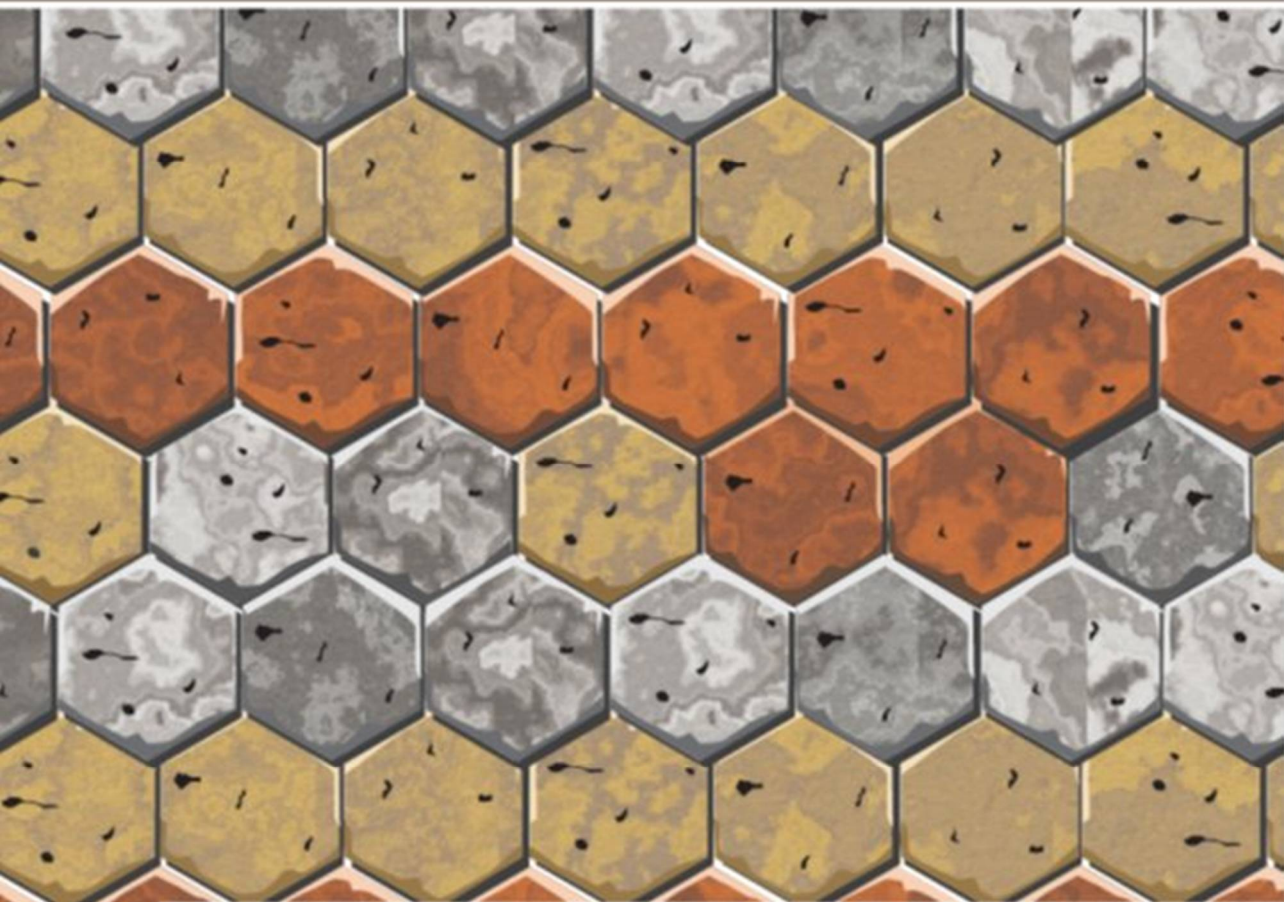


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EXPLORING SELF-DIRECTED LEARNING AND ACADEMIC ACHIEVEMENT IN ONLINE HIGHER EDUCATION

