanitarian crisis and the Covid-19 pandemic is expected to have far reaching implications for the demand and supply of education services in Zimbabwe (Shumba, Muntanga & Macha, 2020). Prior to the pandemic, schools could mainly get their funding from the school fees paid by parents. Some schools were fortunate to be funded by donors. However, this has since been curtailed. Parents seem reluctant to embrace online curriculum services and pay for them (UNICEF,2020).It appears the teacher is expected to facilitate learning using his or her own meagre resources in the context under study. Lack of resources may result in teachers forming negative attitudes. Normally, professional teachers want job satisfaction over and above everything else. If the job fails to satisfy them it ultimately results in them forming attitudes. Schools' lack of financial and material resources may result in teachers forming negative attitudes towards online teaching and learning.

UNICEF is providing technical support in Zimbabwe and is also supporting the resourcing of an Open Education Resource portal with digital learning resources. It has since recruited two consultants to support this endeavour (Zimbabwe Situation Report, 2020). Catholic Relief Services is also working on the development of Sms/text messages and WhatsApp messages for e-learning albeit in a few districts. Higher Life Foundation, a non-governmental organisation powered by Econet Mobile Services is also supporting remote learning through *Ruzivo* Smart e-learning solution. The platform has electronic and radio transmitted applications which cover a broad and wide geographical area and is very popular with both teachers and students. However, the government's recent directive to use online platforms imposes new and additional demands on secondary school teachers in the context under

study, which has implications on their attitudes. This is because there are resource constraints, renewed content structure, that is, the content was planned for face-to-face delivery but has to be adjusted for online teaching coupled with other variables such as family obligations. Secondary school teachers may feel overburdened and stretched by these unfamiliar demands, hence may form negative perceptions towards the whole process. The planned curriculum, that is, the centralised curriculum was not meant for remote teaching and learning in the first place. The centralised curriculum was designed basically for face-to-face lesson delivery. This meant that with the new online requirements teachers had to plan again and align the content to mode. The new requirement would require teachers to acquire new skills to meet the expectations of online teaching and learning. Generally, teacher morale in Zimbabwe is at its lowest ebb due to lack of motivation as their salaries have been eroded by inflation and there is no valence for the job. By the time of writing this paper the poverty datum line was way above the teachers' salaries due to the hyperinflationary environment (Zimbabwe Situation Report, 2020). It is in this context, compounded by the Covid-19 pandemic, that the study sought to explore the factors influencing rural secondary school teachers' attitudes to the Ministry's directive for teachers to engage in online teaching.

One other worrisome issue in the whole matrix is the issue of assessment. Assessment validates the teacher's performance as it serves to validate instruction (Lai, 2016). Remote learning makes it difficult for the teacher to make both summative and formative assessments which are major components of any curriculum as they give feedback on the performance of both the instructor and supervisee. Teachers may form negative attitudes because of these limitations. The World Bank report (2020) affirms that lack of student assessment is also a thorn in the flesh as teachers will be flying blindly as they try to support their students remotely. Assessment is further curtailed by reduced teacher mobility and access to better facilities as the lockdown has reduced communication between and amongst teachers with implications for the implementation of the response activities.

It is also interesting to note that before the Covid-19 pandemic in Zimbabwe, most high school students were not allowed to use cell phones and tablets within the school premises as teachers and heads of stations feared that the gadgets could corrupt pupils socially and emotionally (World Vision, 2020). The need for online learning has necessitated that students be allowed to use these gadgets for learning purposes. The very teachers have now ironically assumed a new role of compelling students to use cell phones in remote learning. Most

teachers also have a duty to remodel their curriculum to suit the new mode of instruction. Teachers who teach practical subjects, mathematics and sciences feel completely overwhelmed by the new demands and may form negative attitudes towards the business of online teaching (Makurumidze,2020).Elhadary, Gamil, and Kilic (2020) posit that there is an obvious difference between the nature of theoretical and practical courses, so teachers struggle to find suitable approaches to ensure that the quality of e-learning is enhanced. In the context under study, the schools are located in remote rural areas and only two of the selected schools are electrified. The selected schools have no internet facilities.

