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INVESTIGATING THE EFFECTS OF USING *THUTO* LEARNING MANAGEMENT SYSTEM:  
A CASE OF THE NATIONAL UNIVERSITY OF LESOTHO

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**Investigating the effects of using *Thuto* learning management system: A case of the National University of Lesotho.**

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**Purpose:** This article aims at investigating the effects of solely using *Thuto* learning management system on NUL students while traditional interactions were temporarily postponed.

**Methodology:** This study adopted a qualitative inquiry and the DeLone and McLean Model of Information Systems with the aim of gaining deeper understanding about the effects brought by the new way of learning at the university amid threats posts by the covid-19. Free attitude interviews were used to generate data from conveniently selected NUL students.

**Findings:** The study revealed that though *Thuto* is ideal during this Covid-19 era because learning still happens, it has many challenges that needs to be addressed, they include the following; not being interactive, inaccessible and reduced students motivation.

**Unique Contribution to theory and practice:** Given the challenges revealed, it is recommended that efforts have to be made to improve the efficiency and the reliability of *Thuto* learning management system and that, lecturers should use other online learning platforms that are more interactive.

**Keywords:** *Thuto* learning management system, NUL, Students, Covid 19, Effects.

## 1.0 INTRODUCTION

After the World Health Organisation (WHO) has declared Covid-19 a pandemic on 11 March 2020, most governments announced national lockdowns. Lesotho was not an exception; on 18 March 2020, Prime Minister Thomas Thabane declared the national emergency on Covid-19 which led to closure of all forms and size of schools on the 20 March 2020 despite the country not having a single Covid-19 confirmed case. Since 18 March 2020, the normal teaching and learning at the National University of Lesotho (NUL) had been put on halt because of the new Covid-19 regulations announced. This new measure meant that, normal face to face interactions between lecturer and students were suspended at the NUL. Students had to learn remotely. As graduations ceremonies, classes and examinations cancelled and university programs being postponed in many parts of the world (Demuyakor 2020, p.1), the above implied that NUL administration and the government of Lesotho had to find a way to save the semester. It was during these unprecedented times that, NUL cracked a deal with Econet Telecom Lesotho (ETL) to launch the zero-rated e-learning programme from the 28<sup>th</sup> April 2020 (NUL Circular 2020). This deal was aimed at facilitating remote teaching and learning at the University. The decision to continue with the teaching and learning at NUL was also witnessed in various parts of the world, notable in China where the outbreak began towards the end of 2019 in Wuhan. Since the outbreak, in an attempt to combat the spread of Covid-19, the Chinese government banned face-to face teaching and learning activities and most universities began a massive shift from normal face to face teaching and learning to online one (Ali, 2020, p.17 and Bao, 2020, p.113). Therefore, this study aims at mainly investigating the positive effects and challenges brought by *Thuto* learning management system on NUL students and suggest possible solutions to the challenges.

### Research question

The study is anchored by the following overarching research question:

What are the main positives and challenges brought by *Thuto* learning management system on NUL students?

### Research objectives

The objectives of this study are to:

- Demonstrate the positives of *Thuto* learning management system at the NUL.
- To outline the challenges brought by *Thuto* learning management system at the NUL.
- To suggest the possible solutions to the challenges brought by *Thuto* learning management system .

## 2.0 REVIEW OF THE RELATED LITERATURE

On-line learning platforms consist of incorporating electronic media in the teaching and learning process with the main aim of disseminating information to students. Integration of on-line learning enables sharing of resources and easy interaction between the NUL lecturers and students, especially during social distancing era. These electronic platforms are ideal for disseminating important learning materials to students while ensuring effective interaction (Sadeghi 2019, p.81, Daniels, Sarte & Cruz 2019, p.2 and Kassymova, Issaliyeva & Kosherbayeva 2019, p.249).

With Covid-19 changing many normal ways of lecturer students' interaction, *Thuto* provides learning solution during these unprecedented times (Arkorful & Abaido 2014, p.401 and Kassymova, et al 2019, p.249). It facilitates remote learning. *Thuto* was incorporated at NUL because it makes both NUL lectures and students to travel less (Arkorful & Abaido 2014, p.401) and stay at their homes as advised by the Lesotho government through Ministry of Health. Students and their lectures staying at their homes mean that, the chances of being infected or infecting others are reduced. Incorporation of *Thuto* learning management system at the NUL is

ideal because it has removed the remoteness barrier as Trakru and Jha (2019, p.96) argues that it has entirely detached the distance obstruction and made it more fitting and satisfying. As a result, in wake of the prevailing Covid-19 circumstances, Trakru and Jha (2019, p.97) claim that effective use of on-line learning platforms has a huge potential to encourage the growth of prerequisite competencies to achieve the challenges of 21<sup>st</sup> century and beyond.

However, the incorporation of the *Thuto* learning management system at the NUL has serious challenges that may hinder student's effective learning. As such, they have to be vigorously addressed for desired results to be attained. The main challenge pertains to hardware and software (laptops, desktops or smart cell phones) acquisition (Rasmitadila et al 2020, p.97 and Dhawan 2020, p.49). Not all NUL students get bursaries from the National Manpower Development Secretariat (NMDS). As a consequence, it becomes difficult for those who are self-sponsored procure all the necessary computer equipment.

Most university learning, including that of NUL was primarily based on conventional methods. They involve face to face interaction of students and their lectures. This therefore as a result implies that, the prompt shift to *Thuto* learning management system is likely to affect negatively the rapport that has been established by the lecturers and students over the years. Consequently, it is presented in this study that, *Thuto* could not only demotivate some students to be fully engaged in the learning process, but also hinder lectures effectiveness (Rasmitadila et al 2020, p.96, 97,102). In these instances, efforts has to be made by both parents and lecturers to encourage students to be fully engaged in their studies, as it appears that Covid-19 is likely to be with us for a long time, given new and deadly variants being discovered in other parts of the world.

The other challenge literature revealed it that, some students do not necessarily have the luxury of learning at the comfort of their homes. They literally have to be near the electricity connection, as huge part of Lesotho remains not connected to the national grid. Even with serious efforts by the Lesotho government, Lesotho Electricity Company and other stakeholders, most of the Basotho villages remains unconnected to the National grid (Mpholo, Renschhausen, Thamae, Molapo, Mokhuts'oane, Taele & Makhetha 2018, p.98). This becomes a challenge for NUL students to effectively use the online learning platforms because their equipment needs a constant source of power to function well. To eradicate this challenge, the government of Lesotho through its partners should consider and speed up the project of renewable energy as it is cheaper than connecting every village to the national grid (Mpholo, et al. 2018, p.102).

### **3.0 DESIGN AND METHODOLOGY**

This inquiry is a qualitative study. Qualitative inquiries strives to understand in-depth those affected by the problem and provide them with the chance of coming up with the solution. This study became qualitative inquiry because it is not interested in the numbers of how many responded but capturing of the opinions of NUL students that are required to learn using *Thuto* (Jameel, Shaheen & Majid 2018, pp.1-2). Qualitative research aims at understanding in depth the experiences of the NUL students with regard to *Thuto* on-line learning platform, (Ahmad, Wasim, Irfan, Gogoi, Srivastava & Farheen 2019, p.2829).

In this study, Free Attitude Interviews (FAI) which was nurtured by Meulenberg-Buskers was used to generate data. FAI do not follow the same rigid format of the structured interviews because it allows the participants to express their opinions without necessarily being restricted by the predetermined questions (Tshelane 2013, p.419, Hlalele & Tsotetsi 2015, p.150). FAI consists of follow-up questioning, seeking of clarification and repetition of most burning issues surrounding the use of *Thuto* learning management system, (Malebese, Tlali, Mahlomaholo 2019, p.3). Therefore, in this study, participants are asked non-directive questions that allowed them to provide adequate information about their feelings. Research participants were not given many structured

questions, but only those that probed them to elaborate on what they said. FAI are normally used when the inquiry has one overarching research question. Data was kept in the researcher's diary.

### Sampling Technique

To fulfil the purpose of this study, the researcher conveniently selected 10 NUL students from different years of studying and faculties. Convenience sampling is used when research participants are selected depending on their availability and willingness Omona (2013, p.181, Etikan, Musa & Alkassim 2016, p.2). Convenience sampling is most suitable in these instances since the University is temporarily closed due to covid-19 and it would be difficult or near impossible to use other sampling methods.

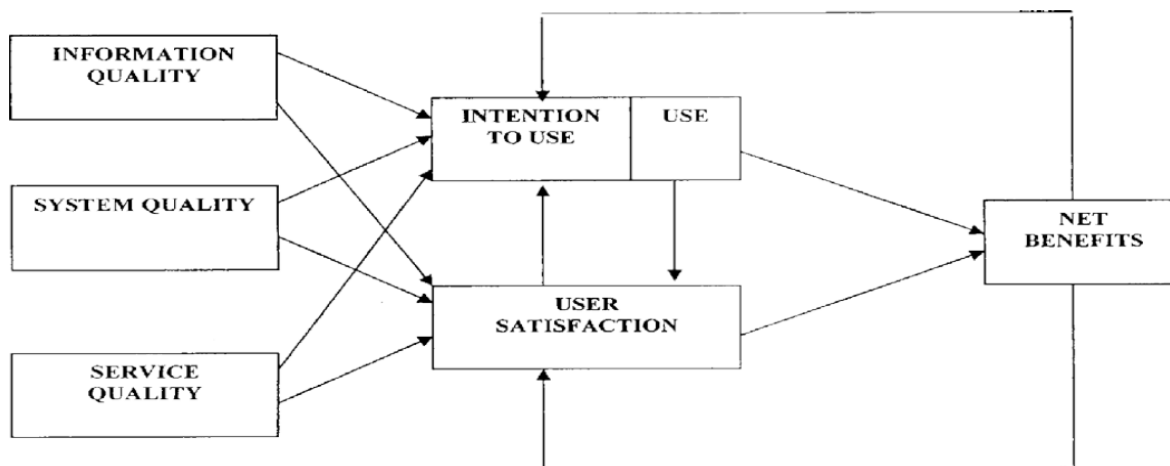
### Ethical Considerations

Participants were informed about the intentions of the study and consent forms were distributed to the potential participants and they signed such forms. Participants were further told that, they will not get any rewards for participating in this study. When reporting, their real names were not used rather codes, thus St1 to St 10.

### Theoretical framework

Different universities around the world had always used different online learning platforms even before Covid-19. However the use of on-line learning platforms was accelerated across at the institutions of higher learning amid new Covid-19 threats. To understand the impact of rushed and mandatory inception of on-line learning at the NUL, the researcher resorted to use DeLone and McLean Information System Success Model (D & M ISS). This model originated from the works DeLone and McLean in 1992 (Machanda & Mukherjee nd, p.15). D&M ISS comprises of six interconnected variables being: System Quality, Information Quality, Use, User Satisfaction, Individual Impact and Organisational Impact (Jaafreh 2017, p.831).

Figure 1 presents the D&M ISS Model



Adopted from Jaafreh (2017, p.831)

Given the model presented above, the main autonomous variables are information quality, system quality and service quality because they are the determinants of quality learning. According to Sirsat and Sirsat (2016, p.13) System Quality refers to the desirability of *Thuto*. Al-Mamary (2017, p.794). Yakubu and Dasuki, (2018, p.186) defines Information quality as concerned with measuring correctness, suitability, comprehensiveness and significance of information on *Thuto*. They further reiterated that, service quality measures the reliability, responsiveness and assurance of the learning material NUL students are exposed to and the extent of the support they get from the Information Technology (IT) department at the university and their lectures.

If the above mentioned variables are positive for NUL students, it means that they will be motivated to use *Thuto*, and greater satisfaction will be witnessed. NUL student's satisfaction is mainly determined by the following; firstly, information provided on the platform is of high quality like the one gained through traditional face-to-face interaction. Secondly, the platform itself is stimulating and encourages students to use it and lastly *Thuto* is easy to use. Therefore, this framework is ideal for this study because it helps in determining whether the online learning offered is of high quality or not and whether students are satisfied.