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Abstract

The rapid proliferation of online learning platforms in higher education has sparked a transformation in the way students access and interact with educational materials. This research endeavors to scrutinize the intricate connection between self-directed learning and academic achievement within the digital realm. By investigating the influence of students' self-directed learning behaviors on their online academic performance, this study illuminates the pivotal role of self-regulation, autonomy, and engagement in contemporary higher education settings. Employing a systematic literature review methodology, this research delves into the theoretical underpinnings of self-directed learning and its implications for students' engagement in online learning. Drawing on the situated expectancy-value theory, this study explores the mediating variables that may affect the effectiveness of self-directed learning approaches. Furthermore, it investigates strategies through which educators and institutions can facilitate and nurture self-directed learning within online learning environments. The study's findings underscore the significant contribution of self-directed learning to students' online learning experiences, ultimately leading to improved academic outcomes. Students who exhibit self-regulation, effective time management, and metacognitive skills in their online studies are more likely to achieve academic success. Thus, educators and institutions are encouraged to design online courses that foster self-directed learning by promoting student autonomy, creating opportunities for self-reflection, and encouraging active participation. In summation, this research provides valuable insights into the interplay between self-directed learning and academic achievement in online higher

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education environments. It underscores the importance of empowering students to assume control over their educational journey, ultimately enhancing their academic performance in digital learning settings.

Keywords: learning achievement, online learning, Self-directed learning, learning goals, challenges, perceived value

Introduction

Amidst the backdrop of the COVID-19 pandemic, higher education institutions across the globe have undergone a seismic shift towards online education as the primary mode of instruction (Hodges et al., 2020). The rapid transition to online learning has brought into sharp focus the importance of students' self-directed learning (SDL) behaviors in this new educational landscape (Zhu, 2021). SDL is a multifaceted construct that encompasses an individual's ability to take charge of their learning process, set learning goals, monitor progress, and adapt strategies as needed (Knowles, 1975). This study seeks to explore the interplay between students' awareness of their learning goals and their level of engagement in online learning environments during the COVID-19 pandemic.

The theoretical foundation of this research is rooted in the Situated Expectancy-Value Theory (SEVT), an extension of the Expectancy-Value Theory (EVT) that incorporates social cognition and sociocultural factors into its framework (Eccles & Wigfield, 2020). The SEVT framework emphasizes how an individual's developing anticipation and value perceptions are influenced by their unique circumstances and the cultural context in which they learn. In the case of the COVID-19 pandemic, it has served as a profound sociocultural context that mandated the complete shift of all teaching-related activities to the online domain (Beach, 2017; LaTour & Noel, 2021). Consequently, this presents an opportune moment to examine how online students benefit from SDL within the context of online learning. Furthermore, this research seeks to understand how students' expectations and perceptions of the value of learning within different contexts may influence their level of effort and engagement (Wigfield et al., 2009).

Online learning has garnered significant attention in higher education, with its advantages and disadvantages being studied extensively (Hill et al., 2003; Hofmann, 2002). While it offers benefits

such as convenience and flexibility (Poole, 2000; Chizmar & Walbert, 1999), it also poses challenges such as technological issues, reduced sense of community, and delayed communication. Nevertheless, the influence of student characteristics on online learning outcomes cannot be understated. Prior research has explored factors like prior knowledge (Mason & Weller, 2000), time management (Hill, 2002), and gender disparities (Rovai, 2002) in the context of online learning. SDL has emerged as a central focus of online learning research due to its relevance to students' ability to navigate and direct their learning effectively (Hartley & Bendixen, 2001). The study of SDL has encompassed both the process (Mocker & Spear, 1982) and personal traits (Garrison, 1997) related to self-direction. Importantly, the degree of students' self-directedness may vary depending on the specific learning context, with familiarity and relevance playing a role (Candy, 1991).

In this evolving landscape, digital accessibility has become a paramount consideration, especially in higher education settings. Digital accessibility entails the design and implementation of digital materials and technologies that are usable by individuals of all abilities (Laufer et al., 2021). It encompasses considerations such as compatible file formats, accessible websites, inclusive learning management systems, and assistive technologies (Tang et al., 2022). Upholding digital accessibility is vital in ensuring that students with disabilities have equitable access to educational resources and opportunities (Mosito et al., 2020).

The African context presents unique challenges and opportunities in the realm of digital accessibility (Mhlanga & Moloi, 2020; Mdikana, 2021; Nel et al., 2023). These challenges include limited resources, infrastructure disparities, linguistic and cultural diversity, as well as limited awareness and experience with digital accessibility practices (Landa et al., 2021). Furthermore, there is considerable variation in digital accessibility policies and practices across African countries and institutions (Konyana, 2023).

This systematic review seeks to comprehensively evaluate the current state of digital accessibility in African higher education. It will encompass an assessment of digital accessibility policies, practices, and challenges within African higher education institutions, as well as an exploration of the perspectives of students, instructors, and staff regarding digital accessibility. Through this extensive literature

review, the study aims to provide insights into the present status of digital accessibility in African higher education, identify best practices, pinpoint areas that require improvement, and inform evidence-based policies and interventions. In an era where technology is increasingly integral to education, ensuring digital accessibility is pivotal for providing equitable educational opportunities to all students in Africa, regardless of their abilities (Mdikana, 2021; Maphalala & Ajani, 2023).

To accomplish these objectives, the systematic literature review will address the following research questions:

- What does existing literature reveal about the state of digital accessibility in African higher education?
- How are digital accessibility policies and practices implemented within African higher education institutions?
- What is the impact of digital accessibility on students with impairments in the African higher education context?
- What are the primary challenges related to digital accessibility in African higher education, and what potential solutions can be identified?

By systematically examining the literature, this study aims to advance our understanding of digital accessibility in higher education within the African context.

Theoretical Framework

The Situated Expectancy-Value Theory (SEVT) serves as a valuable theoretical framework for examining the intricate relationship between self-directed learning (SDL) and students' engagement in online higher education. In the wake of the COVID-19 pandemic, online learning has become a prominent mode of education delivery (Hodges et al., 2020), making it imperative to explore the influence of SDL on students' online engagement. Expectancy-Value Theory (EVT) has been widely applied to understand students' perceptions and motivations in educational contexts (Rosenzweig et al., 2019). However, EVT's application to online learning engagement in higher education remains relatively uncharted territory, necessitating a more

profound investigation. SDL, a fundamental component of online engagement (Lo, 2019), empowers students to take ownership of their learning by determining what, how, and when they engage with online resources (Shang et al., 2023). Their perception of the significance of learning profoundly impacts teaching and learning in higher education, motivating students to invest substantial effort in enhancing their academic performance (Rachmatullah et al., 2021).

SEVT offers an illuminating framework for comprehending the dynamics of self-directed learning within the context of online learning environments. This theory, born from the amalgamation of social cognitive theory and EVT, underscores the role of individual beliefs, values, and contextual factors in shaping learning behaviors and outcomes (Eccles & Wigfield, 2020). When applied to the realm of self-directed learning in online settings, SEVT provides insights into how students' expectations and perceived values influence their engagement and success (Soliman, 2020; Tang et al., 2022). SEVT posits that students' expectations and perceived values concerning learning goals are situation-dependent, influencing their motivation, engagement, and learning outcomes (Hirt et al., 2022). Several scholars have gleaned essential insights by applying SEVT to self-directed learning in online higher education (Farrel et al., 2016; Beymer et al., 2022; Eccles & Wigfield, 2023). It is worth noting that the theory's strength lies in its contextual relevance (Heyward-Rotimi, 2023). SEVT underscores the importance of considering the unique context of online learning environments in higher education, which exhibit considerable diversity in content, instructional methods, and technological tools (Eccles & Wigfield, 2023). Consequently, students' expectations and perceived values related to self-directed learning can vary significantly based on these contextual factors (Beymer et al., 2022). In the context of online learning, students' expectancy beliefs come to the forefront (Jones et al., 2010; Perez et al., 2019). Some students may exhibit strong self-efficacy beliefs, feeling well-prepared to navigate online courses independently, while others may require additional support (Atkinson, 1957; Soliman, 2020).

SEVT also emphasizes the perceived value of self-directed learning goals (Perez et al., 2019). The motivation of students to engage in self-directed learning within online environments hinges on how they perceive the relevance and importance of the knowledge and skills they acquire (Eccles & Wigfield, 2020). When students discern a

direct connection between their self-directed efforts and their academic or career objectives, their motivation increases (Ball et al., 2020). Educational institutions play a pivotal role in shaping the context for self-directed learning in online higher education (Woldegiorgis, 2020). By providing resources, guidance, and instructional design strategies that foster self-directed learning, institutions can support students' engagement and success in online courses (Eccles & Wigfield, 2023). However, SEVT acknowledges various factors that can mediate the relationship between expectancy and value beliefs and self-directed learning outcomes (Konyana, 2023). These factors may include the design of the online course, the quality of instructional materials, the level of interaction and collaboration, and the presence of feedback mechanisms (Landa et al., 2021; Laufer et al., 2021; Nel et al., 2023).

In summary, SEVT offers a robust framework for understanding the interplay between students' expectations, perceived values, and self-directed learning behaviors in online learning environments within higher education. This theory's consideration of situational factors and mediating variables provides valuable insights into how educators and institutions can facilitate self-directed learning and enhance students' engagement and success in online higher education. Adhering to the principles of SEVT can create an environment that fosters self-directed learning, ultimately benefiting students' learning outcomes in the context of online education.

Justification for the situated expectancy-value theory (SEVT)

The selection of the "Situated Expectancy-Value Theory" for this study is well-grounded and rationale. It offers a robust theoretical framework for examining the intersection of digital accessibility and self-directed learning within online higher education settings, with a specific focus on Africa (Perez et al., 2019). This theory is highly suitable for a study centred on the African context, characterized by distinctive cultural, linguistic, and infrastructural influences that shape the higher education landscape (Hirt et al., 2022). By emphasizing the significance of considering the context, the theory allows for a nuanced exploration of how digital accessibility and self-directed learning practices are embedded within Africa's educational environment. The "expectancy" component of the theory aligns seamlessly with the motivation underpinning self-directed learning (Loh, 2019). In the realm of online education, it is paramount to understand how students perceive their likelihood of achieving their

learning objectives (expectancy) and the value they assign to these objectives (Jones et al., 2010; Eccles & Wigfield, 2020). This aspect aids in investigating how students' perceptions of the digital learning environment may impact their motivation to engage in self-directed learning. Furthermore, the theory underscores the significance of perceived value regarding learning objectives. Inclusive higher education strives to provide equal opportunities for all students, including those with disabilities. By assessing how students perceive the value of accessible digital learning resources, the theory can illuminate whether digital accessibility positively influences their motivation to participate in self-directed learning.

The theory acknowledges that various factors can mediate the relationship between expectancy, value beliefs, and actual outcomes (Ball et al., 2016; Rachmatullah et al., 2021). In the context of digital accessibility and self-directed learning, these mediating factors encompass institutional policies, technological infrastructure, faculty support, and student awareness (Ajani, 2023). The theory's framework facilitates a comprehensive exploration of these factors. Given that the study aims to evaluate the impact of digital accessibility and self-directed learning in the African higher education landscape, the theory's emphasis on understanding policies and practices aligns harmoniously with the research objectives (Gamede et al., 2022). It helps identify how policies and practices related to digital accessibility and self-directed learning can be enhanced to promote inclusive education. The theory offers a holistic perspective by considering both the expectancy and value dimensions. This holistic approach enables a more profound understanding of the intricate interplay between digital accessibility, self-directed learning, and inclusive higher education (Ajani & Khumalo, 2023). Consequently, the "Situated Expectancy-Value Theory" serves as a robust theoretical underpinning for investigating digital accessibility and self-directed learning in the African higher education context (Mhlanga & Moloji, 2021). Its focus on contextual factors, motivation, and mediating elements aligns seamlessly with the study's objectives, providing valuable insights into the enhancement of inclusive education through digital accessibility and self-directed learning practices.

