Journal of Research in Instructional
e-ISSN: 2776-222X
Vol. 5(2) 2025, pp. 540 – 552
https://doi.org/10.30862/jri.v5i2.697

Perceptions of pre-service teachers towards online learning at a teacher education college in Zimbabwe

Alois Matorevhu*, Havatidi Madzamba

Mutare Teachers College, Zimbabwe

Submitted: 15-04-2025

Accepted: 19-05-2025

Published: 28-05-2025

Abstract: At the end of 2019, the advent of the COVID-19 pandemic prompted an immediate knee-jerk response in many countries worldwide to shut down all learning institutions, from preschool to university level. This unforeseen abrupt closure of most educational institutions compelled the conversion of face-to-face learning to a fully online or blended/hybrid format in a very short transitional time. While the advantages of online learning are apparent, its effective use in many universities and colleges is very complex and challenging. This may be due to factors like large student numbers, lack of appropriate gadgets, poor internet connectivity, and expensive data bundles. In the context of both challenges and benefits of online learning, this study sought to explore perceptions of pre-service teachers (students) at a teacher education college in Zimbabwe on their experience in the use of a particular online teaching and learning platform. We used a semi-structured questionnaire and interviews in this case study to gather data. Findings show that pre-service teachers perceived the online learning platform to be useful in facilitating learning by enabling them to learn anytime from any place. However, the pre-service teachers indicated that, if given the opportunity to choose, they would prefer face-to-face learning due to their inability to purchase laptops, the high cost of data required to stay connected to the internet, and their lack of proficiency in using the online learning platform. Based on findings, recommendations are given for enhancing the use of online platforms for teaching and learning.

Keywords: COVID–19 pandemic, online learning, pre–service teachers' perceptions

Abstrak: Pada akhir tahun 2019, munculnya pandemi COVID-19 mendorong respon spontan di banyak negara di seluruh dunia untuk menutup semua lembaga pendidikan, dari prasekolah hingga tingkat universitas. Penutupan mendadak yang tak terduga dari sebagian besar lembaga pendidikan ini memaksa konversi pembelajaran tatap muka menjadi format daring penuh atau campuran/hibrid dalam waktu transisi yang sangat singkat. Meskipun keuntungan pembelajaran daring tampak jelas, penggunaannya yang efektif di banyak universitas dan perguruan tinggi sangat rumit dan menantang. Hal ini disebabkan oleh faktor-faktor seperti jumlah siswa yang besar, kurangnya gawai yang sesuai, konektivitas internet yang buruk, dan paket data yang mahal. Dalam konteks tantangan dan manfaat pembelajaran daring, studi ini berupaya untuk mengeksplorasi persepsi calon guru (mahasiswa) di sebuah perguruan tinggi pendidikan guru di Zimbabwe tentang pengalaman mereka dalam penggunaan platform pengajaran dan pembelajaran daring tertentu. Kami menggunakan kuesioner semi-terstruktur dan wawancara dalam studi kasus ini untuk mengumpulkan data. Temuan menunjukkan bahwa calon guru menganggap platform pembelajaran daring bermanfaat dalam memfasilitasi pembelajaran dengan memungkinkan mereka untuk belajar kapan saja dari mana saja. Namun, calon guru menyatakan bahwa jika diberi kesempatan untuk memilih, mereka akan lebih memilih pembelajaran tatap muka karena ketidakmampuan mereka untuk membeli laptop, tingginya biaya data yang diperlukan untuk tetap terhubung ke internet, dan kurangnya kemahiran mereka dalam menggunakan platform pembelajaran daring. Berdasarkan temuan tersebut, rekomendasi diberikan untuk meningkatkan penggunaan platform daring untuk pengajaran dan pembelajaran.

Kata kunci: Pandemi COVID-19, pembelajaran daring, persepsi calon guru

*Corresponding author: amatorevhu@gmail.com

INTRODUCTION

The emergency of COVID-19 pandemic prompted a swift reaction in several nations, resulting in the closure of all educational institutions, from preschool to secondary and university levels (Aseey, 2020; Matorevhu, 2020). By July 08, 2020, 1,184,126,508 learners had been affected by school closures globally (UNESCO, 2020). However, as time went by alternatives to traditional learning methods, which ensured that students learnt, while mitigating the spread of COVID-19 pandemic, were sought (Maatuk et al, 2021). Therefore through reflection and rethinking, the paradigm of online learning started to take root in many institutions world over. Online paradigm to teaching and learning became popular because it was believed to promote learning at the same time mitigating the spread of Covid-19 through social distancing. Online learning systems are web-based software for distributing, tracking, and managing courses over the internet (Mukhtar et al, 2020).

In order to abide by lockdowns and social distancing, many educational institutions were forced to embrace online teaching and learning (Kaisara, 2021). This was evidenced by rescheduling of teaching and learning programmes from face-to-face to online learning. For instance, in many EU countries schools closed in 2020 to mitigate the spread of COVID-19 pandemic, but later e-learning was introduced to allow learning to occur (UNESCO, 2020). Some popular virtual classroom applications in the transition from complete face-to-face to blended teaching and learning, which is a hybrid of online learning and face-to-face, include ZOOM, Google Classroom, Moodle, and Blackboard (Stone, 2020).

Online education according to Asgari et al (2021) has been there before, but the COVID-19 pandemic has initiated an unprecedented global need to explore massive online teaching and learning opportunities. The unforeseen and abrupt closure of most educational institutions around the world compelled the conversion of face-to-face teaching and learning to fully online or blended/hybrid format (mix of online and face-to-face) in a very short transitional time (Dhawan, 2020). For continuity of education, moving from face-to-face classes to online has ushered in a new version of learning in which lessons, and all learning activities are conducted remotely. In developed world countries online learning methods like Moodle, Blackboard, and other learning management systems, are not new since they have been part of their curricula (Heng & Sol, 2020). However, in developing countries online learning is not common, and there are many issues of concern when it comes to implementing this learning mode (Heng & Sol, 2020). Dhawan (2020) notes that many academic institutions face challenges in their attempt to integrate online learning into their educational programmes.

The prevailing assumption that technology integration in education and learning enhancement are mutually and inextricably linked, often makes people think that technologies can enhance learning (Damopolii & Kurniadi, 2019; Gillet-Swan, 2017). However, this is not the case, because for technology to enhance learning consideration of the relationship between technology, pedagogy and content need to be considered. In creating individual learner tailored instruction for each learner, additional workload pressures result on educators as they try to implement online learning (Gillet-Swan, 2017). Therefore the sudden swing to online learning has proved challenging and created a gap between teachers and learners (Igbokwe et al, 2020).

During face-to-face learning mode, collaborative learning through group work is commonly used. However, due to geographical location some learners may be isolated,

resulting in deprivation of sharing ideas with others through collaborative learning. In higher education institutions, many educators are used to face-to-face contact modes, so when they use online teaching and learning which they are relatively unfamiliar with, they tend to use a "one size fits all approach". In such cases the content or approaches applied in face-to-face contexts are adapted to online format, based on the assumption that they are suitable for all learners. However, for effective online learning variable adaptation should be used to match learner needs, and context of online learning (Gillet-Swan, 2017). To improve online integration in higher education, some institutions are upgrading e-learning facilities aligned with their respective online curricula (Elumalai et al, 2020).

Transitioning suddenly to online learning from face-to-face posed numerous challenges for students, teachers, education administrators (Heng & Sol, 2020). Some challenges associated with online learning are that: (1) Face-to-face conventional course conversion to online format consumes time and requires the educators' familiarity with (or willingness to learn about) online learning pedagogy and instructional tools, including the learning management system (LMS) (Ryan et al, 2012); (2) Some students prefer to learn difficult concepts face-to-face (Jaggars, 2014) and believe that face-to-face instructions provide deeper level of learning compared to the online (Holzweiss et al, 2014); (3) Designing thorough online assessment which minimize cheating (Lee-Post & Hapke, 2017); (4) Developing an effective infrastructure which supports both the institution and learners (Martínez et al, 2019; Moskal et al, 2013); and (5) Addressing some skills development processes is impossible through online learning. For instance, in engineering education learners should work with instruments, in laboratory settings which is impossible to do online (Bourne et al, 2005; Vielma & Brey, 2020, Asgari et al, 2021).

Preventing the spread of COVID-19 pandemic by rapidly shifting to remote learning in many countries was not anticipated. However the rapid shift enabled countries to reflect on how to effectively provide education in such circumstances (Carretero et al, 2021). Analysis of various global education systems shows that full-time remote education with the current state of infrastructure and internet accessibility would exacerbate existing inequalities, especially for children from poor economic backgrounds, who cannot afford online learning (Carretero et al, 2021).