Statement of the problem

The study investigated selected rural secondary school teachers' attitudes towards remote online teaching and learning in Chivi North District. In the district under study, the researchers noted with concern various contestations ushered in by the Covid-19 pandemic such as low morale, lack of institutional support and the general euphoria associated with technology. The researchers felt that these factors cannot be ignored as the online learning platforms have been adopted globally due to the Covid-19 pandemic.

Research questions

The present study investigated attitudes of secondary school teachers towards online remote teaching and learning in three selected rural schools in Chivi North of Masvingo Province. The research was guided by the following research questions;

- Which factors influence rural secondary school teachers' attitudes towards remote online teaching and learning?
- How can the teachers' attitudes be improved to foster online teaching and learning in the schools under study?

Theoretical Framework

The study adopted the Technology Acceptance Model theory which was propounded by Davis in 1989. The Technology Acceptance Theory was developed from the Theory of Reasoned Action which views human beings as rational people who act after making some careful analysis of the potential usefulness of any given information, hence engage or disengage in a certain behaviour after weighing on the implications of the perceived curriculum innovation. The Technology Acceptance Model was tailored for modelling user

acceptance of technology (Davis, 1989). The main goal of the theory is to provide an explanation of the determinants of computer acceptance. Davis (1989) in Yuen and Ma (2000) posits that perceived usefulness and perceived ease of use are considered to be the fundamental determinants to acceptance by user.

The study adopted the theory because the selected research participants might be having some challenges in online teaching and learning platforms, which are fairly novel to the secondary school curriculum. Perceived usefulness of online platforms can influence the attitudes of secondary school teachers towards remote online curriculum implementation. The amount of confidence a teacher has in using online platforms may influence his or her classroom practice. Yuen and Ma (2000) found out that the two variables, perceived usefulness and perceived ease of use, directly affect the intention to use online platforms. In this study, perceived ease of use refers to the degree to which the secondary school teachers (prospective users) expect the target system to be free of effort. The perceived usefulness implies the secondary school teachers' subjective probability that using specific remote online platforms would increase their job satisfaction within their context, hence the teachers would develop positive attitude. The theory states that system users, for example, secondary school teachers may develop negative attitudes that stem from seldom use of online learning platforms.

Literature review

Lawton and Gershner (1982) assert that successful use of remote e-learning depends on teachers' attitudes towards use of technology. Numerous pedagogical studies have shown that successful implementation of technology-based teaching depends entirely on the teachers' attitudes towards, and acceptance of technology (Abbad, 2009; Yuen & Ma, 2008; Wang, 2003). The mere fact that the corona virus (Covid-19) disease broke out unexpectedly means there was no proper planning to move to online teaching and learning as the government got more interested in fighting and mitigating the spread of the pandemic. Teachers, however, had to quickly adapt to online remote teaching. In most cases, this was against their will and could have resulted in the formation of negative attitudes towards the change. The UNESCO Report (2020) avers that distance online teaching has brought new challenges for teachers, many of whom are more likely to be overwhelmed since they have little support. Teachers

had little time to prepare to migrate to online teaching and learning. Most teachers had to rely on their peers and other sources to help organise and manage remote online teaching and learning (World Bank Report, 2020). Studies by Nordlof, Hallstro and Gunnar (2019) show that teachers form negative attitudes if curriculum methodology is changed or innovated without their contributions as most innovations tend to deskill the instructors. This research study explores the Zimbabwean context in order to establish whether such variables exist. The selected schools are not homogeneous in terms of resources, enrolment, staffing and management.

Teachers' attitudes as well as knowledge and internet skills are major factors affecting teachers' initial acceptance of online remote learning and their future behaviour regarding online learning (Yuen & Ma, 2008; Davis, 1989). A number of factors contribute to the formation of the attitudes. These include perceived usefulness of curriculum change and perceived ease of use of online platforms. Perceived usefulness of online platforms can influence the teachers' attitudes as well as boost their confidence towards their implementation in the classroom (Alodail, 2016; Rosenberg, 2001; Davis, 1989). Perceived ease of use by implication is the degree to which the prospective user expects the target user system to be free of effort whereas perceived usefulness is the prospective user's personal will or motivation that using specific application systems would increase his or her job satisfaction within an organisation (Yuen & Ma, 2008).

