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Digital tools used by teachers for assessing learners with Attention-Deficit/Hyperactivity Disorder (ADHD): Implications for career transitioning

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Abstract---Research has shown that the use of digital assessment tools enhances learners' engagement in their learning process outside the school environment. Unfortunately, the use of digital tools is contemptible in low-and-middle income countries. In this study, the researcher examined the digital tools used by teachers for assessing learners with Attention-Deficit/Hyperactivity Disorder (ADHD). The study employs a qualitative, phenomenological approach. Using a purposive sampling procedure, six university teachers from three geographical regions in southern Nigeria participated in the study. The use of digital assessment tools was assessed through a structured interview. The responses of the participants were analysed thematically. The findings identified some of the digital assessment tools used by teachers as well as the associated challenges. Specifically, the study established that Google form, Socrative, and Kahoot form were the digital assessment tools mostly used by the teachers in assessing learners with ADHD. The study also revealed that the major challenges of using these digital tools include lack of device, network glitches, poor power supply and high cost of data. The implications of the study were highlighted and recommendations were made.

Keywords---ADHD, Career Transitioning, Digital Tools, Learners, Teachers.

Introduction

Attention-deficit/hyperactivity disorder (ADHD) is one of the most common neurodevelopmental disorders of most students in higher education institutions. ADHD is described as a disorder that begins in the early stage of learning,

characterised by a persistent inability to concentrate, pay attention to specific tasks, or regulate behaviour (Crouse, 2010). This disorder is characterized by displays of impulsivity, inattention, and hyperactivity that directly interfere with a learner's functioning and are unsuitable for a learner's intellectual development (CDC, 2021; CHADD, 2017). While ADHD is also the most often diagnosed neurodevelopmental disorder among school-age children it may also occur in adults (American Academy of Child & Adolescent Psychiatry, 2013). Around 7.2% of learners worldwide suffer from ADHD (APA, 2013) and has been found to be highly heritable and may persist into adulthood (Ayano, Yohannes, & Abraha, 2022). It has been revealed that learners who were diagnosed with ADHD at an early age have persistent symptoms that affect many aspects of their lives as they age (Zayats & Neale, 2019). ADHD learners are at a higher risk of developing social problems and displaying more antisocial and hostile behaviour.

In the learning environment, researchers have revealed that learners with ADHD are associated with depression, anxiety, substance abuse, and poor academic performance (Uchida, Spencer, Faraone, & Biederman, 2018; Kuzmickaitė, Leskauskas, &Gylytė, 2019). ADHD is characterized by trouble paying attention, impulse control, and activity level modulation, which results in severe impairments in everyday functioning. Among these are problems with school functioning and relationships with parents, teachers, and peers. According to Fiedorowicz et al. (2001), learners suffering from ADHD can have difficulties in school, at work, and in friendships, and they often have difficulties in adulthood, manifest unusual impatience, restlessness, and boredom associated with learning tasks. The prevalence of attention deficit is high among young learners. According to Ford (2020), young learners between the ages of 17-19, and may be early or late within these age ranges, frequently experience the transition from secondary school to college, university, and other higher education about the same time.

The transitional manifestation of learners with attention deficit includes consistent late arrival at learning venue and appointments, loss of learning materials, exhibit inability to organise their priorities and find it difficult to maintain friendship and other relationships (Crouse, 2010). Young learners that suffer from attention deficit disorder are at a heightened risk of lower educational achievement compared with their peers without the disorder (Jangmo, et al. 2021). These characteristics of ADHD could destabilise the young learner's potential to cope with transitioning to higher education as well as career transitioning at adult age.