While some educational institutions may say they were prepared for e-learning to facilitate online education, the sudden shift from face-to-face learning to almost full online learning created challenges for education systems, which have affected teachers, students and parents. Many education institutions, teachers and students were not entirely prepared for online learning. Premised on high pressure of work, lack of digital competences and short timelines, some educators found it challenging to deliver online classes (Carretero et al, 2021). Among students, not all were prepared to suddenly learn in the home environment, isolated from peers, hence they struggled to remain motivated and regulate themselves to focus on learning. Parents had to work at the same time being fully responsible for guiding their children in learning, a role which was almost entirely for educators (Carretero et al, 2021). While the need for distance learning is apparent since the emergence of COVID-19 pandemic, achieving effective online reach to students was very complex. For the majority, neither students nor educators had prior experience in teaching and learning outside the classroom (EdTech, 2020). Currently for educators the main impediment is lack of appropriate training to design and manage distance learning

programmes. This is compounded by lack of internet infrastructure, electricity, connectivity, and a lack of appropriate teaching and learning materials. Three main obstacles to learners for online learning are lack of access to technology, an unsuitable home learning environment, and a lack of access to learning materials (EdTech, 2020).

E-Learning (online learning) is use of any form of electronic technology and the internet for learning (Gokah et al, 2020). In pre-service teacher education online learning and assessment serves to enhance knowledge and skills of the pre-service teachers in using technology for teaching and learning (Gillet - Swan 2017). Online learning enables learners to learn anywhere anytime (Igbokwe et al, 2020). Development of relationships between learners by the use of discussion forums without violating the rule of social distancing was made possible during COVID-19 pandemic. Also, e-learning eliminates barriers with potential to hinder participation like fear to talk to other learners. Therefore through e-learning, communication and relationships that sustain learning are enhanced.

Although online learning (e-learning) offers flexibility and comfort as learning can occur at any time at any place, the challenge to use online learning effectively arise for some universities and colleges from large number of students, poor infrastructure and internet connectivity off campus (Ntshwarang et al, 2021). Therefore the unanticipated closure of educational institutions all over the world tested the preparedness of universities and colleges to deal with the crises that require the help of advanced technology including hardware and software to enable effective online learning.

Although benefits of e-learning (online learning) during the COVID-19 pandemic are acknowledged (Ho & Tay, 2020), consistent access by students to internet can be a challenge to poor households or families with many children going to school, since data to remain internet connected is expensive. Some may not afford to acquire computer hardware and software due to financial constraints (Ho, and Tay, 2020). Several studies have addressed the opportunities and challenges associated with the transition from traditional learning to online learning (e-learning). One of the main reasons for faltering e- learning initiatives is the lack of well-preparedness for this experience (Maatuk et al, 2021). In the context of both challenges and benefits of online learning, the quality of online education as a gap, should be evaluated from the students' perspectives because they are the users (Elumalai et al, 2020). Therefore this study sought to explore perceptions of pre-service teachers towards online learning at a teacher education college in Zimbabwe. Understanding of perceptions of pre-service teachers would enable as an urgent priority, appropriate measures to be taken to enhance online teaching and learning.

METHODS

The study sought to explore pre-service teachers' perceptions about a college modified online platform called Modelena. Data were collected through a structured five-point Likert scale questionnaire, from forty-three randomly sampled first year three year pre-service teachers who had used the Modelena online learning platform from 2021. Pre-service teachers involved were from different academic fields which are arts, sciences, and humanities. The pre-service teachers were also from diverse demographics such as background, gender and language. Items in the questionnaire were adopted from technological, pedagogical and content knowledge framework by several writers including Hosseini and Kamal, 2008; Koehler and Mishra, 2009; and Schmidt et al., 2009. The Likert

scale as shown it Table 2 ranged from strongly disagree (1) to strongly agree (5). The questionnaire had six sections measuring different aspects; biographical data-questions 1 to 4; perceived usefulness of Modelena questions 5 to 7; perceived self-efficacy questions 8 and 9; perceived ease of use questions 10 to 12; quality of feedback questions 13 to 15 and quality of uploads questions 16 to 19. Questionnaires were physically distributed to each participant and collected on completion. Follow-up semi-structured interviews with purposively sampled five pre-service teachers were done, to counter-check through triangulation, claims made in responding to items in the questionnaire. This ensured validity of findings. Participants were informed about the confidentiality of all their opinions. The Statistical Package for Social Science (SPSS v 20) was used to analyse data. Pre-service teachers' perceptions were analysed based on the learning platform format, quality and accessibility, technical support, tutor and peer interaction, and ease of use.

