

# INSTITUTIONAL PRACTICES FOR INCLUSIVITY AMONG STUDENTS IN DISTANCE LEARNING PROGRAMME: A REVIEW OF LITERATURE

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## Abstract

In distance learning environments, various institutions have developed and implemented practices that are meant to support learning. However, very scanty literature is available on the inclusive practices in the distance learning modes. Three theories, namely the inclusive pedagogical model, Collaborative Learning Theory and the Independence and autonomy theory were adopted to guide the study. The paper adopted literature review as the methodology. The findings from review of literature indicates inclusive practices adopted in distance education, namely, universal design for learning, use of OpenSTEM Labs, inclusive group work activities, diverse accommodations, inclusive curriculum delivery, inclusive assessment practices, technology inclusion, personalization and collaboration. On the bases of the conclusion of the paper, it is evident that there are various inclusive practices that have been adopted, there is lack of uniformity in the implementation in the distance learning modes. The paper recommends that instructors should adopt cognitive models and learning theories that favour inclusiveness and to recognize the plurality and cultural diversity of learning contexts and students.

**Keywords:** Institutional Practices, Inclusivity, Students, Distance Learning Programme, Intergrative Review.

## Introduction

The increased development of technology has continued to revolutionize learning in educational institutions. With this development, distance learning is seen to be one of the fastest growing areas in education due to invention of information communication technology and developments in computer science (Moore & Tait, 2002). According to Kerka (1996), distance education is defined as the use of print or electronic communications media to deliver instruction when teachers and learners are separated in place and/or time. On the other hand, Filipczak, (1995) define distance learning as getting people - and often video images of people - into the same electronic space so they can help one another learn or a system and process that connects learners with distributed resources. Moreover, Asha and Ricky, (2017) define distance education as the delivery of learning to learners who are separated, mostly by time and space, from those who are teaching and training. In Nigeria, Okebukola (2013) argues that distance learning is a way of combining work and family responsibilities with educational opportunities, and that it includes any educational process in which all or most of the teaching is conducted by someone geographically removed from the learner. Moreover, in distance learning, most or all of the communication between teachers and learners is being conducted through electronic or print media because learners and teachers are separated by time and space.

Previous research indicates that distance education spans a wide range of perspectives, many of which center the promise of advancing liberal education, broadening access to education, democratizing knowledge production and consumption and closing equity gaps among student populations (Colvard, Watson, Park, 2018).

### **Inclusive Education**

According to the Committee on the Rights of Persons with Disabilities (UN 2016), inclusive education means, a fundamental right to education, a principle that values students' wellbeing, dignity, autonomy, and contribution to society, a continuing process to eliminate barriers to education and promote reform in the culture, policy, and practice in schools to include all students. Moreover, inclusive education begins with the assumption that all children have a right to be in the same educational space (Cobley, 2018). Thus, the concept of inclusion is based on human rights, equal opportunities, social justice and participation. Inclusive education is very complex and multifaceted recognizing that there is not just one inclusion but rather, inclusion according to government rhetoric, inclusion as seen by children within schools, inclusion according to disabled activists, inclusion according to the lay person and inclusion contested by various academics. Inclusive education means that all students attend and are welcomed by their neighborhood schools in age-appropriate, regular classes and are supported to learn, contribute and participate in all aspects of the life of the school. On the bases of the above definitions, it can be concluded that inclusive education is about how we develop and design our schools, classrooms, programs and activities so that all students learn and participate together. Literature indicates that there are several successes of implementing inclusive education. First, inclusive education enables both teachers and learners to feel comfortable with diversity and to see it as a challenge and enrichment in the learning environment, rather than see it as a problem. Secondly, inclusive education increases social and academic opportunities for both children with and without disabilities, as well as significantly increases the likelihood that children with disabilities enroll in higher education and have better employment and life outcomes (Florian, et al., 2017).

