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Integrating digital literacy into South African academic literacy: An autoethnographic exploration of evolving interventions

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ABSTRACT

The rapid advancement of technology has transformed the educational landscape, prompting institutions worldwide to integrate technology into their curricula to enhance personalized learning and student engagement. However, this advancement has also exacerbated existing educational inequities, particularly in developing countries like South Africa. Academic literacy is an established intervention aimed to support *first-time entering students* in higher education with their academic acculturation (Alexander et al., 2005; Council on Higher Education, 2017; Nel & Janse van Rensburg, 2022). However, while current academic literacy interventions provide crucial support, these interventions lack the necessary components to fully equip students for success in this technologically driven era. Using an explorative auto-ethnographic research design the inter-section of technological advancements and the pressing need for improved academic literacy interventions is investigated. Finally, the argument is made that the increasing digital divide necessitates a modernized approach to the development of literacy skills – one that seamlessly inte-grates digital literacy into existing academic literacy frameworks – to enhance student success and empower them to thrive in the digital age.

Keywords: academic literacy; digital literacy; student success; academic acculturation; technology-driven education; autoethnography

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1. Introduction

Higher education institutions (HEIs) worldwide are grappling with the persistent challenge of equipping students with the necessary skills to navigate and successfully complete their degrees. Student success is frequently used as a key metric to measure institutional performance, yet many students struggle to acculturate to the academic environment, a failure often linked to the articulation gap1 between secondary and higher education (Bharuthram, 2012; Brinkworth et al., 2009; Darlaston-Jones et al., 2003; Emerson et al., 2014; Leki, 2006; Scott, 2009; Van Dyk et al., 2014; Van Dyk & Coetzee-Van Rooy, 2012; Van Schalkwyk, 2008; Weideman, 2003). In South Africa, these challenges are exacerbated by the diverse and stratified higher education landscape, where socio-economic disparities, limited access to resources, and institutional barriers further hinder student success (Bunting, 2006; Hill, 2016; Kubler & Sayers, 2010; Naidoo, 2004). Although the South African government has prioritised equitable access to higher education since 1994, persistent issues—such as high tuition fees, inefficiencies within the National Student Financial Aid Scheme (NSFAS)[2], and systemic inequalities—continue to pose significant barriers (Chéry, 2024; Greeff & Mostert, 2021; Masutha & Motala, 2023; Wangenge-Ouma & Cloete, 2008). The combined effects of these cognitive, motivational, socio-cultural, economic, and institutional variables contribute to dismal throughput rates.

For example, as depicted in Figure 1, 38% of South African students (excluding students from UNISA)[3] enrolled in three-year degree programmes in 2016 dropped out before completion (Council on Higher Education, 2023).

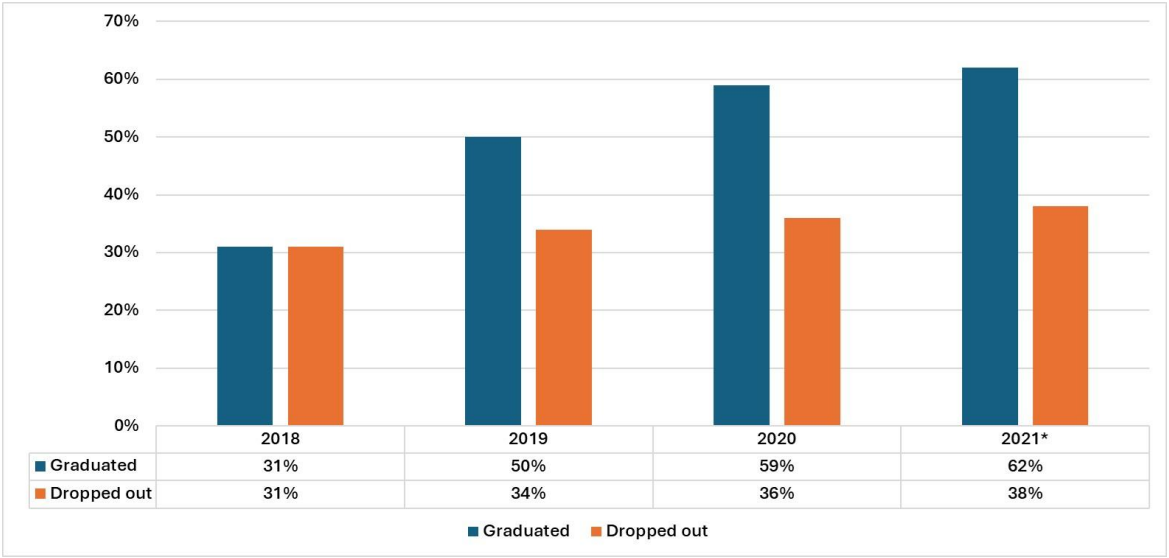

Figure 1: Combined South African throughput rates for 3-year degrees with the first year of enrolment in 2016 – excluding UNISA (Council on Higher Education, 2023)

1 The articulation gap can be seen as a result of "poor schooling of individuals (or cohorts)" and students' inability to adapt to the academic environment – the divide between High school and University is simply too big (Sebolai, 2022).

2 69% of SA HEI students were funded via NSFAS in 2020 (Branson, 2023:6).

3 The public institutions included in the calculation of these statistics are NWU, RU, UCT, UFH, UFS, UKZN, UL, UP, SU, UWC, Wits, SMU, UMP, NMU, SPU, UJ, UV, UZ, WSU, CPUT, CUT, DUT, MUT, TUT, and VUT (Council on Higher Education, 2023).

Similarly, 32% of students pursuing four-year degrees failed to graduate. These challenges transcend disciplinary boundaries, though faculties such as Theology and Education are particularly affected, as illustrated in Figure 2.

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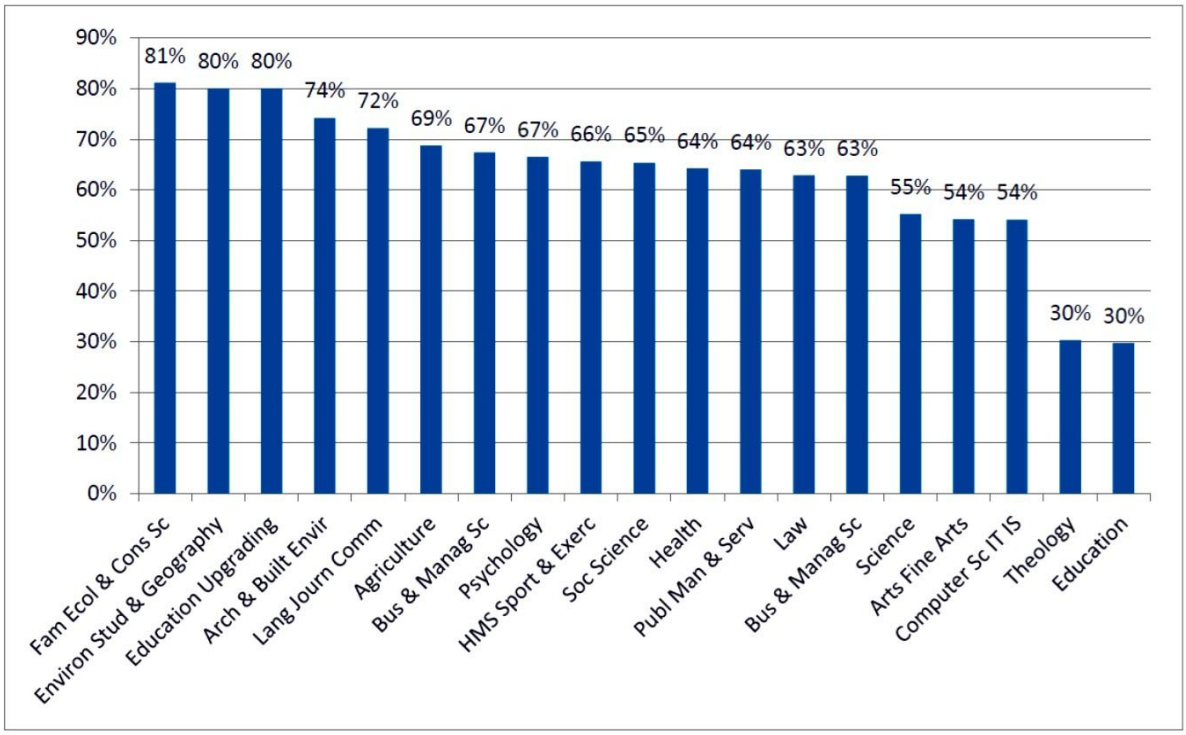

Figure 2: Combined South African throughput rates for 360-credit degrees within 6 years of their first enrolment – excluding UNISA (Council on Higher Education, 2023)

The persistent achievement gap and low throughput rates highlight the urgent need for targeted interventions to address the barriers hindering student success. However, the imperative need for targeted interventions to support student success has long been recognized. Globally, institutions aim to identify at-risk students early and provide tailored support to both at-risk and non-at-risk students, with the overarching goal of enhancing academic achievement and bridging the achievement gap (Alyahyan & Düştegör, 2020; Chen et al., 2023; McNair et al., 2016; Pendakur & Harper, 2023).

In the South African context, the identification of at-risk students and the subsequent provision of academic support is often framed within the development of students' academic literacy abilities—commonly referred to as academic literacy (AL) or English for Academic Purposes (EAP). While academic literacy interventions have been a central component of most South African university curricula for several years, the efficacy of AL appears to be waning in the increasingly digital and technologically driven higher education environment. The evolving landscape of higher education, characterized by rapid advancements in information and communication technologies (ICT), the Internet of Things (IoT), massification, the Fourth

Industrial Revolution, artificial intelligence (AI), and the enduring impact of the COVID-19 pandemic, necessitates a rethinking of traditional academic literacy approaches. If HEIs are to ensure that students receive the necessary support to succeed and are prepared for the digital demands of the 21st century, a more comprehensive approach to academic literacy—one that integrates digital competencies and information literacy—is essential. This article seeks to explore how academic and digital literacies can be reconceptualized to address the linguistic, technological, and socio-cultural challenges faced by students in South African higher education institutions. While this proposition may be considered contentious, particularly given the ongoing debates surrounding academic literacy and language in South Africa, it is essential to seize this opportunity to revise and enhance academic literacy offerings to better equip students for the challenges and opportunities of the future.

2. Methodology

To address the limitations of traditional academic literacy interventions in a rapidly evolving, technology-driven educational landscape, this article follows an analytical autoethnographic methodology. This approach allows for a reflective and critical examination of the effectiveness of the existing academic literacy interventions, informed by my experiences and insights within the South African higher education context. The integration of these methodologies underscores the urgency of addressing the research question within the post-COVID-19 higher education environment, particularly considering declining throughput rates and the growing necessity for technology-aligned pedagogical practices.

2.1 An analytical autoethnographic research methodology

Analytical autoethnography is a qualitative research approach that blends personal experience with analytical rigor to explore broader cultural, social, or institutional phenomena. This methodology enables researchers to use their lived experiences as an entry point to critically examine and interpret complex issues within their fields, thus situating personal narratives within a broader academic framework (Anderson, 2006; Chang, 2008). