

Teachers' Perceptions of the Effectiveness of Remote Learning Materials on Causing Self-Learning during the Covid-19 Lockdown in Uganda

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Abstract

The 2020 seven-month Covid-19 lockdown in Uganda led to the introduction of remote learning/self-study materials into the school system. Primary seven school teachers who later received their candidates to prepare them for the end of cycle exams found this problematic. Thus, an exclusively qualitative study constituting in-depth interviews and Focus Group Discussions was carried out to examine their perceptions on the issue. The study invoked the equivalence theory of distance learning, with the following questions:


1. What do primary seven school teachers perceive of the concept of remote learning and remote learning materials?
2. How do the teachers perceive of the content and instruction process within the material?
3. What challenges did the teachers encounter with returning learners after the lockdown was lifted?

The findings indicated that primary seven school teachers lacked knowledge about the concept of remote learning and could not conceptualise the possibility of effective self-learning. They observed that learners returning to school after the lockdown did not show signs of having effectively learnt using the self-study materials. This study recommends refresher courses to introduce primary school teachers to the concept of remote learning using self-study materials.

KEY WORDS: *Teachers' Perceptions, Covid-19 Pandemic, Remote Learning, Self-Study Materials, Self-Learning.*

By March 2020, the World Health Organization (WHO) had declared Covid-19 a global pandemic. In order to mitigate the spread of the virus, His Excellency the President of the Republic of Uganda directed on 18 March 2020 the closure of all institutions of

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learning with effect from 20 March 2020. Following the closure, there arose a general concern from several stakeholders indicating that learners needed some form of academic guidance to ensure continuity of learning under Lockdown. On 4 April 2020, Ministry of Education published an official Preparedness and Response Plan (PRP) with a focus of ensuring continuity of learning during the sudden closure of schools. The enormous task was trusted with the National Curriculum Development Centre to develop remote learning materials for all primary and secondary school learners. A comprehensive framework was developed to guide the development and distribution of remote learning materials and was dispatched with a circular by the Permanent Secretary of the Ministry of Education and Sports on 20 April 2021. It was agreed that the self-study materials would be developed in print, audio and audio-visual based on the NCDC approved curriculum, with focus on core competencies. These had to be tailored towards allowing self-study in the absence of the teachers that had been conscripted into the locked down.

Seven months later, a phased re-opening of schools was announced on 20 September 2020 during the presidential address to the nation in which he instructed all end-of-cycle candidate classes to return to school, with very strict Standard Operating Procedures (SOPs). For primary schools, the second term was scheduled to begin on the 15 October 2020 ending on December 18, 2020. The third term then began on Monday 11 January 2021 and ended on 30 April 2021. For primary seven-candidate class, the term ended with the completion of the Primary Leaving Examinations (PLE) exercise on 31 March 2021. The National Examinations Board (UNEB) however made an announcement indicating that the PLE test items were selected without consideration of the fact that learners had spent time in the lockdown. According to UNEB, learning had taken place using remote learning materials and therefore there was no need to treat the exam with any special consideration. This, however, raised many questions among major stakeholders as to whether learning had effectively taken place with remote learning materials, prompting this study.

METHODOLOGY


This study was exclusively qualitative in nature because of its structural flexibility, the possibility of deeper probing and examination of issues. The research was concerned with explanations, descriptions and explorations of opinions, attitudes, of teachers on the effectiveness of remote learning materials. The sample was selected from primary

seven school teachers who had been sidelined in the remote learning process and yet were charged to prepare candidates for their end-of-cycle exams. A sample of forty primary seven teachers was selected from both government and private schools within Nangabo sub-county of Wakiso district in Uganda. This study employed a two-strategy mode of techniques: Purposive and Convenience sampling techniques. The reason for selecting the two sampling techniques was based on the fact that the target population had to meet particular practical criteria. For this case, the practical criteria were mainly the spatial distribution of respondents within the researcher's reach, their availability, accessibility, proximity, and willingness to participate on the research project.