### **Inclusive Education in Distance Learning Mode**

There has been increased implementation of inclusive practices in distance learning environments. Inclusion is the principle that all learners learn together, whenever possible, regardless of any difficulties or differences they may have. Distance learning is seen as a flexible and appropriately inclusive to deliver inclusive education. Thus, in such virtual environments, technology could be used to support inclusion. This kind of platform would allow distance learning to take place for excluded groups as the technical element of learning is localized thus, making attendance for tutorial or technical guidance during a programme less of a barrier. The increased use of distance learning strategies and affordances can be seen as both an affordance and a barrier for learners with disabilities (Xu & Jaggars, 2014).

Previous literature also indicates that attending to the accessibility needs of students with disabilities held strong promise for ensuring online education would be accessible for all students, regardless of disability identity or status. In distance learning environment, institutions have developed and implemented practices that are meant to support learning. These institutional practices have been implemented in diverse perspectives. However, very scanty literature is available on the inclusive practices in the distance learning modes. The next section of the paper presents the theoretical framework that was adopted to guide the study.

### **Theoretical Framework**

This paper is informed by three theories, namely the inclusive pedagogical model, Collaborative Learning Theory and finally, the Independence and autonomy theory. The theories are discussed as follows.

### **Inclusive Pedagogical Model**

The inclusive pedagogical model was developed by McLoughlin in (2007). The model emphasizes the internationalization of learning resources based on a constructivist approach, to provide a degree of flexibility and plurality to the learning situation. In this model, there is need to adopt cognitive models and learning theories that favour inclusiveness and to recognize the plurality and cultural diversity of learning contexts and students. Finally, the model proposed the need to design learning and evaluation activities that are consistent with culturally inclusive pedagogical goals and approaches. This model is developed from a socio-constructivist perspective (Vygotsky, 1978). Based on activities that are linked to the real world and active student participation, the acquisition of knowledge is a process that is both social and individual. Lee and McLoughlin (2007) argue that the process of creating and participating in these discussions becomes a form of student-generated content. McLoughlin and Lee (2007) reiterate that there are richer and engaging pathways to learning are available now than ever before; however, these opportunities demand that both teachers and learners experiment with new tools to explore their potential for enabling choice, creativity, participation, personalization, productivity and self-direction for learners. McLoughlin and Lee (2008a) add that further dimension to participative learning by increasing the level of socialization and collaboration with experts, community and peer groups, and by fostering connections that are often global in reach. McLoughlin and Lee (2008a) reiterate that the personalized practices that underpin effective, innovative pedagogy will differ according to the subject area, but are likely to emphasize some or all of the following: digital competencies focusing on individual creativity and performance; strategies for meta-learning, including learner-designed learning; inductive and creative modes of reasoning and problem-solving; learner-driven content creation and collaborative knowledge-building, peer learning; and social tagging, collaborative editing and peer review.

## **Collaborative Learning Theory**

Collaborative Learning theory is developed from Vygotsky's socio-cultural theory. The theory is mainly based on the concept of Vygotsky's (1978) argument of the zone of proximal development. This refers to the individuals' capacity to learn how to use socially applicable apparatuses and culturally grounded symbols. Moreover, Vygotsky, (1978) reiterate that the zone of proximal development addresses cognitive development and also makes room for human learning.

In this theory, the learners engage in collaborative experiences, they are afforded opportunities to work with others in broadening their learning experience whilst sharing knowledge, exchanging ideas and solving problems (Omrod, 2012). Thus, collaborative learning theory is part of a social consciousness of information and includes a process of negotiation or joint construction of meanings which applies to the whole process of teaching (Roselli, 2016). Therefore, students get motivated to collaboratively find answers to challenges, through dialogue, instead of remembering accurate answers. The collaborative learning theory argues that the three key components to be considered include learning design, collaboration and environment. Moreover, Razali et al., (2015) reiterate that an available and flexible setting has the potential to positively enhance interaction and collaboration between students. In addition, Razali et al., (2015) argue that learning interaction is significant in connecting students with others, whilst being supportive of the relationship between students and lecturers.

