



BEYOND THE BORDERS: GLOBAL COLLABORATION IN OPEN DISTANCE EDUCATION THROUGH VIRTUAL EXCHANGES

Doctor P.Z Msekelwa

E-Learning Senior Education Coordinator, Department of Education Eastern Cape Province

Correspondence Author: Doctor P.Z Msekelwa, **E-mail:** zingisap@yahoo.com

| Abstract

As a component of their educational programs and with the guidance of educators and/or facilitators, groups of students participate in virtual exchanges (VE), which are extended periods of online intercultural interaction and collaboration with peers from around the world. Experts in a scientific subject are linked up with others who want to participate for teaching and learning through virtual collaboration. In order to host material where both students and professors can share knowledge in a particular subject, many worldwide colleges and ODeL institutions use virtual platforms. Students can improve knowledge and abilities in a range of areas crucial to their personal, academic, and professional growth through virtual communication. Both synchronous and asynchronous digital tools were employed by students and teachers for virtual communication and collaboration. Students in South Africa can digitally interact with a professor in Canada and elsewhere. The difficulty is that some of the lecturers and students are not instructed on how to utilize the technology, let alone how to deal with network issues. Examining the literature was done with a focus on the virtual exchange in ODeL. The study's methodology is qualitative research. The study has used connectivism theory to examine the data collected from students participating in virtual interaction. According to the Connectivism theory, learning happens when peers connect and collaborate to exchange ideas, thoughts, and viewpoints. The study utilized five online learning groups. The participants' thoughts, experiences, and perspectives on the value of digital engagement were solicited. The gathered data were analyzed using thematic analysis, a technique for uncovering themes in qualitative data. The findings demonstrated that digital interaction and virtual exchange enhance communication, problem-solving abilities, and language development.

| Keywords

Virtual exchange, open distance and e-learning, connectivism, online learning, Connectivism

| Article Information:

Accepted: 20 May 2023

Published: 15 July 2023

DOI:10.60087/jklst.vol2.n2.p.13

1. Introduction

Global Open Distance colleges gradually use technology to allow students to communicate with one another utilizing virtual tools like learning management systems, video conferencing, and newly emerging digital tools. The researcher has seen that through virtual collaboration and idea sharing, student languages improved. The researcher is one of the e-tutors helping the students enrolled in this ODeL. Students participate in online forums while using the internet and devices like computers, WI-FI, iPods, mobile phones, and sound network coverage. Effective and efficient processes demand a good digital infrastructure. The researcher had observed that disadvantaged students find it challenging to get the necessary equipment for online conversations due to financial constraints.

2. Literature Review

According to Gokcora, (2021) and Batardiere, et al. (2019), students can build knowledge and skills through virtual interaction in a number of areas crucial to their professional, academic, and personal growth, such as communication, critical thinking, teamwork, and problem-solving abilities. Zoom, Microsoft Teams, video conferencing, and instant messaging are a few examples of virtual collaboration.

Learners can cooperate in group conversations by using collaborative activities. The ability to collaborate and finish a work is demonstrated by students (Begona, Malin, & O'Robert, 2021; Tafazoli, 2022; O'Dowd, O'Rourke, 2019). Collaborative online international learning has arisen as another strategy to assist global education since the creation and broad use of learning management systems like Blackboard and Moodle in early 2000. Many nations have employed synchronous (Zoom meetings) or asynchronous (digital forums) digital interaction. (Garces and O'Dowd, 2021; O'Dowd, 2021; O'Dowd & Dooly, 2021)

Samarrale, Teng, and Alzaharan (2018: 47-55) propose that the integration of audio or speech technologies into the delivery of distant education courses is an additional cost-effective approach to enhance the learning experience. The range of options for communication tools varies from basic telephones equipped with voicemail functionality to advanced audio conferencing systems. Due to the significant advancements in innovation within this business, the facilitation of team collaboration and online meetings has become increasingly efficient and manageable. In light of the ongoing evolution of the digital ecosystem, it is imperative to analyze the latest developments that IT managers and team leaders can anticipate in the realm of video conferencing in the 21st century (Ahmad & Jantan, 2019).

Artificial Intelligence (AI) is poised to assume a pivotal role in the future of video conferencing, functioning as an integral facilitator within the meeting room. According to Atanasova (2019), machine learning algorithms developed by technical leaders have the capability to transcribe audio, track the number of attendees, and offer valuable data regarding attendee engagement. These advancements aim to assist individuals in directing their attention towards the most significant aspects of a meeting.

According to Tu and Corry (2019), the proliferation of Internet usage globally has led to the widespread integration of computer technology in the provision of distance education. The utilization of Internet-based course management software in traditional higher education courses has expanded the scope of online learning beyond distance learning. However, extensive research has been conducted to establish optimal methods and principles for internet-based distant education courses and programs. As stated by Ooko (2016: 527). The key computer technologies employed for distance education encompass e-mail, online collaborations, and web-based education. It is evident that only students possessing dependable computer and Internet connectivity would have the opportunity to enroll in courses that make use of these technologies.

Mays (2017:2) argues that in light of its widespread adoption, it is crucial to acknowledge the relevance of active learning in the broader context of modern higher education. This context encompasses a substantial

population of students engaged in online and blended learning environments. The transition to a different mode of instruction has required a reevaluation of traditional face-to-face teaching methods, often leading to a total overhaul of course structures to accommodate online or mixed learning settings. Indeed, the proliferation of online courses serves as a means to guarantee that a heterogeneous cohort of higher education students can engage in adaptable learning modalities that cater to their individual requirements (Mays, 18:6).

The integration of intelligence flexible learning incorporates a significant level of automation and student agency into the realm of asynchronous online learning and interactive media. The advent of computerization brought about significant transformations in the administrative framework of universities. However, the origins of online learning in higher education may be traced back to experimental endeavors within certain disciplines, rather than being driven by centralized and managed programs. The growth of online education has been intimately associated with the emergence of correspondence courses, distant learning, and the early utilization of educational materials (Tait, 2018).

In the study conducted by Kanchana and Patchinayagi (2019), it was shown that full-motion video teleconferencing offers distance students the most realistic experience comparable to being physically there. This particular method of video transmission for remote education is considered to be among the earliest. This particular technological system necessitates the use of two distinct sets of equipment, with the potential for more sets in the case of multi-site transmission. Specifically, an uplink dish is employed to send the video, while a downlink dish receiver is utilized on the student end to receive and subsequently show the transmitted signal.

According to Sutherland (2019:34), the utilization of digital migration and technology holds significant importance for students engaged in studying within the context of Open and Distance e-Learning (ODEL). According to Marwala and Xing (2019) as well as Fomunyan (2017), the existence of a wide range of wearable gadgets can be seen as indicative of an initial phase in the development of a new technology. Education institutions must take immediate action to fully harness the immense potential of wearable technology in transforming teaching methodologies and enhancing student learning experiences.

Furthermore, Al-Rahmi, Aldraiweesh, Kamine, and Zeki (2019:118) assert that the integration of novel and developing technologies, such as smartphones, wearable devices, sensors, cloud-based information technology, sophisticated analytics, and the Internet, is inducing transformative effects on business and operational frameworks within various industries, including the realm of higher education. According to Duff, Stone, Townsend, and Cathey (2020), the emergence of these technologies has opened up novel prospects for enhancing or redefining the university experience, particularly in the realms of teaching and learning.

In addition to renowned global institutions in Open and Distance Learning (ODL), such as Athabasca University in Canada, several technologies have been employed to facilitate virtual interchange and collaboration.

Athabasca University is a prominent university in Canada that specializes in Open and Distance Learning (ODEL), providing adaptable instructional methods and educational opportunities to a wide range of learners, encompassing individuals from varied backgrounds. In addition, Athabasca University was established with the explicit purpose of offering educational opportunities to those in the post-secondary level who desired to pursue their academic objectives while remaining within the confines of their residences, employment, and familial responsibilities (Cronin, 2017:3).

University is the institution's flexible delivery systems, which provide students with the option to save on relocation fees. A wide range of undergraduate courses, totaling over 525, are available for enrollment through continuous enrollment, self-paced learning, and individualized delivery methods, all of which incorporate some form of online component. Online graduate programmes are administered to groups of

students. Numerous internet help options are readily accessible. The provision of student support at Athabasca University is facilitated through the utilization of a Learning Management System (LMS), which enables e-tutors to engage with learners situated in geographically distant regions (Giralt, Betts, Pittarella, & Stefanelli, 2022).

Athabasca University has implemented a mechanism that enables students to electronically submit their assignments, as opposed to relying on traditional postal methods. The utilization of electronic means for the submission of tasks facilitates the expeditious provision of feedback to students. Athabasca University implemented measures such as staff training, the establishment of a computing helpdesk, and the establishment of explicit response requirements for student inquiries. Various platforms and methods are utilized to foster innovation and provide online enhancements to course and service delivery. The government assumes a role in providing financial support for internet technologies utilized by students. Additional resources are committed to the university in order to provide support for the advancement and deployment of online systems. The primary emphasis lies in the elimination of obstacles that hinder individuals from attaining higher education, as well as the pursuit of teaching and research of exceptional quality (Bozkuert & Akgun-Ozbek 2017:3).

Athabasca University have the necessary resources and infrastructure to deliver exceptional online services and programs to its constituents. Students who have access to the internet are able to acquire a diverse range of educational resources, such as online assessments and tasks, course materials, glossaries, links to services provided by the educational institution, as well as hyperlinks (Gillet-Swan 2017:2).

The Open University of the United Kingdom (OUUK) utilizes modern technology to facilitate communication with its varied student base across the globe. As the sole institution in the United Kingdom dedicated to distance learning, OUUK is committed to providing educational opportunities to individuals regardless of their geographical location. According to Commander, Schloer, and Cushing (2022), the University of London holds the distinction of being the largest academic institution in the United Kingdom, boasting a student population over 200,000.

According to Lenkatis and Lorane (2021:2), there were numerous grounds to undermine the significance of OUUK when it first transmitting its lectures on the British Broadcasting Cooperation television and radio 45 years ago. Firstly, it is noteworthy that the notion of delivering higher education remotely was not a novel concept. As early as the 1700s, the provision of correspondence courses emerged, with the teaching of shorthand being one such example. Moreover, in the mid-19th century, the University of London commenced offering distance learning degrees to students across the globe (Joseph, Massimo, Silvia, 2021).

OUUK is a well-established model that effectively caters to non-traditional students who are often overlooked as viable candidates for higher education. Since its inception, this institution has demonstrated the ability to effectively integrate scalability and personalization through the utilization of technology, all at a more affordable price point compared to traditional colleges, without compromising academic excellence. According to Bond and Daher (2016),

The instructional techniques utilized by the Open University UK have undergone inevitable transformations in response to changing circumstances. Online courses now include lectures, as well as text and video-based class discussions. The institution has actively engaged in the Open Courseware movement, offering complimentary online resources for numerous courses and delivering free courses via iTunes, resulting in millions of downloads. The majority of study materials are currently produced internally, incurring significant costs. According to Paul and Tait (2019:4), students now have access to all the necessary texts through mobile devices like iPods.

The United Kingdom government provides support to learners in the realm of wireless technology, offering an advanced infrastructure. For example, network coverage is available in every location. There is a lack of

electricity-related issues. At the Open University UK (OUUK), students engage in online interactions with their e-tutors and fellow students. Students have the capability to access and retrieve their course materials through the online learning portal provided by the university. The preference of students is in the submission of assignments using online platforms, as it enables them to receive feedback in a timelier manner compared to the traditional method of paper submission. The OUUK prioritized the implementation of regular assignments, the provision of thorough feedback through the employment of e-tutors, and the monitoring of feedback quality. Each e-tutor is assigned a maximum of 20 students, a number that is considered manageable. It is mandatory for students to complete any formative tests that are submitted electronically. According to Paul and Tait (2019:5), students utilize an online library as a means of locating references while undertaking their tasks.

In the African context, the University of Namibia (UNAM) in Namibia actively engages in the implementation of virtual education (VE). The institution's Centre for External Studies is dedicated to establishing itself as the foremost center for open and distance learning within the country and beyond. Its primary objective is to facilitate individuals in realizing their maximum capabilities through the provision of accessible, innovative, and adaptable learning opportunities. The primary objective of this institution is to offer inclusive and high-quality higher education, as well as to facilitate the advancement of adult community members through accessible open learning possibilities provided by distance and continuing education programs. The Centre for External Studies provides educational opportunities for those who are unable to attend university campuses on a full-time basis due to various circumstances (Duplesis & Keyter, 2019:7).

Students are strongly advised to seek guidance from tutors for any challenges they encounter within a specific academic module. In order to enhance the utilization of study materials among students, the Department of Student Support periodically organizes contact sessions at various centers. Contact sessions provide students with a great opportunity to engage with instructors and receive assistance in their modules. Additionally, these sessions facilitate interaction among students who are enrolled in similar modules and facing comparable challenges, with the aim of fostering the formation of study groups (Breins, Raghuran & Gunter, 2019:56).

The Centre for Open, Distance and eLearning (CODEL) at the University of Namibia provides online assistance via a ticketing system. The online assistance system facilitates students in submitting inquiries and addressing a range of concerns, including assignments and study materials. The learning management system (LMS) utilized by CODEL is Moodle, which serves as the official educational platform. Moodle is specifically engineered to offer educators, administrators, and learners a singular, comprehensive, and secure system that seamlessly integrates many functionalities, hence facilitating the creation of a customized learning environment. Moodle facilitates self-directed and collaborative learning by promoting self-monitoring, social connections, and active student engagement, aligning with the socio-cultural learning philosophy and social constructivism (Leanard & Snyman, 2019:3).

When utilized in conjunction with supplementary educational resources, Moodle enhances the virtual learning environment (VLE) of CODEL by integrating many technologies that facilitate diverse pedagogical methods. The CODEL virtual learning environment comprises various components, including Moodle, which functions as a Learning Management System. Additionally, it incorporates Mahara, an ePortfolio platform, lecture recording capabilities, plagiarism detection tools, and live lecture delivery mechanisms (Niitembu & Tautiko 20:34).

Video conferencing is a technological tool that facilitates real-time virtual meetings and instructional sessions, so enabling educators to deliver educational content to students located in different geographical regions. The present video conferencing systems facilitate students' ability to participate in lessons from any location worldwide, utilizing Internet-enabled devices.

Furthermore, video conferencing facilitates virtual meetings within the university, enabling staff members to connect with one another across various satellite regions. The video conferencing services offered by CODEL are facilitated by the utilization of Zoom technology. Video conferencing services encompass the provision of video-conferenced educational sessions, as well as the facilitation of virtual block teaching. According to Shaketanga (2018:77), it is recommended for students and lecturers utilizing Zoom video conferencing to install the Zoom software and mobile applications.

Obafemi Awolowo University (OAU), located in Nigeria, is recognized as a prominent African university that utilizes Virtual Environments (VE) as a means of enhancing teaching and learning within its academic setting. The academic institution was initially designated as the "University of Life" upon its establishment. The Obafemi Awolowo University (OAU) is under the ownership and operation of the Federal Government of Nigeria. According to Aladejana and Olajide (2019:20), the institution was established in 1962 and initially consisted of five faculties. The OAU remote learning paradigm incorporates the utilization of multimedia technology to facilitate electronic instructional delivery and foster independent learning. This entails the implementation of automated learning processes, including the delivery of lectures, through the utilization of advanced student information systems. E-learning technology encompasses many tools such as tablet devices, digital video broadcast systems, and multimedia conferencing network systems. These technologies facilitate the accessibility of educational resources for learners, both online and offline, hence providing flexibility and convenience to students. Additional distribution platforms that can be utilized to facilitate the learning process encompass compact discs (Ejemeyowwi & Osabuohien, 2020:78).

The Obafemi Awolowo University (OAU) has recently introduced a Learning Management System (LMS) known as e-zone. E-zone serves as a platform for delivering educational resources to students in various digital formats, including online text, PDF documents, Microsoft Word files, PowerPoint presentations, audio recordings, and video lectures. Additionally, the system provides instructors with the capability to establish connections to a wide range of freely accessible instructional resources found on the Internet. In addition to the provision of resources, the e-zone facilitates the creation of avenues for interaction in three distinct directions: from the teacher to students, from students to the teacher, and among students themselves. The discussion boards provided by the platform facilitate the exchange of ideas and opinions on a certain subject taught by a lecturer within virtual classrooms. This feature fosters a sense of community among users, despite their geographical dispersion across various regions of the country (Bashir & Olajide, 2020:2).

The e-zone encompasses assignment and classwork modules that are essential components of the instructional process. The system incorporates several interactive tools such as chat, feedback, glossary, lesson, quiz, workshop, and a comprehensive test engine capable of managing different question formats, including essay questions, multiple-choice questions, and various other question types. One notable characteristic of e-zone is its capacity to maintain comprehensive records of user behaviors. This functionality enables instructors to effectively monitor pupils and accurately identify those who may be lacking sufficient engagement in a virtual classroom setting (Oluwaseun, 2016).

According to Okocho (2020:5), students who are currently enrolled at OAU encounter challenges related to inadequate infrastructure, insufficient power supply, and disparities in Internet accessibility. This phenomenon is frequently observed among students residing in rural areas. In contemporary times, students are confronted with the challenges posed by power outages.

Africa Nazarene University, located in Kenya, plays a significant role in providing valuable contributions to the field of virtual education for students who are pursuing their studies online. The establishment of the institute took place in the year 2008 with a specific focus on addressing the realm of distant education. Africa Nazarene University (ANU) specifically focused on attracting students from Kenya and other regions. The establishment of the institution aimed to offer educational options to individuals who aspire to pursue

higher education but have constraints in dedicating time to traditional modes of study. The establishment of ANU was also motivated by the objective of offering non-traditional and inventive educational approaches that transcend spatial and temporal constraints. This initiative aims to afford individuals the flexibility to engage in learning at their preferred rhythm, while simultaneously addressing the pressing demand for a skilled labor force to foster societal progress. (Symconidis & Impedovo, 2023) is a citation indicating the source of information in an academic context.