THE EQUIVALENCE THEORY OF DISTANCE LEARNING

This study is guided by the Equivalency theory of distance learning. This American theory argues that learning at a distance should be built on the concept of equivalency of learning experiences. According to the theory, learning experiences for all learners at a particular programme should be built with outcomes that are achievable at the same footing for all learners. Notable proponents of the theory like Shale (1988); Simonson (1995); Keegan (1995) argue that learners should have learning experiences that are tailored to the environment and situation in which they find themselves but achieved at the same footing across the board. It is therefore incumbent upon the designers of learning programmes to ensure that there is an acceptable equivalency in the learning experiences for all learners, regardless of how they are linked to the resources or the instruction they require. This implies that education providers have to design learning items and experiences that make all learners benefit at the same level despite the differences in time and space and also the socioeconomic situations they live in.

The key elements of the “Equivalency Theory” as listed by Simonson, Schlosser & Hanson (1999) include the concept of equivalency, learning experiences, appropriate application, students' response and learning outcomes. According to these elements, equivalency is built on the argument that learners have fundamentally different environments in which to learn. It is therefore a responsibility of the distance educator to design learning events that provide experiences with equal value for learners. The element of Learning Experiences is built on the assumption that learners hail from various locations, learning at different times, and may therefore require a different mix of learning experiences. Some may need a greater amount of listening and observing while others may require a larger dosage of physically doing the work.



The goal of instructional planning is to make the sum total of all learning experiences for each learner equivalent. The concept of Appropriate Application is built on the assumption that learning experiences should allow delivery of instructional ideas that fit the expectations and facilities available to all learners. This element argues that learners should be defined by their enrolment in a course and therefore materials should be developed with the understanding of their level of knowledge and resource availability. And lastly, any learning must be built on achievable learning outcomes that are developed out of learning experience that are obvious, measurable, that occur cognitively and effectively in learners because of their participation in the course or unit.

The Equivalency Theory is also built on some principles that posit learning through an interactive teaching/learning process. For example, Simonson (1995) argues that whereas the equivalency theory agrees that the learner and teacher may be separated from one another in the learning process but there should be two-way interactive telecommunication systems that synchronously and asynchronously connect the learning process. These should facilitate the sharing of experiences either by video, voice, or data-based instruction. This conceptualisation looks at Television and other communications network as ideal in permitting learners and instructors to interact, either by seeing and or being seen, hearing and being heard, in almost the same way as in the local classroom. And according to Keegan (1995) there should be an electronically linking system for instructors and learners at various locations to create virtual classroom situations. In other words, equivalent learning experiences may not be fully achieved with total disconnect from between the teacher and the learner.

This theory is very relevant in examining remote learning experiences that were designed in Uganda. The remote learning programme in Uganda was developed to totally divorce the teachers' participation in the on-going learning process. Instead, text materials were delivered to learners, while radio and television programmes were pre-recorded and aired out on media outlets without any moments of interaction between the teacher and learners. And above all, the television and radio programmes were created with a selected few teachers that worked with NCDC as panel members. In other words, learners were assumed to learn from teachers that they had never seen and interacted with before.


Most challenging to these materials is the fact that the Ugandan community is very heterogeneous in terms of ICT infrastructure and all other telecommunication

development. The socioeconomic situation doesn't permit all learners to access the learning materials with equal measure due to the fact that the Ugandan society is heavily stratified in terms of economic status. Even the nature of schools is very contestable because private schools and government-aided schools in Uganda are very different in terms of how their learning experiences are facilitated. This poses great challenges to the learning process and open up a great discussion on the effectiveness of the remote learning materials on causing self-learning.

THE STRANGE CONCEPT OF REMOTE LEARNING

The concept of remote learning dates back to the mid nineteenth century, it was originally termed merely distance learning. According to Nasser (1997), the first form of distance learning included texts, radio and television learning materials that were delivered by post to learners in distance localities. Anderson and Simpson (2012) describe this situation as a generational baggage on learning. Accordingly, the first generation was mainly in print that was done through correspondence while the second generation was through broadcast such as radio and television. A key feature in all the above was a one-sided, dominated learning process that barred the teachers from interacting with the learners. However, such materials were developed in respect to a number of qualifiers in order to categorise learning materials as applicable for remote learning or for self-study. These have been identified by Kenter (2015) as being self-explanatory, self-directing, self-motivating, self-evaluating and self-learning.