## **Independence and Autonomy Theory**

The theory of independence and autonomy was developed by Charles Wedemeyer (Simonson, 2003). According to this theory, distance education is the independence of the student as reflected in their preference for the term independent study for distance education at higher education institutions. Wedemeyer developed a system with several characteristics emphasizing learner independence and adoption of technology as a way to implement that independence. Simonson, (2003) argues that the system should be capable of operation any place where there are students or even only one student—whether or not there are teachers at the same place at the same time. In addition, the system should place greater responsibility for learning on the student. Moreover, faculty should use, as appropriate, all the teaching media and methods that have been proved effective. Moreover, the faculty should cause the redesign and development of courses to fit into an articulated media program. Moreover, faculty should preserve and enhance opportunities for adaptation to individual differences. The theory argues that the characteristics of independent study system include the student and teacher are separated, normal processes of teaching and learning are carried out in writing or through some other medium. Moreover, teaching is individualized and learning takes place through the student's activity. In addition, learning is made convenient for the student in their own environment and finally, the learner takes responsibility for the pace of his or her own progress, with freedom to start and stop at any time.

In regards to distance education, Wedemeyer proposed a reorganization of elements that would accommodate physical space and allow greater learner freedom, key of which is the development of the relationship between student and teacher.

### **Inclusive Practices in Distance Education Learning Mode**

Previous studies on inclusive education in distance education learning modes exist. However, there are varied perspectives that are presented in various contexts. A review of literature in this paper presents inclusive practices adopted in distance education, namely, universal design for learning, use of OpenSTEM Labs, inclusive group work activities, diverse accommodations, inclusive curriculum delivery, inclusive assessment practices, technology inclusion, personalization and collaboration.

### **Universal Design for Learning**

Literature indicates that one of the inclusive practices adopted in distance education is universal design for learning. Universal Design for Learning (UDL) is a framework that can guide the development of inclusive learning environments. The UDL framework as an instructional design process, provides a structure to proactively design lessons that integrate inclusive strategies and options that can support all learners in the classroom (Meyer et al., 2014). Moreover, Rose and Meyer (2002) add that the UDL provides principles that together form a practical framework for using technology to maximize learning opportunities for every student. The UDL as an inclusive practice has three core principles. According to Meyer et al., (2014), UDL is based on the principle of being purposeful and motivated which refers to learners' abilities to be goal-directed, sustain effort, and self-regulate as they learn. Secondly, the UDL is also based on the basis of the principle of being resourceful and knowledgeable that is learners' abilities to activate and connect to prior knowledge, recognize strategies to structure and retain knowledge, and transfer and generalize what they learn. Thirdly, the UDL is guided by the principle of being strategic and goal-directed, that is, learners' abilities to plan and organize how they learn, teachers to be strategic learners, and self-monitor as they teach (Meyer et al., 2014).

Therefore, in relation to distance education, UDL as an inclusive practice is meant to reduce barriers to accessibility by proactively considering potential impediments to teach (Ann Dell, et al., 2015). Literature indicates that the above discussed principles of UDL emphasize enhancing inclusiveness and equal access for all students in higher education institutions (Ann Dell et al., 2015). Therefore, UDL emphasizes the importance of understanding disabilities from a social contextual perspective including race, gender, ethnicity or socio-economic status that should be taken into consideration (Burgstahler & Cory, 2008). This indicates that the UDL as an inclusive practice does not associate disability with the individual but puts more emphasis on understanding the social environment factors.

Therefore, from the above explanations, UDL assists in reducing barriers that individuals with disabilities experience when the design of a product or environment is considered to begin with rather than waiting to remove barriers as they occur through individualized accommodations. Moreover, the principles with UDL promote usability and accessibility of learning for both students with and without disabilities in the higher learning institutions. UDL also provides detailed checkpoints for designing curricula that enable all learners to actively engage, feel included, and learn enthusiastically with peers in both online and physical classrooms (Griful-Freixenet et al., 2021). Thus, UDL is seen to promote inclusive education in the mode of distance learning.

### **Use of OpenSTEM Labs**

Previous studies also indicate that there is the use of OpenSTEM Labs to enhance learning among learners in inclusive environments. The Labs consist of a suite of tools that are used extensively across the colleges and universities. Thus, this provide students with access to laboratory work every time using a sophisticated range of interfaces to archives of real data and to robotic apparatus (Kolb et al., 2018). Moreover, Brodeur et al., (2015) argue that the access to real instruments allows learners to plan experiments, make mistakes and try again, and collect real data, providing a more authentic experience and an alternative for those unable to access traditional laboratories.

Although consideration of technological accessibility is made during their development, individual students' needs, often identified at the time of first use, can result in requests for alternatives or adjustments that can take time to put in place. This risks some students being disadvantaged, leading to a poor experience of online practical work. The 'practical preview' is an online workshop in which disabled students are introduced to the range of microscopy tools that they might encounter during their STEM qualification. In addition, Richardson, et al., (2019) reiterate that OpenSTEM Labs' helps in the teaching through the use of real remote instrumentation, streaming observations of real experiments and live, interactive, online broadcasts from the field and the laboratory. Moreover, Lambert (2018) reiterate that when students and faculty are invited to participate in the practices of remixing and revising content, they can make the materials more representative and inclusive of a wide variety of people and perspectives, promoting representational justice.

### **Inclusive Group Work Activities**

Literature also indicates that inclusive group activities has been adopted by education institutions to enhance learning in distance education mode. According to Pearson, et al., (2019), inclusive group work practices include aspects such as collaborative practical activities, shared presentations, data collection activities or debates. Moreover, in distance learning contexts, education institutions also engage in students having one-to-one with a tutor or support person, accessing example data or using versions of outputs from previous collaborative tasks, none of which replicate an authentic group work experience.

This involves creating tools and guidance to enable academics to create and lead inclusive group work activities, and to consider what types of reasonable adjustments may be appropriate. Furthermore, it aims to develop a guide for all students to help them think about what it means to work effectively in a diverse group (Pearson, et al., 2019). Previous study by Pearson, et al., (2019) indicate that students emphasized the importance of providing detailed information about group activities in advance of the course start date, including information about dates and duration. In contrast, staff raised issues around design, timings, and the role of group members and the importance of making group work activities 'authentic'. (Pearson, et al., 2019). Moreover, McPherson, et al., (2019) argue that group work approaches that consider diversity and promote equitable participation by all students, enhance the culture of the learning environment and are more likely to lead to productive group interactions.

### **Diverse Accommodations**

Literature also indicates that another inclusive practice that has been adopted in distance education is diverse accommodations. This refers to the alterations made to the delivery of instruction or testing, while keeping the essential content the same. Moreover, accommodations are designed to adjust the task requirements for a student in some way, without directly altering the student's skill levels. According to Valverde et al., (2011) diverse accommodations involve a fundamental alteration in the nature of the instructional activity which is equally effective for the student to grasp matter. Barnard-Brak et al., (2010) reiterate that the role of self-advocate is new to students in higher education institutions with disabilities who have had accommodations provided and their parents as advocates prior to enrolling for further studies.

When students with disabilities do approach faculty for accommodations, they discover that not all faculty understand their disability nor know the appropriate accommodations to meet the needs presented by the disability. Similarly, Gokool-Baurhoo and Asghar (2019) found that more than half of students with disabilities reported not being properly accommodated, and this was more likely to be reported by students who experienced new challenges related to online learning. In addition, Scanlon and Baker (2012), argue that the comprehensive instructional accommodations model contributes to broadening the profession's thinking about what it means to accommodate students. A study by Denhart (2008) reported that, when students with disabilities request accommodations, they are often granted. Despite these accommodations, students with disabilities oftentimes feel that they experience a heavier workload and put in longer hours than their peers who are non-disabled. Moreover, Phillips et al., (2012) reported that the teaching staff at universities made accommodations for students with verified disabilities and only few of them reported experience with making online accommodations for students who stated they had disabilities. Therefore, due to the limited experience of the faculty in making online accommodations, the majority of them were unsure whether they had the knowledge, technology, and support to handle online accommodations, yet making appropriate accommodations for students was important to them.

In another study, Valverde et al., (2011) argue that modifications to the curriculum, materials or resources used in the course can also improve accessibility of distance learning mode. This process transforms curriculum, materials and or resources to a form which allows for their easy use by learners with disabilities. This finding agrees with Inclusive Pedagogical Model assertions by McLoughlin in (2007), which emphasizes the internationalization of learning resources based on a constructivist approach, to provide a degree of flexibility and plurality to the learning situation.

### **Inclusive Curriculum Delivery**

One of the inclusive practices that has been adopted by institutions to enhance long distance learning is the use of inclusive curriculum delivery. Research indicates that the initiatives towards enhancing practices include the implementation of professional development programs and the development of instruments that aim to measure the degree of inclusion evident in teachers' practice and reflection for long distance learning. In support of this mode of delivery, Lee, et al., (2014) reiterate that the opportunities to learn about others through interaction and to practice respectful and reflective communication build enhanced intercultural learning. In as much as this is expected to be enhanced in the learning institutions offering distance learning education, there are still challenges in establishing that shared understanding for this to be achieved effectively. In agreement with this assertion, Madriaga et al., (2010) argue that students both with and without disabilities experienced parallel barriers to group work, and that bringing people together in intercultural groups as a strategy did not in itself increase tolerance and collaboration. In addition, a research by Hockings (2010), argues that trust, bonding, and an inclusive learning dynamic cannot be created and nurtured simply by placing people together. On the bases of the arguments above, it can be concluded that developing inclusive group work is a multidimensional process, and participating individuals require an understanding and acceptance of factors ranging from why they are in the group to how the group will function and how they as individuals can be respected and included in the learning process. Therefore, in as much as institutions have policies and some have adopted inclusive curriculum delivery for distance learning education, very little has been achieved in the actualization of the policies that are meant to guide the inclusive instruction practices.

### **Inclusive Assessment Practices**

Previous research also indicates that one of the inclusive practices in distance education is inclusive assessment. Assessment is the fundamental way that we measure students' understanding and progress; it is only through demonstrating knowledge against the set criteria and learning outcomes that students can pass assessments and earn credits toward completion of their degree. According to Kasch et al., (2021), in distance education, and for students with disabilities for whom access may be increasingly challenged, it is fundamental that tutors make the most of feedback offering formative opportunities, ensuring students are assessed on the task, and given clear grading criteria.

Moreover, Johnson and Cooke (2016) highlighted that for distance learners, employing a range of feedback formats may best meet the needs of all students, with opportunity for engagement with a variety of technologies. Moreover, Gibson, et al., (2022) reiterate that there are three key requirements in promoting student potential, including purposeful and accessible feedback, online group work opportunities, and finally, student agency over assessment format. Another study by Kumar and Wideman, (2014) argue that the emphasis on flexibility and on students working with faculty to shape their distinctive assessment paths also underscores the important role of students as partners in inclusive learning communities. In addition, Ashworth, et al., (2010) reiterate that even faculty who value inclusion struggle to reconcile their desire to teach inclusively with their existing standards and practices. Similarly, Hockings (2010) raised important challenges in regard to inclusive assessment, that the methods introduce barriers to a wide range of students. Moreover, Madriaga et al., (2010) reiterate that disabled and non-disabled students experience similar assessment barriers. Similarly, Butcher, et al., (2010) add that conventional higher education assessment methods disadvantage academically weak students. Moreover, there is great need for holistic systems to be established for the improvement of assessment practices and the support of students completing assessments. Moreover, Brandt (2011) study in Norway concluded that while inclusive policy has significantly influenced students with special needs, such attempts have to be coordinated and constant support should be provided to students within institutions. Similarly, Mutanga and Walker (2015) attempted to understand productive approaches to inclusive higher education policy, suggesting that regardless of policy interventions, students with special needs continue to experience various barriers to higher education. In addition, other studies suggest the need for a tailored inclusive policy framework to guide higher education institutions during their support of students with special needs. In contrast, Madriaga et al., (2010) frame inclusive teaching and assessment explicitly as a marker of quality, extending the notion articulated by advocates of universal design that inclusive assessment practices are effective for all students. This developing tension between competing discursive formations of inclusion raises the hopeful possibility that longstanding concerns about accessibility and academic standards might be beginning to shift.