In order to curb the negative influence of these kinds of abnormal behaviours among learners for effective career transitioning, there is a need to examine the digital tools used for assessing learners with ADHD. This is because assessment is a critical component of instruction. Assessments are considered to be reflective of learning, skills and competencies acquired by learners during their lifetime, and these results can affect their career transition at a later date. Curriculum implementers have made use of digital tools in order to maximize the use of assessment in the learning process. One of the common digital tools adopted by teachers is online assessment. Online assessment is one of the technological-based tools for assessing learners in an online setting. Online assessment as described by Iskandar, Ganesan, Shafiqah, Eleena, and Maulana (2021) is a tool

for gauging the progress and achievement of learners at every stage of the educational process. Based on the definition by Iskandar et al., learners with symptoms of ADHD could be further assessed and engaged outside their normal school environment for effective learning processes. Teachers can fully assess learners online using digital assessment tools such as Socrative, Google Form. Teachers can also assess the learners online by conducting online tests, quizzes, exams, presentations or simply requesting online submission of assignments, reports, essays, and reflections. Alternatively, Weleschuk, Dyjur, and Kelly (2019) view online assessments as means of evaluating students, providing feedback, and striving to push learners further in their learning process.

Socrative, an online students' response system digital assessment tool, is a free and user-friendly tool that enables learners to respond to questions posed to them over the Internet using a handheld device in addition to providing opportunities for formative assessment (Roman, 2012). Roman emphasized that teachers design assessment activities and control the flow of questions, which learners interact with through their devices in real-time. Using this free educational resource, which displays responses in real-time, encourages students to engage in the lesson and facilitates instant assessment, thus granting the teacher the opportunity to manage the class accordingly by enacting corrective measures which enhance learning (Wang, 2015; Balta, Perera-Rodríguez, & Hervás-Gómez, 2018; Balta, & Tzafilkou, 2019; Heflin, Shewmaker, & Nguyen, 2017). Kahoot is another digital formative assessment tool that is game-based learning, which has been widely used in education (Ismail, 2019). Ismail (2019) further emphasized that Kahoot provides teachers with various opportunities to create game-based assessment categories such as quizzes, surveys, jumbles and discussions in which the learners compete against one another.

Polleverywhere is a cloud computing platform that has similar capabilities to those of Socrative and Kahoot, while permitting students to access it via their own devices. Teachers can use Polleverywhere to ask open-ended or multiple-choice questions to their students, and they can respond using mobile devices (text messages and Twitter), tablets, or laptop computers (Kappers, & Cutler, 2015). Similarly, Mentimeter is an online assessment platform that gives teachers the opportunity to get comments from learners in an anonymous way (Musliha, & Purnawarman, 2020). This assessment software is flexible which can sustain the learner’s engagement during formative assessment since it allows learners to express their opinions in both closed and open-ended questions. Google Form is a digital tool developed by Google. According to Sari et al (2020), Google Form is a web-based assessment tool designed to assess and engage learners in a virtual classroom. These digital tools assessment tools have been shown to be useful in determining a learner's learning experience. However, there is need to examine the extent teachers utilise these digital tools for effective assessment of learners with ADHD.

Literature Review

Several studies have been conducted across the globe with respect to the predominant of learners with ADHD. Researchers (Johann, Bobbe, Laufkotte, Lange, & Wodarz, 2004; Lee, Humphreys, Flory, Liu, & Glass, 2011; Johnston, &

Mash, 2001) have revealed that ADHD is predominant among 30-50% of learners with psychiatric problems such as drug abuse. Further research by Harpin (2005) suggests that 3.8% of learners suffer from ADHD, characterized by low provocation thresholds, sudden and intense anger, instabilities in interpersonal relationships, occupational and educational frustration, and alcohol abuse (Kessler, et al. 2006).

These empirical findings have shown that learners diagnosed with ADHD abound across learning institutions. Hence, their career transition could be affected if adequate measures and treatments are not employed at the right time. One of the measures to limit the adverse effects of ADHD on the career transition of learners is the utilization of digital assessment tools to engage these learners outside the classroom. Studies have shown the efficacies of these selected digital tools (Socrative, Kahoot, pool everywhere, mentimeter, and Google Form) on instructional delivery. Studies have been carried out by Turan and Meral (2018) and Kim (2019) on the effectiveness and attitude of students towards Socrative and Kahoot in English as a foreign language class. The findings showed that these digital assessment tools were effective and learners had positive perceptions towards Socrative and Kahoot. However, Kim (2019) revealed that learners who were exposed to Kahoot exhibited greater interest and engagement in grammar learning than learners who were exposed to Socrative. In spite of that, Socrative was deemed beneficial because of its immediate feedback and anonymity (Kim, 2019). A study carried out by Waluyo (2018) on the usefulness of Socrative digital formative language assessment tool revealed that Socrative is a useful tool for assessing learners' progress. Waluyo noted that the immediate feedback characteristics of Socrative benefited the learners because they were able to identify their strengths and weaknesses, learn from their test results, and improve as a consequence.