Profile of participants

As shown in Table 1 participants comprised 25 (58,1%) females and 18 (41,9 %) males. While there seems to be gender imbalance in favour of females, it is a reflection of the overall college enrolment of which more than 70% were are female. A close analysis shows that, although actual gender proportions were not used, but within the limits of enrolment figures, approximate gender balance was achieved in the sample.

Table 1: Participants profile

Gender	Number	Percentage (%)
Female	25	58,1
Male	18	41,9
Total	43	100

Participants' Perceptions Interval Score Levels

Altun and Akyildiz (2017) suggest intervals scores which can be used to interpret Likert-type scale findings. For instance in Table 2 below a mean score between 1.00 and 1.80 indicates that the responses given by the respondent is considered as very weak. In this study this would mean a very weak perception on whatever factor will be under consideration.

Table 2. Likert -type scale mean range interpretations (Altun & Akyildiz, 2017)

Interval	Degree	Level
1.00 - 1.80	strongly disagree	Too weak
1.81 - 2.60	disagree	Weak
2.61 - 3.40	neutral	Neutral
3.41 - 4.20	agree	Good
4.21 - 5.00	Strongly agree	Very good

RESULTS AND DISCUSSION

This part presents findings of the study based on the analysis of data through Satistical Package for Social Science (SPSS), and qualitative analysis techniques.

Perceptions by pre-service teachers of usefulness of Modelena teaching and learning platform

Table 3 shows means on issues about Modelena platform usefulness in teaching and learning of pre – service teachers at the college.

Table 3. Perceptions on usefulness of Modelena

Item	N	Mean
Studying through Modelena provides the flexibility to study at the time convenient to me	43	3.47
Modelena can enable me to study irrespective of where I am located in the world	43	3.81
Modelena enable me to take tests and submit assignments electronically	43	3.77
Overall mean		3.68

On whether Modelena was useful for the purpose the participants were in agreement that it was. The statistical mean of 3.68 in Table 3 falls in the range of "agreement" in the Likert scale range. This suggests that the pre-service teachers at the college strongly agreed that the Modelena platform enabled them learn anytime, at any place submitting tests and assignments electronically hence achieving college online teaching and learning objectives.

Pre – service teachers' perception of their proficiency in using Modelena

Self-efficacy refers to individual belief in capacity to execute actions or behaviours to produce specific performances. Table 4 below shows means for self-efficacy of pre- service teachers in using Modelena.

Table 4. Self-efficacy perceptions

Item	N	Mean
I feel confident while using Modelena platform	43	3.16
I can navigate Modelena platform by myself	43	3.63
Overall mean	43	3.40

Based on the overall statistical mean (3.40) in table above participants were not confident about their ability to use Modelena. Interviews with participants revealed several challenges pre-service teachers faced in using Modelena. One pre-service teacher stated:

> "I lack enough practice in using Modelena because I do not have a laptop. To make matters worse my cell phone is of poor quality with low memory space. I rely on using my two friends' laptops."

In line with lack of confidence in using Modelena another pre – service teacher said:

> "There is need to have an efficient help desk to attend to challenges we face in using Modelena. This will help to increase our confidence in using Modelena and the internet in general. Many student teachers started using computers here at college due to poor family backgrounds; therefore it is

not proper to assume that every student teacher has the capacity to use computers for learning."

These responses by pre-service teachers support the overall statistical mean (3.40) in Table 4 above shows that pre-service teachers lacked confidence in ability to use Modelena. The lack of confidence emanated from limited use of the learning platform due to insufficient computer hardware (laptops, desktops, smartphones) for use, and technical support to develop skills of pre-service teachers in using the online learning platform Modelena.

Pre-service teachers' perceptions of ease of Modelena use

Ease of use suggests the amount of effort one must deploy in using something in order to achieve specific outcomes. In this case focus was on ease of use in relation to effort needed to manipulate Modelena for the purpose of teaching and learning.

Table 5. Perceptions on ease of use

Item	N	Mean
I believe Modelena platform is user friendly	43	3.07
I spend less time on a task when using Modelena	43	3.21
Overall, I believe that Modelena is easy to use	43	3.12
Overall mean	43	3.13

The mean was, 3.07 for belief of Modelena as a user friendly platform, 3.21 for less time spend on a task using Modelena and 3.12 for belief that overall Modelena was ease to use. All means are in the neutral category, showing that the pre – service teachers were not decisive on whether Modelena was either ease to use or not, but they were aware of challenges they were encountering in using Modelena. For instance, commenting on these aspects during interviews one pre – service teachers stated:

"I am not sure to say whether Modelena is user friendly because I do not have enough computer skills to make such conclusion. The same applies on time spent on doing tasks."

Some questions which arise from this response are: Do pre – service teachers' competences comply with the demands to use Modelena effectively? Do pre – service teachers get enough support to use Modelena for teaching and learning? Such questions indicate the need for further research.

Pre-service teachers' rating of feedback from Modelena

Learners are assisted to know their weaknesses which need improvement and strengths for consolidation. Table 6 shows mean scores on perception of pre-service teachers on quality of feedback from educators.

Table 6. Perceptions on feedback

Item	N	Mean
Guidance is available promptly on Modelena	43	2.98
Feedback is available to me promptly	43	3.07
A specific person(or group) is available to assist on any queries	43	2.40
Overall mean	43	2.81

Although the mean in this regard falls again in the neutral range a close look at the items in this sector shows that participants had a very low opinion about the quality of feedback provide by the tutors and technicians. With respect to promptness of availability of: guidance on Modelena the mean is 2.98 and feedback the mean is 3.07. Availability of a specific person to assist on any queries has a mean of 2.40. Collectively all these means show that pre – service teachers were neural or not conclusive on whether the quality of feedback was either good or bad. However, pre-service teachers' low rating of the quality of feedback is reflected by the mean of 3.91 (Item 19) indicating agreement with the view that given the option, they would prefer face-to-face learning to online. This finding is supported by follow up interviews on this issue. For instance one pre-service teacher said:

> "Even when you are fully paid up accessing Modelena readily is a challenge because you may not be cleared promptly by the accounts section. Also my Modelena individual account may not instantly be accessible, so one needs to queue at the ICT section for assistance. As I do this, due dates for assignments uploaded by lecturers (educators) will be approaching. This frustrates. If it is face – to – face I simply do the assignment and submit."

Another participant said:

> "Power outages and slow internet and frequent lack of connectivity are challenges which make use of Modelena boring. Accessing learning materials uploaded and uploading assignments are frustrating challenges."

Pre-service teachers' perceptions on the nature and quality of uploads on Modelena

Participants again remained neutral on the nature and quality of uploaded materials. They would not decide to say the materials uploaded were well structures but only indicated clearly that most uploads were simply lecture notes (item: Most of the uploaded work is lecture notes).

Table 7. Perceptions on quality of uploads

Item	N	Mean
My uploaded subject area materials are well structured for online learning	43	3.47
Most of the uploaded work is lecture notes	43	3.63
Most uploaded work is in video form	43	2.16
Given a choice I would rather use face to face learning	43	3.91
Overall mean	43	3.29

Most participants indicated that very few videos were uploaded as material to assist them to learn, as reflected by a mean of 2.16. Comparatively, a mean of 3,63 indicates that

most pre-service teachers agreed that majority of learning material uploaded on Modelena were notes. Interviews with participants revealed that they preferred materials uploaded on Modelena to be interactive. One participant said:

> "Notes posted on Modelena should be structured in a manner which enables us students to work through on our own. In most cases notes posited are just original PDF documents uploaded, and in such a case it will be difficult to understand key issues or points which need to be learnt."

Asked to elaborate, this participant expressed the need to upload materials in form of modules which speak on concepts to be learnt:

> "Since learning is online, materials uploaded should take the role of the lecturer, by clearly interacting with students as they go through. There should be interactive activities guiding students to understand concept to be learnt."

Supporting the use of interactive teaching and learning materials another participant said:

> "Videos from YouTube or created by lecturers on particular concepts can be used so that learning of abstract concepts is made easy. Videos are good because students can replay in order to go over again areas where more understanding is needed."

General pre-service teachers' perception to Modelena platform teaching and learning platform

The overall statistical mean obtained in this study was 3.25, indicating a neutral position. Neutral might imply pre-service teachers were either willing to answer a particular question or not confident enough to take a particular stand on an issue or aspect under consideration.

Focus of this study was on understanding the perceptions of pre-services teachers had on aspects of the newly adopted Modelena teaching and learning platform. As Ntshwarang et al (2021) and Syauqi et al (2024) note pre-service teachers at the college agreed that the Modelena platform enabled them to learn anytime, at any place submitting tests and assignments electronically, hence achieving college online teaching and learning objectives. This positive perception should be capitalised on to improve other areas in which Modelena is perceived negatively. Such positive perception is an assurance that pre-service teachers are most likely to use Modelena if current challenges they encounter are solved. However, the fact that pre-service teachers played it neutral in their overall perception by not indicating whether they liked Modelena or not, has several interpretations. For instance, one might think that the pre-service teachers got training to develop confidence in the use of the platform. Lack of proper training or skilling may lead to less confidence, hence indecisiveness on whether the platform is fit for use or not in teaching and learning. Another possibility could be that the pre-service teachers had inadequate practice in using the learning platform, due to intermittent internet availability and poor internet infrastructure. These possibilities, coupled with pre-service teachers' preference to revert to face-to-face teaching and learning, might be suggesting that they

(pre-service teachers) are not comfortable in the use of Modelena, which calls for further study.

Neutrality becomes a contradiction and a cause for concern, when one considers the general age group of the participants, age group 20-25 had (34,9%) and 26-30 (32,6%) to an overall age range of 20-30 years with 67,5% of participants having been born when ICT was proliferating the Zimbabwean society between 1992 and 2002. In this context it is expected that this age group should have decisively and overwhelmingly stated positivity about Modelena. Again the pre-service teachers were neutral (mean 2.98) on the promptness of availability of guidance on Modelena. Indecisiveness suggests that the pre-service teacher preparation programme did not equip the prospective teachers with knowledge and skill to make clear decisions on using ICT for teaching and learning.

Although pre-service teachers were neutral on whether Modelena was user friendly (mean 3.21), they were aware of challenges they were encountering in using Modelena. For instance an overall mean of 3.40 shows that pre-service teachers lacked confidence in ability to use Modelena. Similar to observations EdTech (2020) makes, pre-service teacher attributed lack of confidence in using Modelena to insufficient computer hardware (laptops, desktops, smartphones), and technical support to develop skills in using the online learning platform. In addition pre-service teachers indicated that they experienced difficulties in accessing their Modelena accounts, due to slow process of clearing, power outages and, slow internet, and frequently lack of connectivity. There is need at institutional level to find ways to deal with these challenges, so that pre-service teachers are provided with suitable conditions for online learning.

Quality of teaching and learning materials uploaded online is important in assisting learners to understand concepts in this study most pre-service teachers indicated that very few videos were uploaded as material to assist them learn, as reflected by a mean of 2.16. Comparatively, a mean of 3.63 indicates that most pre-service teachers agreed that majority of learning material uploaded on Modelena were notes. Follow up interviews with pre-service teachers revealed that they preferred materials uploaded on modelena to be interactive, through structuring notes posted so learners can work through on our own. In most cases notes posted were said to be just original pdf or PowerPoint documents. Supporting this finding Gillet-Swan (2017) expresses the need to adapt content to online format, and matching it with learner needs. Online learning materials uploaded should assume the role of the educator, by clearly interacting with pre – service teachers as they read through, guiding them to understand concepts to be learnt.

Related to understanding, pre-service teachers expressed the need for videos from YouTube or those created by educators on particular concepts to make learning of abstract concepts easy. Videos are good because students can replay in order to go over again areas where understanding is needed. This finding is supported by Gillet-Swan (2017) who advocates for creating individual learner tailored instruction. The low quality of teaching and learning materials uploaded on Modelena points to the need at institutional level, to involve educators (lecturers) in in-service activities focusing on teaching and learning material production. Therefore the need for educators (lecturers) to learn to develop appropriate online teaching and learning materials, and use them appropriately should not be taken as obvious, but should be given the serious attention it deserves.

CONCLUSIONS

The pre-service teachers agreed that Modelena was a useful platform. The college can take advantage of this positivity and use it as a basis for development of pre-service teachers competences to use online learning. Regardless of believing in the usefulness of the platform pre-service teachers lacked confidence in ability to use the platform. There is therefore need for further training or support in the use of Modelena to increase ease of use. Such support should be afforded to all cohorts of pre-service teachers which come admitted as intakes annually. The more one is skilled the more one would find Modelena online learning platform easy to use. The pre-service teachers rated the quality of feedback and quality of uploaded materials very low, an aspect the college and its ICT department might want to look at. The "poor" quality of uploads may reflect on the lack of skills of the lecturers who tended to upload simple word notes. The pre-service teachers felt if they were given a choice they would revert to face-to-face learning, which maybe a reflection of insufficient training. Preferring face-to-face may be due to resistance to change or that the pre-service teachers want the easy passive traditional way of learning, where the educator works harder than the learner. There is need to follow up, and assess why pre-service teachers would prefer face-to-face, yet they are the ICT generation.