The African Nazarene University (ANU), in its capacity as the Institution of Open and Distance Learning (IODL), endeavors to remain up-to-date with global advancements by placing increased focus on the integration of technology to facilitate teaching and learning (Mays, 2017:15). The African Nazarene University (ANU) has undertaken initiatives to expand its computer laboratory facilities and provide training to both faculty and students in the effective utilization of technology for educational purposes. In order to accomplish this objective, an educational institution utilizes a Learning Management System (LMS) known as the Comprehensive Academic Management System. This system is employed for many administrative functions such as student registration, financial management, and examination processes (Mays, 2018:4). According to Ooko (2016:19), this learning management system (LMS) provides students with the ability to submit their assignments, review their assignment and examination results, and access the feedback given by their instructors.

Both e-tutors and students had comprehensive training on the utilization of the e-Nazi platform. Newly admitted students at the African Nazarene University (ANU) are also offered comprehensive instruction in computer literacy programs and the utilization of Internet technologies. The university frequently organizes various training programs, workshops, and seminars with the aim of enhancing knowledge and understanding of e-learning. The library catalogue of the university can be accessible via the website of the University (Ogwengo & Osano, 2017).

The Open University of Zimbabwe, located in Zimbabwe, is recognized as one of the Open and Distance Learning (ODL) universities within the Southern African Development Community (SADEC) region. This institution employs virtual learning methods to cater to students from around the world who are engaged in online studies. The practice of distance and open learning has been prevalent in Zimbabwe for a considerable period, and the establishment of new distance education institutions continues to occur. The establishment of the Zimbabwean National Association for Distance and Open and Distance Learning (ODL) dates back to as early as 1997. According to Musingafi, Mapuranga, and Chiwanzi (2020:59-66), the investigation into remote education programs in Zimbabwe reveals the existence of several additional institutions that have obtained registration from the ministries of education and higher education.

The institution mostly relies on print media as its main source of information dissemination. The utilization of advanced technologies is solely reliant on the government radio's assistance. The e-tutors compose scripts that are afterwards transmitted to individuals in Zimbabwe, who in turn forward them to the audio visual center for the purpose of recording. Subsequently, the recorded teachings are transmitted to the Zimbabwean Broadcasting Corporation. Students are permitted to carry empty cassettes; however, their utilization is restricted. The Bachelor of Education programme is also available through the Open University. Tutors and students engage in discussions on radio platforms, particularly to cater to individuals residing in rural regions. Additionally, tutors occasionally deliver lectures through radio broadcasts (Zvavahera & Masimba, 2017:77-89).

The primary challenges mentioned by the participants encompassed inadequate study resources, challenges in accessing information and communication technology (ICT), and poor feedback mechanisms. Musingafiet et al. (ibid) proposed that an open university should aim to establish a teaching and learning system that is both effective and balanced. This system should meet the learners' desires to such an extent that they are motivated to return to the institution for further studies. Additionally, learners should feel a

sense of pride in recommending the institution to others who are seeking to pursue higher education. According to Tarusikirwa (2017:45-56), one of the key issues identified is the insufficient research skills exhibited by the learners. According to Zvavahera and Msimba (2019:77-89), it is evident that open universities have challenges in terms of lacking necessary infrastructure and resources. Additionally, a significant number of students exhibit a lack of fundamental computer skills, which poses difficulties in effectively utilizing growing online technologies for instructional purposes.

3. Methodology

The present study will employ a rigorous methodology to investigate the research question at hand. This section will outline the specific procedures and techniques that will be employed during research process. The research employed a qualitative research methodology. The utilization of the qualitative research approach was deemed appropriate in this study due to its capacity to explore and comprehend the intricacies of human experiences through the formulation of open-ended questions, which are not easily quantifiable (Creswell, 2021). Furthermore, this method is not constrained by the constraints of a quantitative approach, hence offering a more adaptable approach. (Babbie, 2020) is a citation indicating the source of information.

3.1 Research design and sampling strategy

Focus groups are considered significant in research because of the researcher's desire to obtain real-time and unfiltered replies (Clark, 2020; Creswell, 2018). The inquiries were mostly based on subjective emotions or observations, and only a limited set of responses were considered crucial in addressing the study inquiries. The study included focus groups as a means of collecting data on virtual education, namely from a limited sample of students who were enrolled at reputable global Open and Distance Learning (ODL) schools in South Africa. The researchers employed a convenience sampling strategy to identify the five groups of individuals.

The participants in each group were subjected to interviews that consisted of questions designed to assess their comprehension of virtual exchange. The significance of participation in online discussion forums and the benefits associated with engaging in digital interaction. Structured interviews were utilized to provide a more comprehensive exploration of the requisite information from the participants. All cohorts of individuals originated from an Open and Distance Learning (ODEL) institution and actively engaged in the process of online education.

3.2 Data analysis

The study involved the participation of five distinct cohorts of students enrolled in different South African Open and Distance Learning (ODEL) colleges. Each group is comprised of five individuals. The overall population consisted of twenty-five individuals. Every group was given the opportunity to engage in a discussion regarding the question presented to them. The researchers employed thematic analysis as a method to analyze the data that was gathered from the participants. The process entailed the categorization of gathered data into several themes (Clark, 2017; Clark, 2019; Babbie, 2020). The data was gathered, transcribed, and subsequently organized into discrete thematic categories

4. Results and Discussion

Interviews were conducted with five different groups representing diverse online schools to get insights on the advantages of virtual exchange in the context of higher education. The inquiries revolved around

the significance of virtual exchange and collaboration in fostering the advancement of communication, study skills, language development, and problem-solving abilities.

4.1. Improves Communication

Regarding virtual exchange and communication, Group One expressed that engaging in virtual interactions with their peers enhanced their communication skills. In the initial phases of the work assignment within the Learning Management system, there were difficulties encountered in effectively communicating and actively participating in the virtual platform. However, with time, it became evident that there was an improvement in communication. When provided with a topic of conversation, individuals are able to write freely and without apprehension.

The second group expressed a high level of confidence in their proficiency with both asynchronous and synchronous digital tools. They attributed this confidence to their active engagement in virtual collaboration, which has significantly enhanced their communication skills. The individuals successfully utilized several virtual platforms, such as WhatsApp, Telegram, Microsoft Teams, and Zoom, to engage in the exchange of ideas with other participants within the virtual environment. The individuals were able to establish communication with fellow participants enrolled in the same course located in foreign nations. Consequently, this interaction facilitated the acquisition of additional knowledge, ultimately leading to remarkable achievements in their respective academic disciplines.

4.2. Language development

The third, fourth, and fifth groups had congruent reactions in relation to language development. Continuous digital involvement enhances language skills, which is a crucial factor in the learning process. The acquisition of language serves as a fundamental basis for the cognitive and educational development of individuals. As the language evolves, learners will be able to successfully accomplish their assigned tasks. Language is an essential component in all facets of education since it facilitates the learners' ability to establish connections and engage with their classmates.

4.3. The cultivation of crucial skills

During the virtual exchange, students have the opportunity to develop several abilities, including active learning, awareness, vision, and influencing. These skills are crucial in helping individuals to effectively utilize technology, foster innovation, adapt to new circumstances, and establish successful connections. The five questioned groups expressed a clear consensus that virtual communication facilitated mutual learning, wherein participants engaged in digital interactions took turns assuming the role of teachers. Information technology (IT) facilitates the acquisition of new skills by two individuals and cultivates a robust sense of camaraderie and trust among all participants participating in the learning process. As expressed by one interviewee, "we had formed friendships that transcended geographical boundaries."

4.4. The development of problem-solving skills is a crucial aspect in various academic and professional domains.

By means of digital engagement and active interaction between learners and teachers, individuals are capable of resolving intricate problems. For instance, within the curriculum encompassing subjects such as Mathematics, Accounting, and Statistics. All students within the group reported a shared experience regarding problem-solving, expressing that digital engagement facilitated their ability to effectively address challenging subjects, such as statistics. They further emphasized that this involvement played a crucial role in their successful achievement of high marks in these tough courses. The utilization of virtual exchange facilitated the participants in the process of elucidating matters of uncertainty.

5. Conclusion

Based on the research findings, the researcher reached the conclusion that students who engaged in virtual interaction with professors and classmates from different geographical locations saw significant improvements in their language skills. Additionally, these students demonstrated enhanced problem-solving abilities, which ultimately translated into improved academic performance. Furthermore, the students demonstrated proficiency in effective communication. These talents were developed through the proper utilization of digital devices. The digital instruments commonly utilized by pupils encompassed computers, iPods, and mobile phones. Students utilized various digital platforms such as WhatsApp groups, Telegram, Twitter, and Facebook to establish communication channels with academics across geographical boundaries.

The researcher proposes that learners engaged in digital activities should incorporate contemporary technologies into their practice, as technology continues to advance continuously. Various technologies can be utilized in online education, such as C3, which encompasses a vast amount of content and functions as a virtual library. Additionally, a digital whiteboard can be employed during video conferencing sessions, while modern messaging applications and presentation software can be utilized by online lecturers.