Self-explanatory content is presented in a style so that a learner can learn from the material without much external support. The content is analysed and presented logically considering the mental and lingual background of the learners of a target group. Self-directed learning materials are created with necessary guidance involving hints and suggestions to the learners at each stage of learning. Self-directed materials are presented in the form of easy explanations, sequential development, illustrations, and learning activities. Self-motivating study materials, like a teacher in the classroom, have to be highly encouraging for the learners to attract their voluntary attention and participation. They should arouse curiosity, raise problems, relate knowledge to familiar situations and make the entire learning meaningful for them while providing reinforcement and feedback at every stage of learning. Self-evaluating study materials have to constitute self-check questions, exercises, activities, that provide the learners with the much-needed feedback about their progress. In other words, the materials reinforce learning, and motivate the learners to progress with self-learning.



However, with dramatic changes in technology coupled with the increasing phenomena of globalisation, such traditional methods are considered obsolete. For example, Saba (2011) argues that the traditional methods of remote learning with correspondence courses on radio and television are deemed out of functional use in the new era of technological advancement. Furthermore, the new generation according to Anderson and Simpson (2012) prefers learning materials with an element of interaction and teamwork between the teacher and students and also between the students. In other words, remote learning needs to adopt a blended model where participants have the opportunity for some form of interaction. Such a model allows time for the teachers to meet from time to time with learners either face-to-face or online interaction to clarify and confirm their understanding of the learning concepts. In this model, the interactions act as a support mechanism to reconcile the learning materials with the learners and the teacher. There is therefore a need to modify the definition of remote learning to include emphatically a provision for learners to regularly interact with teachers.

USAGE OF REMOTE LEARNING MATERIALS FOR SELF-LEARNING


In an era of globalisation where Information Communication Technology (ICT) takes the lead in information distribution and dissemination, remote learning modalities have to arguably be modified. Mihiotis et al (2006) for example argues that remote learning has to conform to three forms in order to gain appropriateness and or legitimacy. These are self-paced remote learning, asynchronous remote learning (ARL) and synchronous remote learning.

Self-paced remote learning allows the student to decide him/herself how he/she will use the provided educational material while there is no physical contact with the supervising tutor or with other classmates. In such a scenario, any available communication tool can serve as an aide to learning be it a mobile cell phone, a radio or television. Self-paced learning is what formed the argument by Kendall Hartley, Lisa D. Bendixen, Dan Gianoutsos and Emily Shreve in their research (2020), which examined the smart phone as a useful tool in a “self-regulated learning environment”. The authors’ argument is that the smart phone, despite contrasting arguments against its usefulness, is more than a tool of social communication but also an effective gadget of self-regulated remote learning. According to the research, if a mobile cell phone is usefully utilised, there is a possibility of ensuring academic success for learners at different stages of learning.

With asynchronous remote learning, the learning process entails a combined effort

from both the teacher and the learners who collaborate on the learning process in an asynchronous manner. It is a teaching method that uses asynchronous delivery mode where learning materials or content are delivered by means of the computer networking technology. In other words, the learner is able to communicate with the teacher and the other students. According to Watts (2016), communication among the participants occurs mainly through email and online forums while the teacher moderates the instruction process. However, it has to be noted that ARL calls for serious investment in information technology and telecommunication networks prior to resumption of classes. Here, the learners are bound to download a course, engage with it at free will before, during and after the session with the teacher. It is for that reason that Ubon and Kimble (2002) consider asynchronous remote learning as a holistic solution to educational matters.

