Students Learning Style and the Usage of Digital Libraries in the Implementation of Secondary Schools Curriculum in Nigeria

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ABSTRACT: *The study examined students' learning style and the usage of digital library in the implementation of curriculum of secondary school s in Nigeria. The usage of digital libraries has become increasing important in the implementation of secondary schools curriculum in Nigeria. However, students learning styles have been identified as a critical factor that affects their utilization of digital libraries and thereby constitute a limitation to their learning. This was mainly due to certain challenges which include non sensitization and awareness of teachers and libraries attendants to cater for the learners' peculiar ways of learning, low strength of internet provision in Nigeria, high subscription rate, inadequacy of e-learning resources to support the users the users, inadequate training on digital literacy, low support from educators on incorporating multimedia resources and poor digital literacy. Therefore, if the essential resources are well catered for learners can make use and access the digital libraries very easy to achieve greater learning outcomes which is implementation of secondary schools' curriculum in Nigeria.*

KEYWORDS: learning style, curriculum implementation, libraries, digital libraries and VARK learning theory.

INTRODUCTION

The shift to remote learning has been a world phenomenon with significant implications for educational institutions most especially secondary schools. Learning has been defined as the acquisition of knowledge or skills through study, experience or being taught (Oxford dictionary). Mellssa (2022) explained that learning is the process of gaining new skills, knowledge, understanding and values. Also, Clarizal (2023) viewed learning as an important part of personal development and one of the most rewarding aspect of human life, in that it helps you to understand the world around you.

The essence of learning is basically to acquire knowledge in order to attain ones goals. It is a

way of building an individual to be able to acquire new skills and expand ones knowledge and potentials (Ogunjobi et al. 2021). Many people desire to gain knowledge and have good education in order to be relevant and perform certain duties in the society and also to be able to inspire in order to survive and be self-reliant. This can only happen through learning.Learning is an indispensable tool that nourishes our minds and soothes our souls and so , it is necessary for both personal and professional career as it makes us capable of acquiring knowledge (Trujillo-Jiménez, & Mendoza-Gómez, 2019). Learning is unending and this is where education is connected. Mellssa (2022) also opined that, the future of education lies in integrating continuous learning into our everyday personal and professional lives even more than we already do. In order to achieve effective implementation of the secondary school curriculum in Nigeria and for the students to reach their peak, there is need to engage in extra learning and self study. Brain Tracy (2023) stated that, these people who develop the ability to continuously acquire new and better form of knowledge that they can apply to their work and to their lives will be the movers and shakers in our society for the indefinite future.

Library is a unit in education system that compliments learning. It is a place where information can be retrieved as regards learning. Library is a vital place in enhancing knowledge. It help in broadening the students to improve on knowledge they have acquired and intensify and life development. Library accommodate large amount of information. Binta (2020) stressed that libraries are such a place where one can read to his hearts, contents without disturbances.

Apart from the usage of library the way student access learning is very important in achieving permanent learning. This various ways is being referred to as students learning styles. Learning styles is a preferred way of processing information for learning by an individual students. It can as well be described as different ways by which students process and acquire information in learning. Aldrey Gads (2023) explained that in a learning environment, different people may process information most effectively through their own preferred modes of instruction. Learning style is very important because it enables the learners to focus on learning for better retention. One of the reasons for accessing learning style is to enable the learners to focus on learning and learning styles is a unique way of which learners process new information for behavioral change. It is very important in education as it affects how students engage with and absorb information that leads to learning and invariable good learning outcome.Learning styles can be categorise into various ways such as visual, auditory and kinesthetic, educators are to adapt their teaching methods to accommodate the different learning styles of their learners. In curriculum implementation, learning, comprehension and retention is very important, if learners cannot remember what they have been taught, learning has not occurred.