References

- [1] Ahmad, S., & Jantan, A. H. (2019). *Organisational effectiveness through transformational leadership and technology innovation: A systemic literature review and future research*. Routledge.
- [2] Aladejana, F., & Olajide, S. O. (2019). *Assessment opportunities and implementation of blended strategies in Nigeria*. doi:10.1040.18/978-15225-6255-9.
- [3] Al-Rahmi, W., Aldraiweesh, A., Yahaya, N. Kamin, Y. B., & Zeki, A. M. (2019). *MOOCs: Data on higher education*. doi.org/10.1016/j.dib.2018.11.139.
- [4] Atanasova, D. (2019). *Moving society with sustainable future: The framing of sustainability in a constructive media outlet*. doi.org/10.1080/17524032.2019.1583262.
- [5] Babbie, E. R. (2016). *The basics of social research*. Cengage Learning.
- [6] Babbie, E. R. (2020). *The practice of social research. South African edition*. Oxford University Press.
- [7] Bashir, A., & Olajide, O. (2020). *Learning management systems to support face-to-face programs*. Obafemi Awolowo University, Nigeria.
- [8] Batardiere, M. T., Giralt, M., Jenneau, C., Baron-Earle, F., & O'Regan, V. (2019). *Promoting intercultural awareness among European university students via pre-mobility virtual exchange*. doi.org/10.14705/rpnet.2019.jve.4.
- [9] Begona, F. G., Malin, R. G., & Robert, O. (2022). *Preparing online intercultural communication and collaboration in virtual exchange*. V12 spec iss.3, p. 149-167, 2022.
- [10] Bondi, S., & Daher, T. (2016). *Learning through personal connections: Co-generative dialogues in synchronous virtual spaces*. <https://doi.org/1080/135.2016.114.288>.
- [11] Bozkurt, A., & Akgun-Ozbek, E. (2017). *Trends and patterns in massive open online courses: Review and content analysis of research on MOOCs (2008-2015)*. Athabasca University, Canada.

- [12] Breins, M. R., Raghuran, P., & Gunter, A. (2019). *Infrastructure of immobility: Enabling international distance education in Africa*. doi.org/10.1080/17450101.2019.16.18565.
- [13] Clarke, V. I. P. (2017). *Designing and conducting mixed method research*. Sage Publications.
- [14] Clarke, V. I. P. (2019). *Meaningful integration with mixed methods: Identifying why, what, and how*. doi.org/10.1016/j.ced.psych.2019.01.007.
- [15] Clarke, V. I. P. (2020). *The mixed method rigor*. Sage Publications.
- [16] Commander, N. E., Schloer, W. F., & Cushing, S. T. (2022). *Virtual exchange: A promising high-impact practice for developing intercultural effectiveness across disciplines*. doi.org/10.21827/VE.5.37329.
- [17] Creswell, J. W. (2018). *Research design: Qualitative, quantitative and mixed methods approaches* (5th ed.). Sage Publications.
- [18] Creswell, J. W. (2021). *A concise introduction to mixed research methods*. Sage Publications.
- [19] Cronin, C. (2017). *Openness and praxis: Exploring the use of open educational practices in higher education*. University of Athabasca, Canada.
- [20] Duff, L. N., Stone, G. A., Townsend, J., & Cathey, J. (2020). *Rethinking curriculum internalization: Virtual exchange as the means to attaining global competencies, developing critical thinking, and experiencing transformative learning*. doi.org/1080/1937156x:2020.1760749.
- [21] Duplessis, D., & Keyter, C. (2019). *Capacity building through public institutions of higher learning: A case study of the University of Namibia*. University of Namibia.
- [22] Ejemeyowwi, J. O., & Osabuohien, E. S. (2020). *Investigating the relevance of mobile technology adoption for inclusive growth in West Africa*. Tuffs University, Nigeria.
- [23] Fomunyan, K. G. (2017). *The political dimensions of engineering education in South Africa*. Routledge.
- [24] Garces, P., & O'Dowd. (2021). *Upscaling virtual exchange in university education: Moving forward from innovative classroom practice to regional governmental policy*. doi.org/10.1177/1028315320932323.
- [25] Gillet-Swan, J. (2017). *The changes in online learning: Supporting and engaging the isolated learner*. Athabasca University, Canada.
- [26] Giralt, M., Betts, A., Pittarella, S., & Stefanelli, C. C. (2022). *Scenario for integrating virtual exchange in higher education*. doi.org/10.32674/jis.v12.53.4629ojedorg/jis.
- [27] Gokcora, D. (2021). *Experiential learning across borders: Virtual learning and global social justice*. <https://nsuworks.nova.edu/elthe/vol4/iss2/12>.
- [28] Joseph, E. M., Massima, V., & Silvia, M. (2021). *A telecollaboration project on giving online peer feedback: Implementing a multilateral virtual exchange during a pandemic*. Athabasca University, Canada.
- [29] Kanchana, S., & Patchinayagi, S. (2019). *Empowering students to become effective learners through activity-based learning*. Hawasa University, Ethiopia.
- [30] Leonard, A., & Snyman, M. (2019). *E-books: Yes or no? A case study of undergraduate students at the University of Namibia*. University of Namibia.