Synchronous Remote Learning (SRL) allows both learners and the teacher to stay in different locations but with the use of technology they participate in the same virtual classroom. In his numerous collaborated studies, Bouras et al (2001) emphasises the notion of a virtual classroom if synchronous remote learning has to be effectively conducted. This is because synchronous remote learning requires the simultaneous attendance of all parties involved such that there is simultaneous interaction between the teacher and the learner in real time. The Ugandan version of remote learning greatly defaulted on all these practices presenting challenges regarding effectiveness with the absence of the teacher as the most evident gap. This gap has been addressed in some scholarly studies. For example, in his 1980 seminal article on remote learning practices, Keegan argued that the key element in such a new form of learning was the physical but not total separation of the teacher and learner. Whereas Keegan argues that in such an arrangement, learning occurs in the context of an educational institution where technical media is used but on the other hand he emphasised that the teacher and learner maintain some form of communication. In fact Keegan argued that face-to-face meetings between the learner and the teacher should remain possible. In other words, it is not practically effective to totally divorce the teacher from the learning process of especially learners at primary school, considering the fact that primary school learners are at a delicate stage of learning. Arguably, this is the stage that highly calls for the teacher's participation in the learning process at each of the stages. With the teachers' total absence, an intriguing question arises, "Can learning at primary school level take place in total absence of the teacher?"



Responses generated from primary seven teachers who were the key informants of the study showed that the concept of remote learning did not take off during the Covid-19 Lockdown in Uganda. Although a variety of text, audio and video learning materials were provided, the materials did not play the role they were designed for. This was largely due to the rushed plunge into the concept without prior planning and preparation. Remote learning had not been initiated into the college and school system before and had not been rolled out through the normal process. The study revealed that teachers did not understand the concept of remote learning using self-study materials and could not conceptualise an effective learning situation across different geographical locations without the teacher. This study suggests that the concept of remote learning fell short of most of tenets of the Equivalency Theory of distance learning in the sense that learning was packaged without considering the different socioeconomic and geographical differences where learners are located. So, it was assumed that learners from the whole country were learning at the same footing.

SUGGESTIONS FOR IMPROVING REMOTE LEARNING

The teachers were tasked to give their views about how remote learning could be improved. The teachers suggested that the concept of remote learning as I had clearly explained to them was a very good idea. They especially appreciated that it could not only be used during times of disasters but could be adopted as a normal learning process in Uganda. However, all of them argued that remote learning could only be effective if some modifications were made. The major modification that teachers recommended was to re-unite the teacher and the learner in the learning process. According to teachers, there are several possible ways by which teachers can be brought back using Information and Communication and Technology. In this case, all the four main types of communication technology --- telephone, radio, television and the internet --- could be put to use with equal measure.


Other teachers underlined the importance of a simple mobile telephone in the teaching/ learning process since mobile phones are readily available and in variety of affordable qualities. Moreover, mobile data can easily be provided for such a noble cause if the stakeholders take it as an important learning intervention. This contention is in tandem with self-paced learning that formed the argument by Kendall Hartley, Lisa D. Bendixen, Dan Gianoutsos and Emily Shreve in their research (2020). As noted earlier, the authors examined the smart phone as a useful tool in a self-regulated learning environment. According to this argument, the smart phone is an effective gadget of

self-regulated remote learning that can possibly ensure effective learning in the remote learning modality.

The respondents, however, cited poor planning on the side of policy developers and government of Uganda for their laxity in creating this provision. According to the respondents, the problem is not scarcity of resources but rather poor resource allocation and planning. What the respondents termed as proper planning was the massive investment in simple technology that could be available to all learners in the country. Teachers showed their awareness of Information and Communications Technology (ICT) and its applicability in the teaching/learning process but emphatically reiterated the adoption of a two-way communications strategy between the teacher and the learners. This is embedded in the two concepts; asynchronous remote learning (ARL) and Synchronous Remote Learning (SRL). Apparently, they both allow the learner and the teacher to use technology to stay in contact during the learning process. In other words, whereas remote learning encompasses the idea of distance and physical separation, the issue of communication between the learner and the teachers remains very important. The idea that the teacher and the learner stay in different locations cannot be used as an excuse to distract the learning process as long as there is an effective use of technology to aid the learning process.