With respect to the effectiveness of the Polleverywhere digital assessment tool, Kappers, and Cutler (2015) found that many learners indicated that they appreciated Polleverywhere and were more engaged when Polleverywhere is used for assessment. The learners pointed out that the advantage of using Polleverywhere is that it provides an avenue to ask open ended questions. Furthermore, concerning the utilization of Mentimeter digital assessment tool, Musliha and Purnawarman (2020) investigated the use of Mentimeter for eliciting students' responses in formative assessment practice and found that the use of Mentimeter in eliciting learners' responses in formative assessment led to reduced learners' fear of responding to questions. Mentimeter, on the other hand, provides an unlimited number of participants and a wide variety of questions formats. It is believed that Mentimeter is more likely to elicit students' responses when used as a formative assessment technique because of the wide range of question formats and the unlimited number of participants. Musliha and Purnawarman further revealed that Mentimeter offers a lot of question types and limitless number of learners. In light of the wide range of question formats and the large number of learners, it is believed that Mentimeter has greater capability in prompting learners' responses during formative assessment. Vallely and Gibson (2018) investigated the usefulness of Mentimeter in engagement of learners using their devices and found that the merit of Mentimeter as digital tool is its ability to create a friendly atmosphere during interaction with learners since

learners are able to contribute anonymously without feeling judged, and this enables teachers to develop and shape learning material and assessment. However, the shortcomings of Mentimeter as revealed by Vallely and Gibson (2018) show that learners could not edit or retrieve their responses once they have been submitted.

Additionally, empirical studies have revealed the merit of using Google Form as a digital tool for assessment of learners. Jazil et al (2019) investigated what junior high school students think about online assignments using Google Form and the result shows that learners have positive attitudes towards the utilization of Google Form as a grammar assessment tool. In agreement with the finding, Yunita (2019) revealed that 80% of teachers think Google Form application facilitates assessments while 20% think they are difficult to use. The study further found that 100% of teachers agreed that Google Form is advantageous for assessing students' proficiency in subjects effectively. In contrary, Rinaldi, Wiyaka, and Prastikawati(2022) found no significant difference in grammar mastery between learners exposed to using Google Form as online assessment and those taught with normal classroom assessment.

These studies indicate that these selected digital tools are effective when utilized in teaching and learning. The findings of these previous studies have affirmed that these digital tools have varieties of formative assessment techniques and have the potential to engage learners more than normal classroom assessment. Therefore, the use of these digital tools could be effective on learners with ADHD since they could engage them and enhance their success in transitioning to a new career. Although there is controversy regarding its ease of use, it is necessary to examine digital tools used by teachers to assess learners with ADHD.

Theoretical Framework

Transitioning denotes the process of simultaneously partially leaving one stage of life style such as role or identity while at the same time entering another, without being fully a part (Levison, 1981). A transition is the process of changing or upgrading a lifestyle, such as upgrading careers. Louis (1980) defines career transition as the time during which an individual student changes their orientation or their role; therefore, transition refers to a period of change. The study was based on Schlossberg's transition theory. This theory of transition sees transition as any circumstance or non-circumstance that results in changed relationships, routines, assumptions, and roles (Schlossberg, (1981). The tenet of this theory emphasized the importance of perception in transition between an event or non-event. This theory categorised transition into three types which include anticipated, unanticipated, and non-event transition. Anticipated transitions are things like graduating from school, unanticipated transition is sudden happenings like disease outbreak or death; while non-events are transitions that are expected but do not occur. Schlossberg (1981) used three key words to describe learners' transition in high school which include moving in, moving through, and moving out. There was a need to develop a theory that would facilitate an understanding of individuals in transition and aid them in connecting to the assistance they require to cope with the "ordinary and extraordinary process of living" (Evans, Forney, Guido, Patton, & Renn, 2010). In

this second stage of career transitioning for learners with ADHD, the use of digital assessment tools is very necessary for effective engagement of learners in learning activities. This is because the stage Schlossberg called "moving through" is the time when learners actively engage in learning experiences that help them sharpen their knowledge and conduct themselves in a manner that prepares them for successful career transitions after school. Therefore, digital tools aid in refocusing learners with ADHD on the main objective of the school programme with respect to skill acquisition and career transition.

Method

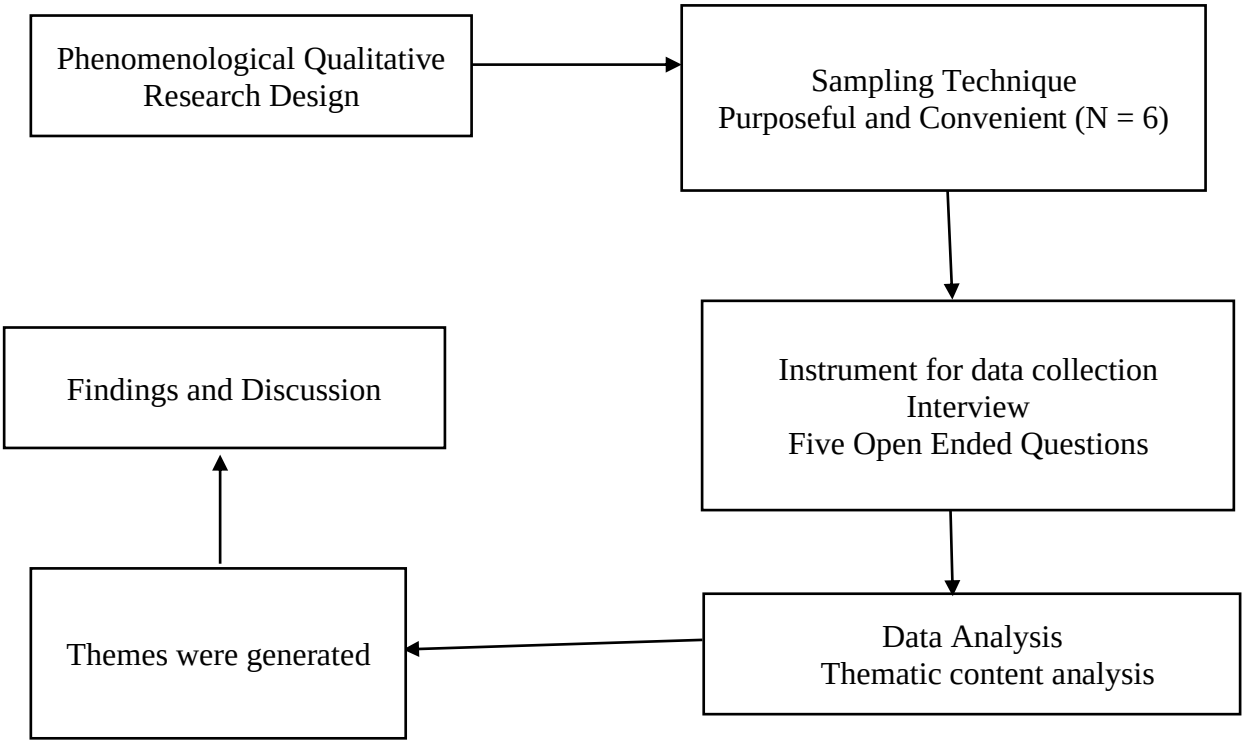
The study used qualitative research design, specifically an interpretative phenomenological research paradigm. This is because the research is based on personal experience and the viewpoints of teachers. In the present study, the research design was most appropriate since it looked at teachers' use of digital tools for assessing learners with ADHD. Twenty special educators were invited for the study. The condition for being selected was that the participants must have used digital tools for assessment of students with ADHD. At the end, purposeful sampling was used to select 6 participants (2 males and 4 females) for the study. Nworgu (2015) contends that this kind of sampling allows the researcher to interview the researchers who are accessible. Two participants were drawn each from south-west, south-east and south-south of Nigeria respectively. Hence, the study was conducted in Southern Nigeria. Additionally, convenience was equally used because the selected participants were interviewed at their own free time.