Categories of Learning Styles

Visual Learning Style: This is the type of learning in which learners prefer to learn through seeing. These catogory of students comprehend more through pictures. Pictures are more enticing in learning. Andrew Schott (2023) said that, many children will benefit from using images to help them understand new concepts. He equally described visual learning as a method in which a learner utilises graphs, charts, maps, and diagrams. In this case the teacher is expected to present learning vividly in pictures of make pictorial representations of the subject matter in order to secure their attention.

Students often remember what they can see so they can easily copy their note, make different paints to make learning very active. Mostly, the visual learning styles may include video clips a long as the learners can visualise the materials. They can as well learn through maps. These categories of students are also called spartial learners. The usual learners can make use of the library effectively because it will allow them to expand their usual way of learning by visiting the reference section, reading and make jotting, update on class notes. This will wipe away any anxiety the students might be nursing which may be an obstacle to learning. It will be more convenient for them to study on their own by reading privately. Library being a quiet place is of more importance and advantages for visual learners because that tend to be more comfortable in a quiet place.

Auditory Learning Styles

Auditory learning is a special way whereby it is most convenient for students to earn effectively by listening. Aldrey Gads (2022) stated that, auditory learners typically learn best through listening and talking often using conversation, music and video clips to interface with information. These categories of students prefer to listen attentively during instruction. Listen to discussion and other class interaction. They can easily remember information processed during learning. They often learn through debate, symposium, repeatedly playing of recorded teaching. Most auditory learners learn by reading aloud for them to listen and comprehend. They also learn through podcasts, active participation, reciting, storytelling for retention. Although, they can easily be distracted in a noisy environment. They are able to make proper comprehension because the more they listen and hear the more the information is retain in their memory. Paying attention to instruction equally help them to understand the concept that is being explained to them. They can on their own form a good class note that will be a guide for revision. Such students equally prefer a quiet environment to learn and assimilate. When they wish to read, they need a quiet place where they can read aloud and make certain jotting for reference.

Kinesthetic Learning Style

This is the type of learning style that involve the physical movement of the learners to

process knowledge and retain information. It requires the learners being involved in physical activity to process and retain new information. in the view of Haskey and Paula (1974), a kinesthetic –tactile learning style requires that you manipulate or touch materials to learn. It is a way of learning by doing which can easily enhance their comprehension of contents that is being presented to them. This type of learning encourages the learners to be very active. With this type of style, the students can discover many things on their own. Also, Psynso (2023) explained that, kinesthetic learning is a learning style in which learning take place by the learner using their body in order to express thought, an idea or an understanding of a particular concept. They learn through creativity, self-discovery, role play and simulations. It is known by learning and by manipulations. They learn better when they are exposed to real world object. They learn through practical. They can read, jot notes, listen and manipulate object. They can be exposed to games, usage of drama to teach or illustrate, repetition of concepts, using questions and answers to engage them in learning.

Kelly Roell (2018) explained that, kinesthetic learners process information best when they are physically engaged during learning process. Above all, it is evident that, students comprehend and learn better when teachers put their learning style into consideration and teach them accordingly. Wgu (2022), reported that an understanding of theses learning styles and strategies can help teachers connect to all different kind of students.However, even though the students learning style and interaction influence their learning, there is the need to help these students to tailor the usage of library in line with their various way of learning for self - actualization.

Theoretical Framework
The theory of multiple intelligence and the VARK model was used to support this study.
This theory was propounded by Howard Gardner in 1983. So also the VARK model was used to illustrate students' learning styles and how they interact with digital libraries. The theory posit that individuals possess different types of intelligences, such as visual-spatial, music-rhythmic, bodily- kinesthetic, interpersonal, intrapersonal, linguistic and logical mathematical. This theory suggests that educators should design their teaching methods and materials to cater for the diverse intelligence of their students. In this study, it is suggested that educators can use this theory to design digital learning.

Library material that can cater for different types of intelligence such as videos for visual-spartial learners and interactive simulations for body kinesthetic learners. Similarly the VARK model by Neil Fleming (1987) which was designed to help students and others learn more about their individual learning preferences (Kendra, 2023). The application of these theories can help students to discover themselves in diverse learning styles thereby making use of these to engage themselves in the usage of digital library.

Usage of Digital Library to Support Students Learning Styles in The Implementation of Curriculum

Digital library refers to collection of digital materials that are accessible through electronic means. Katie (2023) defined digital library as a collection of digital objects such as books, magazines, audio recordings, video recordings and other documents that are accessible electronically. The digital library can as well make use of multi-media approach for learning. They provide access to a wealth of information resources and have become an essential tool in research, learning and education.

The digital library provides convenience for leaners because it is easier to access library almost everywhere internet is connected. It is a means of supporting the students to have a global access to learning. It can enhance the quality and relevance of learning , strengthening inclusion and improve education administrations. It can mitigate the effects of education distribution and school closure (UNESCO, 2020).

In recent time, there has been an increase in the development and usage of digital libraries and this has led to the emergence of various models and frameworks for designing and evaluating digital libraries. For instance the 5S framework proposed by Chawdhury and Chawdhury (2010) highlights the five essential components of a digital library such as sources, services, spaces and staff and users. The framework emphasizes the important of user-centred design in creating effective digital libraries. Another model for designing and evaluating digital libraries is the digital library evaluation framework proposed by Li and Belkin (2008). This framework focuses on three key aspects of digital libraries they are users satisfactory task performance and system usability. The framework emphasis the importance evaluating digital libraries from the perspective of users and their task.

Digital libraries have been a very good concept in supporting learning and students' development. It breaks the barrier of limitation educationist have been looking for a way to rescue learning limitations and learning loss that can constitute a bleak in the leaning outcome. Many times students with a particular learning styles will be struggling to learn and understanding certain concept due to their limitations. These students can easily overcome through the use of digital libraries. Zhang, Chen, Zhao, & Du, (2020) stated that, getting over barriers to learning requires a solid connection to what is being taught through relevance to the learners. This means, students need to be connected to what might interest them such as electronic learning, electronic reading and even outside the classroom learning. Zhang, Chen, Zhao, & Du, (2020) equally explained that students must be taught to find their own pathway in learning.

The digital library is the appropriate means of making the learners from various learning

styles to supplementing their learning. They can easily get their assignment done. The digital libraries serve as specific media to implement the learning process (Radovan Urana, 2017). It also has great potentials in learning due to the nature of resources they bring together and that can be used to illustrate a variety of educational topics in practically all areas of knowledge or to support individual learning (Radovan Urana, 2017).

Accessing digital libraries enables the students to have world class resources at the tip of your fingers from online study resources to popular e-book and audio books and award winning movies and documentaries (British Council, 2023). In this case, students with virtual learning style can easily access library through videos, e-book, reading and other documentaries since there is provision for them. Likewise, students with auditory learning style can also access the library by using audiobooks, movies with other documents. Whereby students with kinesthetic learning style can also make use of series of digital drama, role playing, video and audio cassette and other interactions. On the other hand students don't need to wait in turns to have access to a book. This can easily be shared via space. Multiple readers can have simultaneous access to the same books, videos and audio books (Astra digital Library, 2021).

Students can read aloud and download materials for personal storage. Students tend to achieve great learning outcomes when they engage personal learning following their own personal intelligence and planned work in relation to their learning styles.

Challenges Faced by Students when Accessing and Utilising Digital Libraries Based on their Learning Styles

Recent studies have highlighted some of the challenges faced by students when accessing and utilizing digital libraries based on their learning styles. These challenges can vary depending on the specific learning styles of the students. For instance, students who have learning preferences for visual learning may have difficulty accessing digital libraries that do not provide visual aid support such as diagrams or images. On the other hand, students who have a preference for auditory learning may struggle with digital libraries that do not provide audio resources. Rakesh (2016) identified a host of challenges in the usage of digital libraries such as user authentication for access collection, digital preservation, equity of access, interface design, interoperability between system and software, information and organization, training and development.