How accessible are digital platforms in African higher education institutions

The existing body of literature concerning digital accessibility within African higher education institutions delves into several prominent themes and challenges. One recurring discovery is that the full transformation of teaching and learning in higher education through digital technologies has not yet been effectively achieved (Oke & Fernandes, 2020). Despite the promising potential of technology to enhance education, substantial obstacles to digital accessibility persist within African institutions (Woldegiorgis, 2022). These challenges have been exacerbated by the COVID-19 pandemic, which has intensified the digital divide, particularly among students from privileged and disadvantaged backgrounds (Woldegiorgis, 2022). The term "digital divide" refers to the unequal access to and utilization of digital technologies, particularly among marginalized groups (Woldegiorgis, 2022). Individuals from disadvantaged backgrounds often encounter impediments such as limited access to suitable technology and internet connectivity (Woldegiorgis, 2022). Equitable access is essential to ensure their full participation in online learning activities, as the absence of such access can perpetuate existing inequalities within higher education (Woldegiorgis, 2022). Furthermore, the literature underscores the imperative of adopting a social justice approach to confront the digital divide and guarantee fair access to educational infrastructure (Tang et al., 2022; Woldegiorgis, 2022; Eccles & Wigfield, 2023). It is crucial to examine the implications of the digital divide for access, equity, management, efficiency, pedagogy, and the quality of online teaching and learning (Woldegiorgis, 2022). Integrating digital technology into African universities is deemed an urgent priority to bridge this gap and provide equal opportunities for all students (Mhlanga & Moloi, 2020; Laufer et al., 2021; Woldegiorgis, 2022; Mpungose, 2023).

Moreover, the literature highlights the significance of addressing neocolonial digital barriers that impact e-libraries and African scholarship (Heyward-Rotimi, 2023). African scholars frequently encounter restricted access to digitized scholarly databases and encounter challenges in navigating Western-centric platforms (Farrell et al., 2016; Kern, 2022; Eccles & Wigfield, 2023; Heyward-Rotimi, 2023). This limitation hinders their ability to access and contribute to the global knowledge landscape (Ajani & Khumalo, 2023). In sum, the existing literature on digital accessibility within African higher education institutions underscores the necessity of addressing the digital divide and promoting equitable access to digital technologies. It sheds light on the challenges faced by students from

disadvantaged backgrounds and the critical importance of incorporating digital technology into teaching and learning practices (Ajani, 2023). Furthermore, various studies emphasize the urgency of confronting neocolonial digital barriers and advancing African scholarship on the global stage (Mhlanga & Moloi, 2020; Mosito et al., 2020; Maphalala et al., 2021; Afolabi & Ajani, 2023). Addressing these issues can enhance digital accessibility in African higher education institutions and ensure equal opportunities for all students.

In the specific context of South African higher education institutions, digital accessibility has emerged as a pressing concern, particularly in the wake of the COVID-19 pandemic and the subsequent transition to online teaching and learning (Gamede et al., 2022; Ajani, 2023). The existing literature sheds light on the challenges and ramifications associated with digital accessibility in South African higher education institutions (Dube, 2020; Mhlanga & Moloi, 2020; Gamede & Ajani, 2022; Nel et al., 2023). Mhlanga and Moloi (2020) contend that the COVID-19 pandemic has had a profound and motivating impact on digital transformation within South Africa's higher education sector. Their study underscores how the pandemic and subsequent lockdown measures necessitated the shift to remote (online) learning, exposing pre-existing challenges and inequalities in accessing digital resources and platforms for educational purposes. As such, the authors emphasize the need to evaluate both the successes and failures of implemented technologies and the associated costs of scaling these technologies. Consequently, numerous higher education institutions adopted and improved the use of learning technologies by students.

Likewise, Woldegiorgis (2022) posits that the digital divide within South Africa's higher education system, particularly exacerbated by the COVID-19 pandemic, has become more pronounced among rural students and institutions. This study highlights how online teaching and learning have intensified the digital divide, disproportionately affecting students from advantaged and disadvantaged backgrounds, and exacerbating existing inequalities. The author concurs that a social justice approach is crucial to mitigate the digital divide and ensure equitable access to learning infrastructure. Landa et al. (2021) explore the impact of the COVID-19 pandemic on education in South Africa, including higher education. Their study reveals that student from economically disadvantaged rural communities encounter difficulties accessing online teaching and learning

platforms and resources. The authors highlight the stark inequalities in educational outcomes among students from various socioeconomic backgrounds as one of the central challenges and implications within higher education institutions. Chisita and Chizoma (2021) assert that reimagining academic library spaces in South Africa amid the COVID-19 pandemic became imperative. This study underscores the value of digital libraries during crises and highlights the digital transformation of the education sector, including higher education. The authors emphasize the need to prepare for the future by adapting library spaces to support digital access and resources. Cox et al. (2022) address the challenges related to access to affordable and suitable teaching materials in South African higher education. The study underscores the necessity of having access to textbooks and other teaching materials that can be legally shared online. The authors stress the importance of curriculum transformation and social justice within higher education, encompassing issues of access and affordability.

In summary, the existing literature on digital accessibility within South African higher education institutions spotlights the challenges posed by the digital divide, underscores the necessity of a social justice approach, and emphasizes the significance of addressing issues related to access, affordability, and infrastructure. The COVID-19 pandemic has further underscored the urgency of digital transformation within higher education and the need to ensure equitable access to digital resources and platforms for all students (Mhlanga & Moloji, 2020).

South Africa's policies, practices and initiatives to promote digital accessibility and inclusive higher education

Online learning environments hold a central role in higher education, necessitating self-directed learning by students to achieve their academic objectives. In South Africa, the pursuit of digital accessibility and inclusive higher education necessitates a comprehensive approach spanning policies, practices, and initiatives to ensure equitable access to educational resources, including for students with disabilities. Consequently, the South African national government has undertaken several measures to promote inclusive digital accessibility across higher education institutions. These efforts encompass:

National Policies:

- **National Integrated ICT Policy White Paper:** South Africa's National Integrated ICT Policy White Paper (1997) underscores the government's commitment to digital inclusion and accessibility, providing a framework for ensuring that digital services, including educational resources, are accessible to all citizens, acknowledging the influence of the Fourth Industrial Revolution (4IR) on teaching and learning.
- **Higher Education Act (No. 101 of 1997):** Governing higher education in South Africa, this legislation includes provisions related to equity and access, mandating higher education institutions to work toward inclusive practices.
- **White Paper for Post-School Education and Training:** Focused on post-school education and training, including higher education, this policy document emphasizes access for all, recognizing the significance of digital transformation in education and the need to evaluate its outcomes, particularly in addressing limited access to higher education.
- **South African Sign Language Act (No. 17 of 2011):** Recognizing South African Sign Language as an official language, this legislation promotes its use in various contexts, including education.

Practices:

- **Universal Design for Learning (UDL):** Many South African higher education institutions embrace UDL principles, designing courses and educational materials to be accessible to a diverse range of students, including those with disabilities.
- **Accessible Digital Content:** Institutions are encouraged to create and provide digital content with accessibility in mind, including designing online learning platforms, videos, documents, and websites.
- **Inclusive Pedagogy:** Faculty members are encouraged to adopt inclusive pedagogical practices, accommodating various learning styles and abilities.
- **Professional Development:** Many institutions offer training and professional development opportunities for faculty and staff on digital accessibility and inclusive education.

Initiatives:

- **National Accessibility Portal:** The South African government has launched initiatives like the National

Accessibility Portal, providing information and resources related to accessibility and inclusion, particularly within the education sector.

- **Center for Universal Access and Disability Support (CUADS):** Numerous higher education institutions have established centers or offices, such as CUADS, to offer support and accommodations for students with disabilities.
- **South African Higher Education Learning and Teaching Association (SAHELTA):** Organizations like SAHELTA focus on advancing teaching and learning practices in higher education, with an emphasis on inclusivity and accessibility.
- **Research and Data Collection:** Initiatives often include research projects and data collection efforts to better understand the needs and experiences of students with disabilities in higher education.
- **Collaboration:** Collaboration among higher education institutions, government agencies, advocacy organizations, and international partners is common, facilitating the sharing of best practices and resources to promote digital accessibility and inclusive education.

To further enhance digital accessibility and inclusive higher education in South Africa, policies and initiatives have been implemented. The COVID-19 pandemic has expedited the digital transformation of education in South Africa, resulting in the deployment of various Fourth Industrial Revolution (4IR) tools. Additionally, policies have been developed to align data protection practices with data privacy legislation, safeguarding data and ensuring privacy in the digital era. These efforts aim to address inequalities in access to online teaching and learning platforms and resources, particularly for students from underserved communities. Furthermore, South Africa has prioritized research skills development to meet its development agenda, attracting suitable students to research programs through recruitment initiatives and internal systems. Policies and practices have also been established to preserve and promote Indigenous knowledge systems through digital preservation.