The method of data collection was an interview. Two open ended questions were posed to the participants. Preliminary questions were administered to the participants which include; 1) How many digital assessment tools do you know? 2) Which of these digital tools (Socrative, Kahoot, pool everywhere, Mentimeter, and Google Form) do you use to elicit and engage your learners. 3) Which of these digital tools are user-friendly to learners? 4) To what extent do you use these digital tools? 5) Describe the challenges you encounter when using these digital tools. Before the interview started, the researcher informed the participants that the interview section would be recorded. With the approval of all the participants, the interview sections were recorded. The participants selected in this study were university lecturers in special education units. The researcher was free with the participants in order to build conversation and explore the information required to elucidate the research.

The researcher adopted thematic content analysis. The researcher clustered codes and forms consistent by identifying patterns across the codes and reflected the underlying meaning from the personal interviews. This was done to ensure that most critical matters, likenesses, and variations among participants. The process and guideline for establishing trustworthiness as stated by Nowel, Norris, and Moules (2017) were followed for thematic data analysis. In phase 1 researcher gets familiarised with the data; in phase 2, codes were generated; finding themes were generated in phase 3; in phase 4 themes were reviewed; 5 theme definition and assigning of names; 6 generating reports. These major phases as stipulated by Nowell et al. (2017) assisted the researcher to go through the dataset

thoroughly, review the group's data, generate code, search for themes, review the themes, define, name themes, and produce the report. Figure 1 illustrates the structure of the study.

Figure 1: Framework



Ethical Considerations

The ethical committee of the Faculty of Education, University of Nigeria Nsukka approved this study. The selected participants filled in the consent form before the interview. On the consent form, the purpose of the study, method, and advantages of selecting participants were clearly outlined. They were also assured that their privacy and confidentiality would be protected.

Findings and Discussion

The following themes were presented to address the use of digital tools by teachers for assessing learners with ADHD.

1) Teachers mostly use Google form, Socrative, and Kahoot as digital tools for assessing learners with ADHD.

2) Lack of devices, power supply, and data costs are major challenges of using digital tools for assessing learners with ADHD.

Teachers mostly use Google Form, Socrative, and Kahoot as digital tools for assessing learners with ADHD

I interviewed six selected participants about the digital tools (Socrative, Kahoot, pool everywhere, mentimeter, and Google Form) they use to elicit and engage their learners. The participants identified Google Form, Socrative and Kahoot as dominant digital tools they employ to elicit information from learners with ADHD. Their reasons behind the utilization of these tools were based on the friendly nature of the interface and learners' feedback on their ease of use. The two participants revealed that they prefer Google form as a digital assessment tool due to its friendly interface and easiness to manipulate. Google form as a digital assessment tool enables teachers to develop a variety of engaging tasks by querying learners using different formats such as objectives, short answer among others. Engaging learners with ADHD could assist them to acquire basic knowledge for easy career transition in the later stage of life.

"I normally use Google Form to administer online tests because I understand the interface and I can use a variety of test formats it provides to test my learners….," (P1).

In a similar way, another participant says that; "…..my learners actively participate in online assessment when I use the Google form platform. They admitted that the platform is more user-friendly and can be assessed easily" (P2).

The findings of this study are consistent with those of previous studies. Jazil et al (2019) found that the usage of Google form by teachers facilitates assessment and is also advantageous for assessing students' proficiency in subjects effectively. Google form assist learners to attain learning objectives that would aid easy acquisition of skill for career transition in future in terms of either being gainfully employed in public and private sectors, starting a business or sustaining a business unit among others.

However, some other participants preferred Kahoot digital assessment tool over Google form due to it gamified based assessment features. As a result, the participants reported that learners find it fun taking their assessment via Kahoot platform because of its unique features combination of game and variety of assessment techniques.

"*For me Kahoot is the most suitable digital assessment tool specifically for learners with attention deficit because it is game based assessment tools….It has the ability to capture the attention of the learners because assessment is presented in form of game for learners" (P6).*

In addition, participant (5) stated that; "my students tell me that the test was like fun to them…..that the way each question was presented was interesting and they would like to participate in such tests in the future. Even though "poll every" is okay…., I prefer Kahoot for my students".