#### 4.0 DATA ANALYSIS

Data generated is analysed through thematic analysis method which was nurtured by Braun and Clarke (Scharp & Sanders 2018, p.2). Thematic analysis method is made up of six important steps which are; becoming familiar with the data, generation of the coding categories and themes, reviewing the themes identified, defining and naming the themes and locating the exemplars in the text produced by the participants. Thematic analysis is pivotal when better understanding about the effects of *Thuto* learning management system is required (Wang, Wang, Khalil 2018, p.204). Themes are derived from the researcher's ability to understand the message conveyed by the research participants (Scharp & Sanders 2018, p.2). Data is presented in table form with themes and supporting extracts.

#### Research Findings

The data presented in this section of the study is generated through FAI and the main themes were derived from the research objectives which were informed by the overarching research question.

Table 1 presents research findings.

<i>Theme 1: The Positives</i>	
Continued learning	<p><i>St 1 3<sup>rd</sup> yr</i> At least with <u>Thuto</u> there is some sort of learning while the nation is under lockdown.</p> <p><i>St 2 1<sup>st</sup> Yr</i>: <u>Thuto</u> is free (Zero-rated) and We can download material free of charge</p> <p><i>St 3 1<sup>st</sup> yr</i> One can access study notes anytime and anywhere.</p> <p><i>St 4 3<sup>rd</sup> yr</i> Study material and notes are easily accessible and results on tests and labs are readily available.</p> <p><i>St 5 4<sup>th</sup> yr</i> It allows studying anywhere, thus if students and lecturers agreed, <u>Thuto</u> is actually unlimited.</p> <p><i>St 6 4<sup>th</sup> yr</i> Feedback for tests, exam, quiz easily accessible. It does not choose time or place, learning takes place and it has Chatroom where we ask questions</p> <p><i>St 9 2<sup>nd</sup> yr</i>: Material uploaded are readily available and one does not have to travel to NUL campus to access it</p>

<i>Theme 2: The challenges</i>	
Material uploaded not clear	<p><u>St 1 3<sup>rd</sup> yr</u> NUL lecturers are not considerate, each and every one through in heavy information which is often not clear. This is not a problem with traditional conduct, that is information is less intense and clearer in the face to face class.</p> <p><u>St 7 2<sup>nd</sup> year</u> Since is the beginning of the semester, normally lecturers would introduce the course and provide all necessary information for effective learning of the concerned course, however with Thuto no such introduction were made and we do not really know what the courses are about. Our lecture uses voice notes which are not clear and one has to listen carefully bulky voice notes for more than 1hr while also making notes.</p> <p><u>St 5 4<sup>th</sup> yr</u> Since on-line learning was used towards the end of the last academic year, its weaknesses became vivid in the beginning of the current academic year. Lecturers were unable to introduce courses efficiently and students did not know exactly what is expected of them. Thuto is not so efficient to practical courses because students are not getting adequate help because most material is abstract to most students.</p> <p><u>St 9 2<sup>nd</sup> yr:</u> The quality of the material uploaded leaves much to be desired. It is not easily understandable.</p>
No effective interaction	<p><u>St 1 3<sup>rd</sup> yr</u> Teaching and learning with Thuto is dominated by documents uploaded for students to read. No live interaction between the lecturer and students.</p> <p><u>St 7 2<sup>nd</sup> yr</u> No interaction with students, Lecturers just send in heavy and ambiguous material for us to read. We cannot ask even ask questions in real time and when we take the initiative of consulting lecturers, they are not there in their offices to attend to our questions regarding material uploaded on Thuto.</p> <p><u>St 10 1<sup>st</sup> yr</u> Though chatrooms allows students to ask questions, lectures do not respond to asked questions immediately.</p> <p><u>St 3 1<sup>st</sup> yr</u> Questions asked by students are not normally responded to quickly or not at all by the lecturers. Thuto is not efficient because questions asked by the lecturer in the chatroom are not normally seen by all students as well as comments.</p> <p><u>St 5 4<sup>th</sup> yr</u> In the Chatroom, interaction is not effective because the lecture do not respond to all questions asked by the students or on time.</p>
Accessibility	<p><u>St 1 3<sup>rd</sup> yr</u> Thuto is not always on-line.</p> <p><u>St 7 2<sup>nd</sup> yr</u> Thuto doesn't accommodate all students at once, thus one minute you are logged in and the next minute you are out and one has to re-login.</p> <p><u>St 8 2<sup>nd</sup> yr</u> Thuto is not always online, it is often offline which limits student's participation. For example, if a question is typed by the lecturer in the chat room there will be more answers provided and one cannot keep the track of such answers since in our group information is only passed by writing not by voice. The worst part is that our lecturers do not consolidated different answers provided at the end on the session.</p> <p><u>St 2 1<sup>st</sup> yr</u> Thuto is often offline, and thus hindering effective learning</p> <p><u>St 10 1<sup>st</sup> yr</u> Thuto is very slow and unreliable while writing assignments and tests to the extent that one minute you are logged in and the next minute you are offline.</p> <p><u>St 3 1<sup>st</sup> yr</u> Normally when writing multiple questions, it takes time to proceed to the next question and time would not be on our side because Thuto has no mercy once time has elapsed it automatically shuts down. Thuto is normally not efficient on weekends. Thus, students cannot easily access it on weekends.</p> <p><u>St 4 3<sup>rd</sup> yr</u> Notifications in the emails are not consistent to the extent that tests and assignment are missed.</p> <p><u>St 5 4<sup>th</sup> yr</u> It doesn't accommodate all students, system is unreliable to the extent that some students are penalised for late submission while the problem was with Thuto.</p> <p><u>St 6 4<sup>th</sup> yr:</u> It is often offline and it is slow to process</p> <p><u>St 9 2<sup>nd</sup> yr:</u> Mxm, it is always offline. It takes ages to log in.</p>

Reduced motivation	<p><u>St 7 2<sup>nd</sup> yr</u> Thuto has reduced NUL students motivation to learn and I think it is going to take real effort to restore that eagerness to learn.</p> <p><u>St 5 4<sup>th</sup> yr</u> Reduces motivation for learning and that leads to poor performance. With Thuto, students resort to finding correct answers not actual learning because with Thuto students say "Pass now and graduate then learn later"</p> <p><u>St 9 2<sup>nd</sup> yr</u>: We are just learning for the sake of it. It is has reduced our eagerness to learn.</p>
Not inclusive	<p><u>St 8 2<sup>nd</sup> yr</u>: Thuto doesn't accommodate those who are virtually impaired to the extent that we need to be next to our virtually impaired colleague so that we can read for them the material uploaded and the comments on the chatroom.</p>

<i>Theme 3: The possible solutions</i>	
System improvement	<p><u>St 1 3<sup>rd</sup> yr</u> Thuto efficiency has to be improved so that it can accommodate every NUL student because for now, we cannot login at the same time. In addition Thuto has to be improved in such a way that students can see lecture at the real time teaching.</p> <p><u>St 7 2<sup>nd</sup> yr</u> Every faculty should have its own Thuto to reduce pressure on the main one.</p> <p><u>St 8 2<sup>nd</sup> yr</u> Thuto has to be improved for the virtually impaired students. Thuto has to be improved so that students interact with their lecture that is provision has to be made for students and lecture to see each other.</p> <p><u>St 3 1<sup>st</sup> yr</u> It should be improved so that on weekends in particularly it is easily accessible.</p> <p><u>St 4 1<sup>st</sup> yr</u> It needs to be improved so that it can be more efficient.</p> <p><u>St 6 4<sup>th</sup> yr</u> Be improved to increase strength and its capacity.</p> <p><u>St 9 2<sup>nd</sup> yr</u>: The system needs to be improved</p>
Varied approach	<p><u>St 2 1<sup>st</sup> yr</u> Lectures should also try to post videos, not just written material to accommodate diverse learning styles.</p>
Different platforms	<p><u>St 5 4<sup>th</sup> yr</u> The university management has to create different learning platforms like zoom and others so that different learning styles could be accommodated.</p> <p><u>St 9 2<sup>nd</sup> yr</u>: Wished we had different platforms to choose from. Relying only on Thuto is not helping.</p>
Student bundles	<p><u>St 5 4<sup>th</sup> yr</u> The university and local networks have to crack a deal by creating students bundles. Thus students have to pay a particular percentage and the university pay the other percentage so that students especially self-sponsored could easily access Thuto, their emails and WhatsApp.</p>
Allow late submission	<p><u>St 5 4<sup>th</sup> yr</u> Thuto should allow late submissions because it is not reliable. One minute you are logged in and the next minute Thuto is offline.</p>
Resumption of classes	<p><u>St 8 2<sup>nd</sup> yr</u> Normal face to face lectures has to resume while adhering to Covid-19 regulations and protocols.</p> <p><u>St 10 1<sup>st</sup> yr</u> Normal traditional classes has to resume while adhering to the Covid-19 protocols</p> <p><u>St 9 2<sup>nd</sup> yr</u>: Classes really has to resume because as it stands were are suffering a lot.</p>



The data generated showed that *Thuto* is important and needs to be used in the University, while social distancing is mandatory and gatherings prohibited. Participants revealed that *Thuto* allows students to continue with learning regardless of where they are. *Thuto* enables students to access notes, study material and be able answer questions either for tests, quizzes or examinations wherever they are. NUL students do not have to travel to the NUL campus to learn.

However, that data revealed that *Thuto* is not without challenges that may hinder effective student's learning at the University. The participants revealed that, more often the material upload by the lecturers is not clearly articulated for ease understanding compared to when traditional classes were used. The other challenge is that, *Thuto* hinders effective interaction between students and their lecturers. Thus, students only get to read the uploaded material by their lectures. Due to *Thuto*, participants revealed that lectures were unable to effectively introduce the courses especially in the beginning of the semester. As a result they do not know exactly the expectations and requirements of the courses. Participants further argued that, their lecturers are not only unavailable at their offices but that, they delay or not to respond at all to the questions students have posted on *Thuto* chat room.

The other main challenge participants raised is that, *Thuto* is not easily accessible. Thus according to participants *Thuto* is often offline especially on weekends. It is unreliable to the extent that it can log itself off while students are busy learning or answering test or examinations questions. Participants further revealed that *Thuto* is very slow to upload answers. This challenge is mainly caused by the poor internet connectivity. It is further revealed that, *Thuto* is not inclusive especially for students who are virtually impaired. They argued that some students have come to the aid of their virtually impaired course mates to assist them with reading of the material downloaded. Moreover, participants argued that *Thuto* challenges are so overpowering that there is a severe decline of learning motivation amongst the students.

To solve these challenges, participants argued that *Thuto* learning management system has to be improved. It has to be refurbished so that it can accommodate all NUL students at the same time and that, provisions have to be made to make it more interactive. Thus, *Thuto* learning management system has to be more synchronous. To counter the connectivity issues, participants argued that lectures need to find ways of accepting late submissions by the students. As a result, participants argued that, it would be helpful if each faculty has its own version of *Thuto*, which is tailored for the specific needs of the faculty. In addition, data further, other learning platforms like Zoom, Google Meet have to be used.

Moreover, since not all NUL students are sponsored and for effective learning to take place, participants argued that NUL with Vodacom Lesotho and Econet Telkom Lesotho have to introduce student's data bundles. These bundles have to be subsidised by the NUL. Participants argued that this initiative will enable all NUL students especially those not sponsored to have a fair and equal chance of accessing *Thuto*. Participants articulated that if these challenges are not addressed, NUL management then has to resort to the resumption of the traditional face to face classes because for now, effective learning is not happening.

## 5.0 DISCUSSION

The current study reported the positives, challenges and possible solutions of *Thuto* learning management system used at NUL since temporary closure amid Covid-19 concerns. This inquiry revealed that although *Thuto* is helpful to both NUL lecturers and students since they do not necessarily have to travel to the University campus for learning to take place, it has many challenges. These challenges need to be attended to because if not, effective teaching and learning is likely not to happen. The first challenge presented by the participants revealed that since teaching and learning takes place remotely, materials uploaded on *Thuto* are normally not clear. This is a challenge because the notes or materials uploaded do not serve the intended purpose. Participants

further revealed that Thuto was not interactive. These revelations are consistent with a study that was conducted in the University of Zululand, which revealed that since students are expected to learn individually at their homes with lectures not present, they experienced a lot of difficulty since they depended on their lecturers (Dube 2020:p149).

In addition, participants argued Thuto is not easily accessible due to connectivity hiccups. This challenge implies that, at times students are unable to log in and as result are likely to miss tests or examinations. The above arguments are consistent with the reports of a study conducted in Malaysia; it reported that, the main challenge brought by online learning is that of poor internet connectivity (Ismail, Bakar & Wafa 2020:7155). A study conducted in Taibah University in Saudi Arabia, also reveals that, students encountered difficulties in accessing the blackboard platform mainly due to connectivity problems, (Mahyoob, 2020:360). This problem needs to be addressed quickly, because if it persists, effective teaching and learning may not take place at NUL.

The study finally revealed that students complaint about the lack of inclusiveness of the learning management system. They argued that, those students who are visually impaired are not catered at all in *Thuto*. The study further articulated that *Thuto* has resulted in decrease of learning motivation amongst the students. Due to online learning, students strongly felt that their academic performance is highly hindered (Dube 2020:149). As a result, NUL management has to ensure that *Thuto* is improved to make learning at the university more pleasant and fruitful.

### **Conclusion**

The current study supports the use of on-learning platforms at the NUL as other universities were already using it even before Covid-19. The argument however presented is that, efforts have to be made that will ensure that the effectiveness of this learning management system. The study was underpinned by DeLone and McLean Information System Success Model (D & M ISS), and as result, it is argued in this study that to a larger extent, the quality of uploaded learning material on *Thuto learning management systems*, and the system (platforms) itself are not satisfying the students needs. The service they obtain leaves much to be desired. Therefore the argument that *Thuto* as whole has to be enhanced is upheld in this study.

### **Limitations of the study**

This study could be criticised on the number of participants. This study had only 10 participants because it intended on gaining in-depth understanding of the effects *Thuto* learning management system has on NUL students. Moreover, in this study only student's opinions are captured leaving behind those of the lectures and the NUL management. So it could be critiqued on being one sided. As a result, a qualitative study could be undertaken so that many and varied opinions could be captured..

### **Recommendations**

Given the research findings, it is recommended that efforts have to be made by the NUL management to improve *Thuto* efficiency. This will enable effective teaching and learning to take place. Furthermore, it is recommended that other learning platforms could be used, so that pressure could be eased on *Thuto*.

### **6.0 REFERENCES**

- Ahmad, S. Wasim,S, Irfan, S. Gogoi, S.Srivastava, A. Farheen, Z. 2019. Qualitative v/s. Quantitative Research- A Summarized Review. *J.Evid Based Med. Healthc* 6(43), 2828-2832.
- Ali,W. 2020. Online and Remote learning in higher education institutis: A necessity in light of COVID-19 Pandemic. *Higher Education Studies*, 10(3), 16-25.

Al-Mamary, Y.H.S. 2019. Measuring information systems success in Yemen; Potential of DeLone and McLeans Model. *International Journal of Scientific & Technology Research*. 8(7), 793-799.

Arkorful, V., Abaidoo, N. 2014. The role of e-learning, the advantages and disadvantages of its adoption in higher education. *International journal of education and research* 2(12), 397-410.

Bao, W. 2020. COVID-19 and online teaching in higher education: A case study of Peking University. *Hum Behav and Emerg Tech* 2:113-115.

Daniels, M.M., Sarte, E. & Cruz, J.D. 2019. Students' perception on e-learning: a basis for the development of e-learning framework in higher institution. The international conference on information technology and Digital Application, doi:10.1088/1757-899X/482/1/012008

Demuyakor, J. 2020. Coronavirus (Covid-19) and online learning in Higher institutions of education: A survey of the perceptions of Ghanaian international students in China. *Online learning of communication and medis technologies*, 10(3), e202018.

Dube, M.C. 2020. Online learning challenges Post Graduate Certificate in Education history students faced during Covi-19 at the University of Zululand. *Yesterday and today* 24:136-157.

Dhawan, S. 2020. Online Learning: A Panacea in the time of Covid-19 Crisis, *Journal of Educational Technology Systems* 49(1), 5-22.

Etikan, I.E., Musa, S.A & Alkassim, R.S. 2016. Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*. 5, 1-4.

Hlalele, D. & Tsotetsi, C. 2015. Engaging the Community in Educational and Social Amelioration: Lessons and Prospects. *Alternation Special edition*. 16, 141-165.

Ismail, N.S., Bakar, N.M.A., Wafa, S.W.W.S.S. 2020. Online learning challenges during pandemic Covid-19 in Malaysian Higher Learning Institution. *Universal Journal of Educatio research* 8(12):7151-7159.

Jaafreh, A.B. 2017. Evaluation Information System Success: Applied DeLone and McLean Information System Success Model in Context Banking System in KSA. *International Review of Management and Business Research*. 6(2), 829-845.

Jameel, B. Shaheen, S. Maid, U. 2018. Introduction to Qualitative Research for novice investigators. *Undergraduate Research in Natural and Clinical Science and Technology Journal*. 2(6), 1-6.

Kassymova, G.K., Issaliyeva, S.T. & Kosherbayeva, A.A. 2019. *E-learning and its benefits for students. Pedagogies and psychology*, (4) 2019.

Mahyoob, M. 2020. Challenges of e-learning the Covid-19 pandemic experienced by EFL learners. *Arab world English Journal*. 11(4):351-362.

Malebese, M.L., Tlali, M.F. & Mahlomaholo, S. 2019. A Socially Inclusive Teaching Strategy for Fourth grade English (Second) Language Learners in a South African School. *South Africa Journal of Childhood Education*, 9(1), 1-8.

Manchanda, A., Makherjee, S. (nd). A Review of Information System Success Models. *International Journal of Innovative Research in Technology & Science* (ISSN: 2321-1156). <http://ijirts.org/volume1issue3/IJIRTSV11I30009.pdf>.

Mpholo, M. Meyer-Renschhausen, M. Thamae, R.I., Molapo, T., Mokhuts'oane, L., Taelle, B.M & Makhetha, L. (2018). 'Rural Household Electrification in Lesotho' in Mpholo, M., Steuerwald, D. & Kukeera, T. (eds). *Africa-EU Renewable Energy Research and innovation Symposium 2018 (RETIS 2018)*. Springer. 97-104.

NUL Circular: REF/REG/ADM 1.75-2020/11

Nul.ls/wp-content/uploads/2020/04/circular-11-Launching-Zero-Rated-E-Learning. pdf

Rasmitadila, Aliyyah, R.R., Rachmadtullah, R. Samsudin, A. Syaodih, E. Nurtanto, M, Tambunana, A.R.S 2020. The perception of primary school teachers of online learning during the Covid-19 Pandemic period. A case study in Indonesia. *Journal of Ethnic and Cultural studies* 7(2), 90-109.

Sadeghi, M. 2019. A shift from classroom to distance learning: Advantages and limitations. *International journal of research in English education*. 4(1), 80-88.

Scharp, K.M., & Sanders, M.L. 2019. What is a theme? Teaching thematic analysis is qualitative communication research methods. *Communication teacher*, DOI: 10.1080/17404622.2018.1536794. <https://www.tandfonline.com/doi/full/10.1080/17404622.2018.1536794>.

Sirsat, S.S., & Sirsat, M.S. 2016. A Validation of the DeLone and McLean Model on the Educational Information Systems of the Maharashtra Sate (India). *International Journal of Education and Learning Systems*. 1, 9-18.

Trakru, M. Jha, T.K. 2019. E-learning effectiveness in higher education. *International research journal of engineering and Technology* 6(5), 96-101.

Tshelane, M.D. 2013. Participatory Action Research and Construction of Academic Identity Among Postgraduate Research Students. *The Journal for Transdisciplinary Research in Southern Africa*, 9(3), 401-429.

Yakubu, M.N., Dasuki, S.I. 2018. Assessing Elearning Systems Success in Nigeria: An Application of the DeLone and McLean Information Systems Success Model. *Journal of Information Technology Education: Research* 17, 182-202.

Wang, S., Wang, H., & Khalil, N. 2018. A Thematic Analysis. *Interdisciplinary Journal of Information, Knowledge and Management*. 13, 201-231.