REFERENCE

Altun,T. and Akyildiz , S. (2017). Investigating Student Teachers' Teachnological Pedagical Content Knowlegde (TPACK) based on some Variable. *European Journal of Education Studies*, 3(5), 467-483. DOI: 10.5281/zenodo.555996

Asgari. S., Trajkovic, J., Rahmani, M., Zhang, W., Lo, R.C., and Sciortino, A. (2021). An observational study of engineering online education during the COVID-19 pandemic. *PLoS ONE 16*(4), e0250041. https://doi.org/10.1371/journal.pone.0250041

Aseey, A. A. (2020). The Impact of COVID-19 on the International Education System: Disruptions in Low-income Countries. In L. Naumovska (Ed.), *The Impact Of COVID19 On The International Education System* (pp. 115–126). Proud Pen. https://doi.org/10.51432/978-1-8381524-0-6_8

Bourne, J, Harris D, Mayadas, F. (2005). Online engineering education: Learning anywhere, anytime. *Journal of Engineering Education. 94, 131–146.* http://dx.doi.org/10.1002/j.2168-9830.2005.tb00834.x

Carretero, G. S., Napierala, J., Bessios, A., Mägi, E., Pugacewicz, A., Ranieri, M., Triquet, K., Lombaerts, K., Robledo, B, N., Montanari, M., and Gonzalez, V. I. (2021). *What did we learn from schooling practices during the COVID-19 lockdown*. Publications Office of the European Union

Damopolii, I., & Kurniadi, B. (2019). Training students metacognitive skill using mobile learning. *Journal of Physics: Conference Series*, *1317*(1), 012185. https://doi.org/10.1088/1742-6596/1317/1/012185

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems 49,* 5–22. https://doi.org/10.1177/0047239520934018

EdTech (2020). The Effect of Covid – 19 on Education in Africa and its Implications for the Use of Technology: A survey of the Experience and Opinions of Educators and UKaid.

https://www.elearning-africa.com/conference2025/ressources/pdfs/surveys/The_effect_of_Covid-19_on_Education_in_Africa.pdf

Elumalai, V. K., Sankar, P. J., Kalaichelvi, R., John, A. J., Menon, N., Alqahtani, M. S. M., and Abumelha, A. M. (2020). Factors Affecting the Quality of E – Learning during the COVID – 19 Pandemic from the Perspective of Higher Education Students. *Journal of Information Technology Education: Research*, *19*, 731–753. https://doi.org/10.28945/4628

Gillet–Swan, J. (2017). The Challenges of Online Learning: Supporting and Engaging the Isolated Learner. *Journal of Learning Design*. 10(1), 20–30. https://doi.org/10.5204/jld.v9i3.293

Gokah, T. K., Gupta, N., & Ndiweni, E. (2015). E-Learning in higher education – opportunities & challenges for Dubai. *International Journal on E – learning: corporate, government, healthcare and higher education*, *14*(4), 443–470. https://core.ac.uk/download/pdf/132799025.pdf

Heng, K., & Sol, K. (2020). *Online learning during COVID-19: Key challenges and suggestions to enhance effectiveness*. Cambodian Education Forum. https://cambodianeducationforum.wordpress.com/2020/12/08/online-learning-during-covid-19-key-challenges-and-suggestions-to-enhance-effectiveness/

Ho, J. and Tay, Y. L. (2020). Ensuring Learning Continues during a Pandemic. *Journal of the Commonwealth Council for Educational Administration & Management. 48*(2), 48–55. https://edu.thecommonwealth.org/wp-content/uploads/2020/11/ISEA-2020-482.pdf

Holzweiss, P.C., Joyner, S.A., Fuller, M.B., Henderson, S, & Young, R. (2014). Online graduate students' perceptions of best learning experiences. *Distance education, 35, 311–323.* https://doi.org/10.1080/01587919.2015.955262

Hosseini, Z., & Kamal, A. (2008). A survey on pre-service and in-service teachers' perceptions of technological pedagogical content knowledge (TPCK). *The Malaysian Online Journal of Educational Technology, 1*(2), 1–7.

Igbokwe, C. I., Okeke – James, J. N., Anyanwu, N.A., and Eli–Chukwu, C.N. (2020). Managing the Challenges to the Effective Utilisation of E – Learning as a Response in COVID – 19 Nigeria. *Journal of the Commonwealth Council for Educational Administration & Management, 48*(2), 28–48. https://edu.thecommonwealth.org/wp-content/uploads/2020/11/ISEA-2020-482.pdf

Jaggars, S. S. (2014) Choosing between online and face-to-face courses: Community college student voices. *American Journal of Distance Education 28, 27–38.* https://doi.org/10.1080/08923647.2014.867697

Kaisara, G. and Bwalya, J. K. (2021). Investigating the E – Learning Challenges Faced by Students during Covid – 19 in Namibia. *International Journal of Higher Education, 10*(1), 308–318. https://doi.org/10.5430/ijhe.v10n1p308

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge ? Contemporary Issues in Technology and Teacher Education, *9*(1), 60–70. https://citejournal.org/volume-9/issue-1-09/general/what-is-technological-pedagogicalcontent-knowledge/

Lee -Post A. & Hapke, H. (2017). Online learning integrity approaches: Current practices and future solutions. *Online Learning 21*, 135–145. https://doi.org/10.24059/olj.v21i1.843

Maatuk, M. A., Elberkawi, K. E., Aljawarneh, S., Rashaideh, H., and Alharbi, H. (2021). The COVID – 19 pandemic and E-learning: challenges and opportunities from the perspective of students and instructors. *Journal of Computing Higher Education, 34*(1), 21–38. https://doi.org/10.1007/s12528-021-09274-2

Martínez, P. J,. Aguilar, F. J,. Ortiz, M. (2019). Transitioning from face-to-face to blended and full online learning engineering master's program. *IEEE Transactions on Education,* 63, 2–9. https://doi.org/10.1109/TE.2019.2925320

Matorevhu, A. (2020). COVID – 19: Basis for United Future Global Response to a Pandemic. In Naumovska, L. (Ed), *The Impact of COVID – 19 On the International Education System*, 127 – 135. Proud Pen. https://doi.org/10.51432/978-1-8381524-0-6_9

Moskal, P., Dziuban, C., and Hartman, J. (2013). Blended learning: A dangerous idea? *The Internet and Higher Education*, 18, 15–23. https://doi.org/10.1016/j.iheduc.2012.12.001

Mukhtar, K., Javed K., Arooj, M. & Sethi, A. (2020). Advantages, Limitations and Recommendations for online learning during COVID-19 pandemic era. *Pakistan Journal of Medical Sciences,* 36 27 – 3. https://doi.org/10.12669/pjms.36.COVID19-S4.2785

Ntshwarang, N. P., Malinga, T., and Losike – Sedimo, N. (2021). eLearning Tools at the University of Botswana: Relevance and Use Under COVID – 19 Crisis*. Higher Education for the Future*, *8*(1), 142–154. https://doi.org/10.1177/2347631120986281

Ryan, T. G,. Toye, M,. Charron, K,. and Park, G. (2012) Learning management system migration: An analysis of stakeholder perspectives. *The International Review of Research in Open and Distributed Learning, 13,* 220–237. https://doi.org/10.19173/irrodl.v13i1.1126

Schmidt, D. A., Baran, E., Thompson, A. D., Mishra, P., Koehler, M. J., & Shin, T. S. (2009). Technological pedagogical content knowledge (TPACK). *Journal of Research on Technology in Education, 42*(2), 123–149. https://doi.org/10.1080/15391523.2009.10782544

Stone, K. (2020). Zoom for educators: *How to set up virtual classrooms for distance learning*. https://getvoip.com/blog/2020/04/08/zoom-for-educators/

Syauqi, S. K., Winarno, N., Samsudin, A., Damopolii, I., & Firdaus, R. A. (2024). From online to in-person: Students' motivation and self-regulation in science teaching activities during and after the Covid-19 pandemic. *INSECTA: Integrative Science Education and Teaching Activity Journal*, *5*(1), 87–107. https://doi.org/10.21154/insecta.v5i1.8689

United Nations Educational, Scientific and Cultural Organization. (2020). *COVID-19 impact on education.* https://en.unesco.org/covid19/educationresponse

Vielma, K,. & Brey, E. M. (2020) Using Evaluative Data to Assess Virtual Learning Experiences for Students During COVID – 19. *Biomedical Engineering Education: 1–6.* https://doi.org/10.1007/s43683-020-00027-8