A study by Park and Kim (2020) investigated the challenges faced universities student when using digital libraries. The study found that, students faced various challenges such as difficulty in locating relevant information, difficulty in using complex search tools and limited access to digital resources due to high cost of subscriptions. Again, in the study

carryout by Akporehwe and Popoola (2021) it focused on the challenges faced by students in accessing and using digital libraries in Nigeria. The study found that students faced challenges such as inadequate internet connectivity, inadequate training on how to use digital libraries and insufficient funding to access premium digital library resources. These studies suggested that, there are various challenges faced by students when accessing and utilizing digital libraries based on their learning styles.

Other challenges also range from non-availability and accessibility of digital libraries at the students disposal. If digital libraries are not easily accessible, students may not be able to have thorough support for their learning which can affect the implementation of curriculum.
Another challenge is lack of digital literacy skills on the part of the students which may hinder their ability to effectively use digital libraries. Digital literacy involves the ability to navigate and use digital technologies and resources for learning. Students wh lack digital literacy skills may find it difficult to effectively access and utilize digital libraries which may affect their learning outcomes. This is a wrong signal on the implementation of the curriculum.

Challenges may arise due to the limitation of the limitation of digital libraries in catering for the diverse learning needs of students. For instance, some digital libraries may not provide resources or features that support certain learning styles, which may make it difficult for students with such learning styles to utilize them effectively. Recent studies have shown that these challenges are prevalent among students in various educational settings. For instance, a study by Xu and Colleagues (2021) found that students in Chinese universities faced challenges such as limited access to digital libraries, lack of digital literacy skills and inadequate support for diverse learning styles when utilizing digital libraries. Similar study by Ong and Colleagues (2020) found that students in Singapore faced challenges such as difficulty in finding relevant resources, lack of guidance on how to use digital libraries and limitations in the features of digital libraries that cater for diverse learning needs.

The Way Forward in Using Digital Libraries by Various Categories of Students With Preference Leaning Styles in the Implementation of Secondary School Curriculum in Nigeria

Nigeria has a clear vision for education. Education should be committed to developing strategies that can enhance the implementation of curriculum and building holistic leaners. Recent studies have explored different strategies that can be employed to enhance the usage of digital libraries for learning supports in the implementations of the secondary schools curriculum in Nigeria by improving the students learning styles. These include:

▶ The creation of users-friendly interface and development of mobile applications for

digital libraries which can improve access and usage (Adeyemi and Daramola, 2021)

▶ Sensitisation of learners on the constant usage and accessibility of the digital library.

▶ Provision of data for the subscription to access e-libraries

▶ Constant training on e-learning library to intimate students on the usefulness.

▶ Constant training of the teachers and library attendants on how to handle e-learning/digital libraries.

▶ Prompt intervention of teachers in discovering the learners' learning styles.

▶ Assisting individual learners to discover his/her preferred way of learning.

▶ Libraries attendants to cater for library users individual way of acquiring information to achieve knowledge.

CONCLUSION

Learners' ability to process learning and seek for constant information are golden ways to achieve effective implementation of the curriculum. In achieving this the learners learning style and the provision and usage of digital library can be of greater help. This will curb the limitation of learning that may arise through the learners' peculiarity in the way they learn. However, the study identified several challenges faced by students in accessing and utilizing digital libraries which include; inadequate technological infrastructures, insufficient digital literacy, and limited access to relevant digital resources.

The study also identified individual students' peculiar ways of processing information which is learning style which can cause limitation for them in acquiring knowledge and give a setback to proper implementation of secondary school curriculum as the learning outcome will definitely be low if there is no back up way of acquiring constant knowledge. It is therefore necessary for educators and curriculum developers to take into consideration the diverse learning styles of students and make provision for learning reserves to cater for their usage of digital libraries. Students should also develop self-awareness about their preferred way of acquiring knowledge and make use of this by accessing digital libraries. Adequate infrastructures should be provided to strengthen the digital libraries in Nigeria

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