A study by Bell (2016) has established that computer literate skills play a crucial role in forming either negative or positive attitudes towards e-learning. Negative attitudes may stem from seldom use of computers and other online platforms. In other words, if one is not aware of the potential and functional use of online remote learning there is a high probability that one can form negative attitudes and bad perceptions towards the innovation. Tapurova et al. (2006) carried out a study in Turkey and found that lack of proper electronic resources was the main reason for the formation of negative attitudes. For curriculum to be properly diffused, resources should be available to the users. Lack of material resources and financial support could be the major stumbling block in the context under study as the Zimbabwean economy is crumbling due to hyperinflation and social instability (The Zimbabwean Situation Report, 2020).

The World Bank Report (2020) asserts that the Zimbabwean economy was already crumbling before the pandemic. The Zimbabwean problems are compounded by the hyperinflationary

conditions and the social and political instability. The Covid-19 disease is unfortunately adding salt to a bleeding wound. Admittedly, the current state of affairs makes it difficult to sustain both education's high demands and the increasing and complicated medical demands. Burke and Dumpsey (2020) posit that learning institutions have to constantly change and adapt in relation to the environment in order not to lag behind. Khan (2016) also posits that the education system must respond to the changing needs of students and their teachers. By and large, technological innovations are increasing the demand to alter the mode of teaching and learning. In Zimbabwe, technology has also had an insignificant impact in the secondary schools (World Bank Report, 2020). However, the unavailability of resources such as computers and internet in most schools makes it difficult for teachers to teach using online platforms (Beri & Sharma, 2019; Agboola, 2006; Byard, 1995).

Garndi and Samarji (2019) carried out a study in Asia and established that the gender and age of teachers are influential factors in the formation of attitudes regarding the use of online platforms for teaching and learning. The research participants in the context under study could be affected by age since some of them were trained before technology had proliferated. The present study also sought to establish whether the five female teachers in the sample held positive views towards e-learning compared to their male counterparts. A study by Nutakor, Banji and Sarpong (2015) in Ghana revealed that female teachers have moderate knowledge of ICT. Their study also revealed that female teachers have little competences in ICT usage but have basic skills to manipulate computers such as in using Microsoft office applications and file management. The study further showed that although female teachers use computers in the delivery of lessons, they are faced with logistical problems. A research study by Wahsheh and Alhawamdeh (2015) also found out that male teachers have fewer challenges in the use of technology. In a related study, O'Donnell (1991) posits that teachers' attitudes are influenced by a number of variables such as gender, age and ability to use technology. The Zimbabwean secondary school has a mixed bag of teachers (Gatawa, 1990). Some of the teachers are degree holders, diploma holders, certificate holders and also para-professionals. The way these teachers embrace technology may differ from teacher to teacher. The old generation in the profession has techno-phobia despite vast educational experiences (Di Giacomo, 2019). This research study intends to find out whether the same factors play any role in influencing the formation of either positive or negative attitudes in the context under study.

Rodgers(2001), Jones (2004) and Mahajan and Kalplan (2018) cite internal and external sources as key factors in stimulating teachers' attitudes towards the use of online remote teaching and learning modes. Internal factors refer to the actual level of teacher competency to manage the level of new technologies (Rodgers, 2001). External factors refer to the inaccessibility, scarcity or unavailability of the software needed and the related gadgets or hardware; lack of associated technical and institutional support; and lack of funding and time across internal and external sources (Jutileni &Jutileni, 2019; Alodail, 2016; Wang, 2002). Jutilen and Jutilen (2019) further assert that attitudes can be as a result of interrelationships or inter-connectedness of people because of certain beliefs which they term meso-level influences. Meso-level influences amongst the teachers can be one good reason for the formation of either positive or negative attitudes towards remote online teaching and learning by the Zimbabwe rural secondary school teachers who were used in the study. Lai (2016) also confirms that people who live and work together, for example, in church or government schools can develop some form of web-connections where they are connected by mutual beliefs or traditions. Once an attitude is formed, it affects the whole cluster (meso-level influence). The research study needs to ascertain whether these variables apply in the context under study.

Methodology

The study adopted the qualitative approach and fifteen rural secondary school teachers in Chivi North District of Masvingo Province in Zimbabwe participated. The study was guided by the interpretivism paradigm. Interpretivists tend to gain a deeper understanding of the phenomenon and its complexity in its unique context instead of trying to generalise the base of understanding for the whole population (Creswell, 2007). Such researchers claim that knowledge is relative to particular circumstances, for example, historical, temporal and cultural. The study aimed to establish factors which influence the attitudes of secondary school teachers towards the use of online teaching during the Covid-19 pandemic. Five respondents were purposively drawn from each of the three secondary schools which are in the same cluster. Data was solicited using an open-ended online questionnaire with questions on teachers' perceived ease of use, perceived usefulness, teacher readiness, institutional support, and resources. The study also solicited for teachers' attitude towards the immediate benefits of remote teaching. The researchers acknowledge that the research might have some limitations because it has used only one instrument to collect data from a similar set of

respondents. However, rigour was maintained. The data were gathered and analysed qualitatively on the attitudes of secondary school teachers towards remote online teaching and learning. A content analysis of the responses from the questionnaires was done to establish the common themes which emerged from the different subject teachers. The research study purposively sampled three teachers each from each of the five disciplines in the secondary school curriculum. The sample had Science teachers, Language and Arts, Humanities, Practicals, and Commercials.

Findings and discussion

The study found out that secondary school teachers in the schools under study had negative attitudes towards the implementation of remote online teaching. Their attitudes were influenced by variables such as perceived ease of use, perceived usefulness, gender, institutional support (resources) and motivation. The data were solicited using online questionnaires and there was 100% response rate. The current study found out that most teachers were reluctant to use online remote learning platforms because they were not familiar with them, and by extension, difficult to use. One senior teacher had this to say “Implementing large amounts of technology is not a simple task particularly on unskilled people like us who lack technological skills.”The response shows that teachers were grappling with technology and were forming negative attitudes due to lack of requisite skills necessary for the successful implementation of the curriculum.

The online platforms seem to be posing challenges to the research participants particularly on Google Classroom which requires more data and high connectivity. One of the respondents thus remarked;

*The government used the panic approach to implement the online teaching and learning process. What the system did is unjustified as they placed the horse before the cart. We were supposed to be in-serviced before embarking on this cumbersome process which makes very unfamiliar demands from us. The school must provide data and laptops
or smart phones.*

The above citation reflects that teachers as key stakeholders were not consulted. Neither were they in-serviced to use the new online platforms, hence they may have developed some serious negative attitudes towards the whole process. Teachers have their own fair share of

challenges and the fact that they are mandated to teach online classes using own resources sounds unfair. The schools have meagre resources and teachers are compelled by reality to use own resources. Teachers need resources like smartphones, data bundles, Wi-Fi, laptops and related gadgets to facilitate remote learning. If these are not met, then teachers will definitely develop negative attitudes towards the whole project. It is a fact that before the Covid-19 pandemic the education system in Zimbabwe was already curtailed as a result of several crises such as drastic economic sanctions, political unrest coupled with hyperinflation and perennial droughts(The Zimbabwean Situation Report, 2020).

The research study also found out that teachers were calculative and formed negative attitudes based on the need not to take any risks as regards online teaching and learning. One teacher questioned “Why would I embarrass myself before my pupils by trying to engage in those complicated platforms? Why the rush? After all, we will reteach the same concepts when schools re-open.”This rhetorical response to the questionnaire reflects that teachers formed some negative attitude based on the perceived use of the online platforms. The teacher hated the online platform because it was not user-friendly.