This study suggests that remote learning should bridge the gap by adopting the synchronous and asynchronous remote learning modes. Synchronous remote learning encourages learning in the virtual classroom to ensure the simultaneous attendance of all parties involved such that there is simultaneous interaction between the teacher and the learner in real time. Asynchronous remote learning on the other hand ensures that the learner is able to communicate with the teacher and the other learners using online forums of communication even if it is not simultaneously. These two modes have been discussed as holistic solutions to remote learning because the learning process entails a combined effort from both the teacher and the learners who collaborate on the learning process in either an asynchronous or synchronous manner. However, both modes are united by the call for investment in Information and Communication Technology (ICT) and telecommunication networks prior to resumption of classes. Such investment would allow learners to access and engage with learning items at free will before, during and after the session.

Teachers also suggested that learning could take place via Zoom and Skype telecommunications. These are widely utilised video communication technologies that



provide video telephony, video conferencing and instant voice calls. Zoom particularly provides online chats through the cloud-based, peer-to-peer software platform while Skype provides voice calls, instant messaging, file transfer, debit-based calls to landlines and mobile telephones. In this case, the teaching/learning process can take place via Zoom and Skype through teleconferencing, telecommuting in a two-way traffic remote learning process. In all the above suggestions however, the teachers suggest a shift from a system that divorces them from the learning process and instead emphasise that remote learning makes sense if it is done with the possibility of teacher-pupil interactions, seeming to operate within the equivalency theory of distance learning.

Teachers also recommended that an official nationwide rollout of the concept of remote learning should be fast-tracked. They all agreed that it's only after the programme has been officially introduced into the Ugandan system that it could be effective in causing self-learning. Official roll out would mean that the concept is properly written and widely disseminated to all education stakeholders in the school system. This could be done by making it a substantive teaching item at the teacher training colleges and also through refresher trainings for the already serving teachers. Refresher courses would be conducted at school and regional clusters using a continuous professional development model.

Teachers also suggested that remote learning materials should not only be developed at a national platform, and merely distributed to the learners, as was the case for the materials in contention. Instead, teachers should be trained to develop their own materials so that they get the concept right and also pass it over to their pupils in the school system. Their argument was that once teachers are taught to develop remote learning materials independently, the concept would be officially rolled out into the school system. This is because the teachers will not only learn the concept on a daily basis but will also teach it to the learners slowly, rather than being dropped onto the pupils without any prior preparation. According to the teachers, learners learn from their teachers better than from anybody else and for anything innovative to sink into the mind of learners, it has to be taught to them by their teachers, short of which the situation would turn out contentious and totally misunderstood by learners. The teachers' argument dismantles the centralisation of a learning process to advocate for the devolution of responsibilities where teachers have to participate in the remote learning process, not as spectators but as the formulators of knowledge in this regard.


It is agreeable that their contestation is professionally bound since teachers do most of the work in the curriculum instruction process. The teachers' argument is in agreement with Keegan's (1980) seminal article on remote learning that argued that the key element in such a new form of learning was the physical but not total separation of the teacher and learner. This study emphasises that teachers' participation should be at all levels right from the development stage of remote learning materials to the instructional process and lastly to the assessment process. In other words, it is needless to divorce the teacher from the learning process of especially learners at primary school level. This sounds like a wake-up call for all stakeholders in Uganda's Primary Education System to rethink and reorganise the concept of remote learning.

CONCLUSION


This study acknowledges the fact that remote learning is a useful intervention to ensure continuity of learning not only in times disasters like the Covid-19 pandemic lockdown but also as a convenient learning practice. It should, therefore, be rethought and re-rolled out in all schools and teacher training colleges in Uganda as an immediate intervention. The roll out has to target school teachers first, to introduce the concept of remote learning, its usefulness in the teaching/learning process. Teachers have to be trained on how to develop remote learning materials to ensure its longevity. This calls for the participation of all stakeholders including Ministry of Education and Sports, political leaders, policy makers, teacher educators, district officers, school owners, school teachers, parents and community leaders. All these should work collectively to create an enabling environment for the implementation of remote learning.

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