The impact of digital accessibility on students' educational experiences and outcomes, including those with disabilities, is profound and far-reaching. Digital accessibility, which involves designing and implementing digital content, platforms, and technologies that are usable and comprehensible by individuals with

diverse abilities, significantly influences students' educational journeys and achievements. Digital accessibility ensures equitable access to educational materials and resources for all students, regardless of their abilities, fostering a more inclusive learning environment. Accessible materials and technologies contribute to enhanced engagement, active participation, independence, autonomy, improved comprehension, and personalization of learning experiences. Moreover, academic performance improves when students have access to accessible materials and technologies. Furthermore, inclusive digital accessibility prepares all students for the workforce in an increasingly digital and remote work environment. Additionally, ensuring digital accessibility is vital for educational institutions to comply with legal requirements and avoid legal challenges.

Investing in digital accessibility not only removes barriers for students with disabilities but also enhances the learning environment for all, promoting a more inclusive and equitable educational system. The importance of digital accessibility has been underscored during the COVID-19 pandemic, as remote learning and digital technologies have become central to education. Various studies have explored the relationship between digital accessibility and students' proficiency in remote learning, emphasizing the critical role of digital accessibility in ensuring equitable educational opportunities and positive learning outcomes.

Achievement of digital accessibility in African higher education: The challenges and barriers

The pursuit of digital accessibility in African higher education presents a formidable and intricate challenge, beset by a multitude of impediments that hold the potential to obstruct the creation of an inclusive educational milieu, beneficial to all students, including those with disabilities. Numerous challenges in Africa's digital accessibility landscape, particularly within the context of fostering self-directed learning for educational attainment, are evident. Notably, issues such as limited internet access, unreliable connectivity, and insufficient technological infrastructure pose significant hurdles (Thwala & Scott, 2014; Chirinda et al., 2021). The scarcity of resources, both financial and technological, poses a formidable constraint to achieving digital accessibility in African higher education (Bawa, 2016). Consequently, many students lack access to essential digital devices and reliable internet connectivity, impeding their participation in online learning environments (Chirinda et al., 2021).

Furthermore, limited bandwidth, frequent power outages, and inadequate IT support contribute to the instability of digital learning platforms, hindering students' access to online educational materials (West et al., 2019). Moreover, the paucity of broadband infrastructure development in certain regions exacerbates the challenge of digital accessibility and restricts access to online resources and remote learning (West et al., 2019). The resource constraints and financial limitations within higher education institutions in Africa further compound the challenges. Often, these institutions struggle to allocate funds for technology and accessibility initiatives (Bawa, 2016). The resulting resource gaps have a direct impact on students, who may lack access to essential devices and reliable internet connectivity (Chirinda et al., 2021). Consequently, students from lower-income backgrounds often encounter substantial barriers in accessing digital devices and dependable internet connectivity, further magnifying existing educational inequalities (Lyles et al., 2021).

The creation of accessible digital content, including documents, videos, and websites, is a formidable task within this context (Thwala & Scott, 2014). A lack of awareness regarding guidelines for accessible content creation can lead to the exclusion of students with disabilities (Dookie, 2017). Additionally, policies and practices related to digital accessibility exhibit significant variation across African countries and institutions, highlighting the absence of comprehensive policies and adequate funding for supporting digital accessibility initiatives (West et al., 2019). Consequently, this lack of coherence hinders progress in achieving digital accessibility (Lyles et al., 2021). Additionally, resistance to change and a lack of institutional commitment to digital accessibility may necessitate substantial efforts and advocacy to shift the institutional culture (Walton, 2018). The high cost of specialized assistive technologies further adds to the challenges faced by students with disabilities (Dookie, 2017).

Addressing these barriers necessitates a comprehensive, collaborative approach involving educational institutions, governments, and international partners to prioritize digital accessibility and ensure equitable access to quality education for all students, regardless of their abilities or circumstances. The implementation of strategies to enhance self-directed learning and promote digital accessibility is critical (Bawa, 2016; Dookie, 2017;

Beymer et al., 2022). This entails adopting digital literacy programs to equip students with essential skills, ensuring access to diverse digital resources, fostering a culture of self-directed learning, and creating engaging online learning environments (Cox et al., 2022; Chisita & Chizoma, 2021; Eccles & Wigfield, 2023; Afolabi & Ajani, 2023).