The response above augurs well with the study carried out by Ishmail and Kaylar (2016) who also concluded that classroom teachers are the originators of the students’ use of online based learning materials and their perceived ease of use may distort or enhance the implementation process. Khan (2016) rightly points out that, when any new technology emerges, the teacher is charged to be able to use it without exception. However, online learning demands a certain level of skills on the part of teachers and students. Even highly educated teachers may lack necessary computer and internet skills and this may affect their zeal to use technology in teaching. Chung (2005) and Tapurova et al. (2006) carried out similar researches and also concluded that successful implementation of online platforms depends largely on the perceptions of teachers on the ease of use. Teachers have two important roles which they must perform with ease, that is, development of remote online curriculum content and implementing the ready-made courses. This current study thus concludes that perceived ease of use of online platforms results in positive attitudes towards the implementation of the online remote learning and perceived difficulty of use attracts negative attitude. Teacher education cannot afford to remain indifferent and unresponsive to the perceived benefits of online remote learning in the Covid-19 era.

The research study also found out that the teachers were forming negative attitudes because they were not prepared to handle the change at short notice. The majority of the research participants detested the new learning platform and one had this to say: “How can I teach and assess a practical subject such as Agriculture or Food and Nutrition on the envisaged online platforms? The platform is not easy for my subject area.” This suggests that some teachers had formed negative attitudes because of the sudden change for which they found themselves in unprepared.

One other teacher was quoted as saying, “This panic approach to curriculum implementation is a fallacy as I cannot labour with a class of 45 students on the online platforms using my own resources.” This above submission, just like the above, shows that the teachers were not ready to teach online. Consequently, they failed to see the perceived usefulness of online curriculum implementation thereby forming negative attitude towards online teaching and learning. The findings go hand-in-hand with the studies carried out by Egbe (2014), who concluded that perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job satisfaction. The findings also confirm Davis’ (1989) Technology Acceptance Model’s key submission that the usefulness of technology is the chief trait that gains it acceptance. As the responses in this study show the issue of teacher readiness to implement online remote learning is a thorn in the flesh. Most participants in the study appeared emotional about the whole process of online learning and therefore had negative attitude. Generally, the teachers were not ready to teach online and did not value its essence. The research finding confirm that by Ali (2020) who concluded that transitioning to online learning on a large scale is a very difficult and highly complex, even in the best of circumstances.

However, one respondent was very positive about online teaching and learning. The respondent indicated on the questionnaire thus: “We should be proactive rather than being reactive. Let’s take into consideration the Covid-19 and the government’s initiatives of social distancing to safeguard life.” The same respondent went further to say: “Teachers need to have the capacity or must have the capacity to use technological tools in order to offer lessons effectively in online platforms.” These words show that the respondent had positive and hopeful thoughts about online teaching and learning. Similar sentiments were raised by Khan (2016) who noted that teachers are essential players in the promotion of quality education and all educational reform programmes. He further encourages teachers to improve their attitudes

and accept a new teaching paradigm, that is, managing learning rather than disseminating it. The perceptions resonate with the United Nations' 2030 Agenda for Sustainable Development that mandates each member state to implement Information and Communication Technology as a way of promoting national development. The current study concluded that teacher readiness is a critical factor in attitude formation that such endeavours need to account for.

The study also found out that participants formed negative attitude based on gender or sexual roles. The study established that female teachers who constituted just below half of the sample under study were constrained to use online platforms based on gender roles in the context of the national lockdown. Female teachers said they were also expected to carry out household chores, including family care. One of the female respondents said; "There is absolutely no benefit of online learning to me as an individual because I cannot use my personal resources to subsidise the school as this should be the reverse. How can I buy data bundle with the money that I should use to buy groceries and firewood?" The response by the female teacher shows that female teachers felt online teaching was unnecessarily expensive and burdensome and could interfere with their domestic concerns. The above assertion also shows that female teachers formed negative attitudes because of own perceived conception about the whole curriculum implementation process. The results in this study resembled those of Mammattah (2016) who carried out a research in Ghana on the attitudes of teachers and students and concluded that male teachers appreciated online learning more than their female counterparts. Other responses on the questionnaires also suggest that remote learning imposes new and additional demands on female teachers who cannot sustain the dual role of parenting and remote online teaching in the lockdown settings. The study thus concluded that female teachers have negative perceptions towards remote online teaching basing on a number of perceived variables as discussed above.