### **Technology Inclusion**

Most educational institutions have made strides by having technology inclusion to enhance online learning for learners with disabilities. The incorporation of technology in the learning and teaching of students living with disabilities may result in creating an environment of collaboration, communication and support in and beyond their classes (Awidi et al., 2019). Moreover, Dikumar (2018) asserts that technology increases the independence of students living with disabilities, freeing them from the continuous need for uninterrupted teacher involvement. Consequently, students have a choice regarding the rapidity of learning that is suitable for them that may lead to more tailored learning. In addition, there is need to instruct all students through developing flexible classroom materials, using various technology tools, and varying the delivery of information or instruction.

It seems that it is required from higher education institutions to deliberately implement, “an integration of high quality, synchronous, in-person learning environments with online technologies to enable students to more rapidly build skills and knowledge asynchronously. Therefore, adaptive technologies is made up of rehabilitative, assistive and adaptive technologies, as well as associated services, which are explicitly made or modified to serve as practical support for students living with disabilities (Chukwuemeka & Samaila, 2020). In another research, Beelen and Jones (2015) argue that the availability of assistive technology like iPods, iPads and computers may be referred to as an internationalization at-home activity that supports the unfolding of international perspectives in the curriculum for students living with disabilities. Wallace, (2018) add that, assistive technology helps students living with disabilities’ learning processes become easier, whilst making their collaborative experiences more enjoyable and transformative. In addition, current research by Saladino et al., (2020) reiterate that teachers use digital technologies daily, which helps them improve the instruction, motivation, and inclusion process for all their students. They also help students with special educational needs to acquire new knowledge, improve their social interaction, and obtain new communicative experiences, improving the motivation, adaptation, and inclusion of students with disabilities.

### **Personalization**

Previous studies also indicate that another inclusive practice in distance education is personalization. Literature indicates that personalization is a component of culturally responsive and emotionally supportive instruction in online learning is personalization, which allows for individualization of the teaching environment through specialized instruction and tools which allow the learner to interact with the text in a connected manner. Personalization in all learning environments in social-constructivist frames means that students also exercise agency and are encouraged to make independent choices about how they will meet their academic goals (Kearney, et al., 2012). Therefore, it can be argued that mobile devices, such as smartphones, tablets, and laptops allow students to apply the concept of personalization to their own learning experience. This allows more flexibility that encourages autonomous learning for students to achieve a certain degree of independent exploration that extends beyond synchronous learning formats. Furthermore, mobile technologies enable students to choose what to study within a topic as well as how and when to investigate and explore community-based learning opportunities.

In support of the above assertions, Romero et al., (2019) pointed out that students use technology to plan, organize, and facilitate learning, and that personalized learning model can develop to provide learners with a more satisfying and engaging learning experience considering learners’ various needs and aspirations. In agreement, Han et al., (2021) reiterate that using learning analytics dashboards facilitates collaborative argumentation learning activity in a university, which has been beneficial in the learning process.

Moreover, Panjaburee et al., (2022) reported that the elements in a personalized system that allow students to fulfill the ability of voice and choice regarding study setting, learning goals, learning path, and learning preferences corresponding to their conceptual learning problems are essential for students to monitor and reflect on their learning progression adapt accordingly. The integration of analytic elements could affect the students' perceptions of the personalized learning mechanism, leading to a continuance of the use of the system. This finding concurs with independence and autonomy theory by Wedemeyer (Simonson, 2003), which argues the system should be capable of operation any place where there are students or even only one student—whether or not there are teachers at the same place at the same time.