- [31] Lenkatis, C. A., & Lorane, B. (2021). *The role of intercultural virtual exchanges in global citizenship development*. doi.org/10.1080/175/3057.2021.1876241.
- [32] Marwala, T., & Xing, B. (2019). *Implications of the fourth industrial age on Higher Education*. Routledge.
- [33] Mays, T. J. (2017). *Utilizing open educational resources in support of curriculum transformation at Africa Nazarene University*. Africa Nazarene University, Kenya.
- [34] Mays, T. J. (2018). *Deconstructing dual-mode provision in a digital era*. doi.org/10.1080/011587919.2018.1457943.
- [35] Musingafi, M. C. C., Mapuranga, & Chiwanza (2020). *Challenges for open and distance students: Experiences of students from Zimbabwe*. University of Zimbabwe, Harare.
- [36] Niitembu, H. A., & Tautika, S. P. (2019). *Factors hindering students from completing studies within the prescribed duration*. University of Namibia.
- [37] O'Dowd, R. (2021). *Virtual exchange: Moving forward into the next decade*. doi.org/10.1080/09588221.2021.1902201.
- [38] O'Dowd, R. (2021). *What do students learn in a virtual exchange? A qualitative analysis of the learning outcomes across multiple exchanges*. doi.org/10.1016/j.jer2021.101.
- [39] O'Dowd, R., & Dooly, M. (2021). *Exploring teacher's professional development through participation in virtual exchange*. doi.org/10.1017/So95834402/000215.
- [40] O'Dowd, R., & O'Rourke. (2019). *New developments in virtual exchange in foreign language education*. University of Hawaii national foreign language resource center.
- [41] Ogwengo, K. O., & Osano, H. (2017). *Factors influencing strategy implementation in institutions of higher learning in Kenya: A case study of Africa Nazarene University*. Africa Nazarene University, Kenya.
- [42] Okocha, S. (2020). *Poor internet brings academic work to a virtual standstill*. University of Lagos, Nigeria.
- [43] Ooko, M. A. (2016). *The adoption of technology to support teaching and teaching in a distance learning program at Africa Nazarene University*. Unisa, Pretoria.
- [44] Oluwaseun, K. A. (2016). *Comparison of quality lecturers in the open and conventional in line with National University*. Obafemi Awolowo University, Nigeria.
- [45] Paul, R., & Tait, A. (2019). *Open universities: Past, present, and future*. The Open University, U.K.
- [46] Samarrale, H. A., Teng, B. K., & Alzahrar, A. L. (2018). *E-learning continuance satisfaction in higher education*. doi.org/1080/03075079.2017.1298088.
- [47] Shaketanga, L. L. (2018). *Challenges and opportunities for implementing recognition of prior learning at the University of Namibia*. University of Namibia.
- [48] Sutherland, E. (2019). *The fourth industrial revolution: The case study of South Africa*. doi.org/10.1080/02589/346.2019.169003.
- [49] Symconidis, V., Impedova, M. A., (2023). *Where internalisation and digitalisation intersect: Designing a virtual exchange to enhance student teachers' professional awareness as European teachers*. doi.org.1080/02619768.2023.2243644.
- [50] Tait, A. (2018). *Education for development: From distance to open education*. <https://www.learntechlib.org/pl189225>.

- [51] Tafazoli, D. (2022). *Developing teachers' reflective practices through a virtual exchange program*. The University of Newcastle, Australia.
- [52] Tarusikirwa, M. C. (2017). *Understanding the barriers of collaborative research: Experiences of some academics in Zimbabwe*. Open University of Zimbabwe, Gweru.
- [53] Tu, C. H., & Corry, M. (2019). *E-learning communities*. <https://www.learntechlib.org/p/95>.
- [54] Zvavahera, P., & Masimba, F. (2019). *The use of information and communication technology in supervising open and distance learning PhD students*. doi.org/10.32919/uesit.2019.03.04.