Another finding of this study is that teacher support is critical in the formation of positive attitudes towards online curriculum implementation. When money, manpower and supplies are not available to make the change that teachers require, it becomes extremely difficult for teachers to adapt to the perceived change. One of the research participants stated, "Lack of professional development is retarding the whole process as teachers must be properly trained to implement the new approach in a positive spirit." Teachers were thus complaining of absence of government and institutional support. The study found out that if teachers lack the necessary training, they get frustrated and find it difficult to implement the perceived

curriculum. The World Bank report (2020) has also concluded that technology plays a large part in the adoption but if no funding is provided to purchase equipment the perceived curriculum adoption cannot be sustained.

The current study also established that teachers required support in form of data bundles, internet, smart phones, computers and laptops in order to fully operationalise remote online learning in the Zimbabwean secondary schools. Teachers in Chivi North district raised the issue of data bundles to use on WhatsApp, Google Classroom and E-mails which are the most common platforms used in the area under study. One respondent had this to say;

We require motivation from both the immediate stakeholders who are the parents and from our immediate supervisors who are the school administrators in order to execute remote online teaching and learning effectively. It is also prudent for the government to note that teachers require financial and material resources in order to get job satisfaction.

The above response shows that teachers are demoralised in terms of remuneration. The study found out that twelve out of the fifteen respondents lacked motivation. They cited this as the biggest factor on the questionnaire, explaining that this influenced their negative attitude towards online remote learning which they perceived as extra work. The participants lacked motivation which caused the development of negative attitudes towards online teaching and learning among teachers. A similar study conducted by Law, Lee and Yu (2010) discovered that motivation was the key in influencing teachers' behaviour towards online remote learning and teaching. Teachers with positive attitudes towards technology are more likely to engage in online teaching.

Commenting on the issue of motivation one of the participants wrote: "My monthly salary can only buy 10 GB of data if converted to data bundles and nothing more. My pay is equal to plus or minus 10 GB and you definitely know the consequences..." The foregoing statement shows that some teachers in the context under study have developed some negative attitudes as a result of poor income and the work environment. A related response had the following words: "I am tired of doing community service and cannot continue to offer voluntary services during this lockdown as I want to rest a bit and do part-time jobs that bring bread on the table." The response shows that some teachers' negative attitudes could compromise the online teaching and learning programme. For online teaching and learning to succeed in rural areas, therefore, teachers' concerns need to be attended to. These concerns, as the study has

shown, influence their attitudes which could also affect the performance of students learning on the platform.

Conclusions

The study concluded that most teachers in the selected schools formed negative attitudes towards the remote online teaching which they perceived as difficult and unsustainable to use. There were a number of challenges that catalysed the teachers' formation of negative attitudes to remote online teaching and learning. Chief among the teachers' constraints are inadequate resources and low remuneration. There was also low morale amongst teachers as the Poverty Datum line was way above their net income which also catalysed negative attitudes. It was also concluded that teachers felt that they were being short-changed by the employer in terms of conditions of service, hence the reluctance to accept what they considered an extra burden to learn and subsidise the online mode. The study also concluded that the teachers needed both material and moral support from the relevant stakeholders in order to foster a positive attitude.

Recommendations

As most schools move towards online teaching and learning, it is of paramount importance to understand teachers' readiness to embrace this new innovation. As reflected in the current research, a number of variables such as perceived ease of use, perceived usefulness, gender and motivation influenced the teachers' attitudes towards e-learning. The study raised a number of issues that should be addressed in order to improve teacher attitudes. The following are the key ones that need immediate attention:

- The teacher training institutions should empower teachers with the requisite skills that are key in executing online teaching and learning.
- The government of the day should also render both material and financial support to schools so that teachers get the necessary support they require.
- Online learning should be improved so that teachers can be able to carry both formative and summative evaluation effectively. The current socio-economic status of the country in context cannot sustain summative evaluation particularly on national examinations. Summative evaluations are of high stakes. There is need for due diligence in the high point value evaluation.
- Teacher remuneration could be reviewed positively in order to motivate them.

- Rural secondary schools should be e-resourced
- Both the government of the day and the stakeholders should support and fund remote online teaching and learning in the secondary schools in context.
- The study recommends workshops to in-service teachers so that they can easily adopt the innovation and implement the curriculum with ease.

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