### **Collaboration**

One other inclusive practice in distance learning mode is collaboration. Collaboration as a voluntary social interaction process in which two or more professionals learn from each other by exchanging expertise, plan and identify aims together and distribute roles equally to generate creative solutions to problems, and in the process share responsibility for the outcomes of the collaborative process (Engelbrecht & Hay, 2018). Moreover, Mellin and Weist (2011) reiterate that there are five models of collaboration that teachers may become involved in, namely; intra-organization collaboration, interagency collaboration, inter-professional collaboration, family-centered collaboration, and community collaboration. Thus, collaboration involves the active participation of the instructor during whole class, small group, and even individual sessions (Lei et al., 2010). As such, collaboration guides educators to provide support to students with disabilities across all learning environments and is particularly important in ensuring that teacher-student interactions incorporate empathy, connection, and quality participation for all students in e-learning environments (McLeskey et al., 2017). Therefore, in online or distance learning modes, collaboration requires active participation from the teacher and all students to establish a connected learning community (Kearney, et al., 2012). In distance learning mode, collaboration can occur in synchronous discussions, asynchronous discussion posts, or cooperative learning groups meeting in a virtual environment. In all of these collaborations, the teacher encourages collaboration and meaning-making by adapting the specifics of the virtual environment and the presentation of content so that the distance community of learners can interact together, discuss, and share. Similarly, Gullo, (2021) argue that the collaborative quality and perceived connectedness of teacher student interactions are key factors in the engagement and success of all students, but most especially students with special education needs. On the bases of the reviewed studies above, it is evident that collaboration between students and instructors in distance education is one of the most powerful teaching tools available. This key factor is turning out to be especially important in virtual learning environments as well.

This finding agrees with the Collaborative Learning theory of Vygotsky's (1978) which argues that learners engage in collaborative experiences, they are afforded opportunities to work with others in broadening their learning experience whilst sharing knowledge, exchanging ideas and solving problems.

## **Conclusion**

This paper concludes that there are inclusive practices that have been adopted by instructors in the distance learning education mode. Literature indicates that some instructors adopt UDL as inclusive practice because it provides detailed checkpoints for designing curricula that enable all learners to actively engage, feel included, and learn enthusiastically with peers in both online and physical classrooms. However, only few instructors manage to adopt UDL as an inclusive practice. In addition, the use of OpenSTEM Labs' has been adopted but there are instructors who do not have the knowledge to implement this. This is because even though consideration of technological accessibility is made during their development, individual students' needs, often identified at the time of first use, can result in requests for alternatives or adjustments that can take time to put in place. This risks some students being disadvantaged, leading to a poor experience of online practical work. Moreover, most instructors use inclusive group work activities as an inclusive practice but there are issues around design, timings, and the role of group members and the importance of making group work activities authentic. In addition, diverse accommodations has been practiced by most instructors but due to the limited experience of the faculty, the majority of them are unsure whether they had the knowledge, technology, and support to handle online accommodations, yet making appropriate accommodations for students was important to them. In another inclusive practice, it also concluded that developing inclusive group work is a multidimensional process, and participating individuals require an understanding and acceptance of factors ranging from why they are in the group to how the group will function and how they as individuals can be respected and included in the learning process. Finally, literature also indicates that collaboration has been widely adopted as an inclusive practice and it is believed that this is one of the most powerful teaching tools available.

## **Implications and Recommendation**

On the bases of the conclusion of the paper, it is evident that there are various inclusive practices that have been adopted, there is lack of uniformity in the implementation in the distance learning modes. This is due to varied contextual challenges that are experienced in various institutions. However, it remains important to note that inclusive practices in distance learning modes has somehow proved to be effective in taking care of the needs of learners with disability. The findings of reviewed literature in this paper have implications to instructors and management of higher education institutions. The paper recommends that instructors should adopt varied inclusive practices that are relevant to accommodate learners with disability in the distance learning modes. Moreover, the management of institutions should consider re-training instructors on adoption of technology and inclusive practices in the distance learning modes. In addition, the instructors should adopt cognitive models and learning theories that favour inclusiveness and to recognize the plurality and cultural diversity of learning contexts and students.

Finally, the instructors should design learning and evaluation activities that are consistent with culturally inclusive pedagogical goals and approaches.

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