The finding of this study is in conformity with the finding of Şad and Özer (2019) who pointed out that participants were highly positive about utilization of Kahoot digital exam platform as a game based formative assessment tool from both attitudinal and pedagogical aspects. Kahoot digital assessment tool is useful in engaging learners with ADHD for successful career transitioning because it would provide them with engagement activities through which they will acquire the required skills for their future careers. The finding of this study equally supported the finding of Cetin (2018) that reported that students see Kahoot as an enjoyable, informative, useful, perfect and fine online assessment platform. Also, in a comparative study of effectiveness of Kahoot and Socrative, Kim (2019) further revealed that learners who were exposed to Kahoot exhibited more interest and engagement in learning grammar than learners exposed to Socrative. Kahoot is a game-based assessment tool that can instil the ability to engage and focus among learners as well as the drive to succeed in life. In addition, students who are exposed to Kahoot as an assessment technique will learn how to concentrate on achieving the stipulated goal, which is a necessity for career transition. Entrepreneurship, professional workers in the private sector, among others, requires these kinds of skills.

Some other participants recognised the unique features of Polleverywhere, Mentimeter, Kahoot among others, however, they preferred Socrative digital assessment tools. *"I prefer Socrative's digital assessment tool because it permits me to assess my students in real time and make on-the-spot adjustments with the goal of enhancing learning. It also enables me to monitor my students' responses and the responses are displayed sequentially, (P3).* A participant (P4) stated that she preferred Socrative over other digital assessment tools because it allows her to question her students using different question types such as short answer, true/false, objectives and the insertion of images. *Socrative platform enables me to add instant feedback mode as additional explanation when my students respond to item question irrespective of right or wrong answer"*(P4). This could be attributed to the features of Socrative digital assessment tools with respect to its interactive and instance feedback. The finding of this study is in line with the finding of Kim (2019) which revealed that the Socrative assessment tool is advantageous because of the well-perceived features of its instant feedback and anonymity. In addition, the finding of this study affirmed the finding of Waluyo (2018) which revealed that Socrative is a useful tool for assessing learners' progress as it allows them to detect their weaknesses and strengths, learn from their tests, and consequently improve. This denotes that the Socrative digital assessment tool has the potential to engage learners with ADHD for successful career transition. Socrative technique can provide learners with ADHD with reflective thinking skills which will enable them to review their weaknesses and make meaningful progress. Having this skill is imperative for career transitioning since it will be able to refocus learners with ADHD on the purpose of the learning activity after they have performed below expectations. Transition is characterised by success and failure, hence, learners that have imbibed the skill of self-assessment would also strive for better achievement as well as aim at a better profession after school.

Lack of devices, power supply, and data costs are major challenges of using digital tools for assessing learners with ADHD

The participants revealed that irrespective of the significant roles these digital assessment tools play, they encounter different challenges which range from environmental to financial and network glitches. Participant (3) stated that one of the problems that limits her from using digital assessment tools like Kahoot and Google form is inadequate power supply and the cost of data for assessing the internet. "*My main problem is frequent power outages that have become a tradition in our environment as well as the high cost of network data….. In addition, my students complain of these problems because I record low attendance online and the absentees always give reason for their absence, such as lack of power or lack of access to the internet, while others complain of errors in scoring…." (P3).* Participant (2) indicated that she uses only Google form because the interface of Socrative, Kahoot, and Mentimeter does not appear user-friendly to him. *"I would like to explore the numerous advantages of other assessment platforms such as mentimeter, Kahoot and Socrative, however, their interface is quite too complex for me and some of my students", (P2).* "Participant (6) expressed concern that the majority of their students do not have the device to access the online assessment, which has posed a serious challenge to their use of the online assessment. "…….*after spending time creating an interesting online assessment using the Socrative platform, you will discover that only half of the class will respond to the test. Some will either complain about login hitches, or network glitches..," (P6).* Participants 1, 3 and 5 reported that their major challenges with respect to use of the digital assessment tool were the slow network of their institutional wi-fi and the high cost of data from the network provider. *"Our institutional Wi-Fi is often very slow, which makes it difficult to sign-in, (P3); I use my phone to subscribe, but the data costs from the private network are exorbitant, (P5); even though students have expressed their desire to be assessed during digital assessments, some of them complain that they do not have adequate wireless networks in their homes (P1)."*