In summary, achieving digital accessibility in African higher education is a complex and multifaceted endeavor, impeded by various challenges including limited infrastructure, resource constraints, awareness gaps, cultural diversity, and policy variability. Addressing these challenges collectively through comprehensive strategies is essential to advancing the goal of digital accessibility, thereby providing equitable educational opportunities for all students.

How significant is Self-Directed Learning in Online Learning Environments?

SDL readiness, as defined by Sumner (2018), pertains to the extent of students' possession of the requisite attitudes, abilities, and personality traits essential for effective self-directed learning (SDL). This readiness factor carries substantial weight in shaping students' performance within online learning environments and shares a positive correlation with their success in web-based educational settings. SDL, characterized by its learner-centric approach, holds notable significance in online learning environments for several compelling reasons. Firstly, SDL bestows upon students the authority to govern their learning processes, enabling them to establish educational objectives, dictate their learning pace, and curate resources and strategies that align with their distinct learning needs. This heightened autonomy and adaptability in their learning journey can serve as potent catalysts for bolstering motivation and active engagement, imbuing students with a profound sense of ownership and mastery over their educational pursuits.

Secondly, SDL, when cultivated within online learning environments, serves as a crucible for nurturing critical skills such as problem-solving, critical thinking, and information literacy. Here, students are proactively engaged in the pursuit of information, its evaluation, analysis, synthesis, and its practical application—a multifaceted skill set of paramount importance in the contemporary knowledge-driven society, and foundational for lifelong learning and professional advancement. Furthermore, SDL in online learning environments

lays the groundwork for the development of student independence and self-regulation. Learners shoulder the responsibility for judiciously managing their temporal resources, organizing their learning endeavors, and diligently monitoring their progress—pivotal competencies in the realm of online learning, where students assume a more substantial role in directing their educational trajectory and must navigate the expansive landscape of available knowledge.

Beyond these merits, SDL within online learning environments excels in fomenting student engagement and active participation. By actively encouraging students to engage with course materials, partake in collaborative activities, and reflect upon their learning experiences, SDL cultivates an atmosphere that transcends passive reception to enhance knowledge retention and deepen comprehension of the subject matter. Nonetheless, it is paramount to acknowledge that SDL in online learning environments may engender challenges. Students might require guidance in the effective management of their time, the sustenance of motivation, and the adept utilization of support mechanisms when confronted with obstacles. Hence, educators and institutions bear the responsibility of furnishing the requisite support, guidance, and resources necessary to facilitate students' SDL effectively within the milieu of online learning. In summation, SDL assumes a pivotal role in online learning environments by empowering students, nurturing critical skills, fostering independence and self-regulation, and catalyzing engagement and active participation. Consequently, educators and institutions should duly recognize the magnitude of SDL's import and endeavor to furnish the requisite support structures for the facilitation of SDL within online learning environments.

Conclusion

The intricate relationship between self-directed learning and academic achievement in online higher education is multifaceted and of significant importance for educators and students alike. This in-depth examination underscores self-directed learning's pivotal role in augmenting students' engagement, autonomy, and overall academic performance in online educational settings. Self-directed learning empowers students to assume responsibility for their educational journey, adapt to diverse digital platforms, and proficiently manage their learning processes. Furthermore, the review highlights the situated expectancy-value theory's pertinence as a valuable framework for comprehending the motivational determinants and

contextual influences that mold self-directed learning in the realm of online higher education. It underscores the necessity of considering students' beliefs, values, and the distinctive challenges inherent to specific online learning contexts. Nevertheless, this inquiry also illuminates the impediments and obstacles that can hinder the effective implementation of self-directed learning in online higher education, particularly within the African landscape. Challenges such as limited infrastructure, resource constraints, and awareness gaps must be systematically addressed to ensure equitable access to quality education. In light of these revelations, it becomes evident that nurturing self-directed learning in online higher education necessitates a multifaceted approach that involves not only students but also educators, institutions, policymakers, and advancements in technology. By acknowledging and mitigating these challenges while harnessing the advantages of self-directed learning, higher education can fully utilize online learning environments to deliver inclusive, adaptable, and efficacious education to all students. This, in turn, elevates learning achievements and cultivates a culture of lifelong learning in the digital era.

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