The challenges associated with utilization of digital assessment tools for teaching students with ADHD such as network glitches and power supply, are environmental factors. This is a common problem in southern Nigeria which affects not only the education sector but other sectors as well thereby hindering immediate and successful career transitioning of individuals. Other problems highlighted by the participants include lack of devices and high data charges. These problems could be attributed to the institutional or education sector, because it is their responsibility to provide wi-fi and computers to facilitate teaching and learning in higher education. Provision of institutional Wi-fi would assist a long way to reduce the amount of money students and teachers spend on data plans.

This study's findings are similar to those of previous researchers (Cetin 2018; Adnyani, Adnyana, &Murniasih; 2020; Maesaroh, et al 2020) who found that the major hindrances to utilizing Kahoot were difficulties in accessing Kahoot website sometimes, internet connection glitches, difficulties in reading the board, problems with selecting answers, and the application's disconnections due to connection timeouts. This finding affirmed the report of Ningsih, and Mulyono

(2019) and Gbasemi and Hashemi (2011) which asserted that the limitations of using ICT in education are financial barriers, lack of availability of computers' hardware and software, lack of support and resources, inadequate knowledge and incompetence in using technology, and constrained to obtain reasonable access to classroom technology. This study is in agreement with the finding of Sari, Iswahyuni, Rejeki, and Sutanto (2020) which revealed that the limitation of Google form is error scoring and internet connection issues which lead to some of the students' inability to submit the form after test. These identified challenges are the primary factors inhibiting the effective use of digital assessment tools to facilitate career transition for learners with ADHD.

This study made a significant contribution to the literature on teachers' use of digital assessment tools for learners with ADHD. The present study is the first of its kind to investigate teachers' use of digital assessment tools with learners with ADHD in a populated area with limited for these learners. The findings of this study provide new insights into the use of digital assessment tools by teachers to engage and refocus learners with ADHD for successful career transitioning. The study also contributed significantly to the body of knowledge by identifying the challenges associated with the use of digital tools for effective transition for learners with ADHD.

Educational Implications and Recommendation

This study found that Google form, Socrative, and Kahoot form were the most digital assessment tools used by teachers in assessing learners with ADHD. This implies that these digital tools are impactful on engaging learners with ADHD for anticipated career transitioning outcomes especially at the moving stage. Digital assessment tools are effective at moving stage of career transitioning because they draw the attention of learners especially those with ADHD towards their learning objectives as well as enhancing their skill acquisition for successful career transitioning. In this study, the lack of devices, network glitches, power supply, and high data costs were identified as the most challenging aspects of using these digital tools. This means that these issues limit the effectiveness of digital assessment tools on learners with ADHD and thus affect their career transition at a later stage in life. In addition, the "moving stage" as identified by Schlossberg transition theory will be adversely affected because it is the base of learners' career transitioning.

Based on the findings of this study and its implications this study recommends that special education teachers should be exposed to other digital assessment tools that have the potential to engage learners with ADHD. This will help engage and refocus learners on their learning objective even when they are not in school environments. Institutions and governments should provide adequate equipment and sustainable energy to facilitate the use of digital assessment tools in assessing learners with ADHD which helps in facilitating their career transitions.

Conclusion

In this study, teachers have identified the digital tools used in assessing learners with ADHD in order to facilitate a successful career transition. Through

phenomenological qualitative research, this study established that Google form, Socrative, and Kahoot form were the digital assessment tools mostly used by the teachers in assessing learners with ADHD. The study also revealed that the major challenges of using these digital tools include lack of device, network glitches, poor power supply and high cost of data. It is imperative to acknowledge that the design of this study and the instrument used have some inherent limitations. The study used purposive sampling in order to choose only teachers who had used digital assessment tools, thereby using a small sample size. Also, the study represented only three universities in southern Nigeria. A mixed method of qualitative and quantitative research is recommended and should broaden the scope of participants.

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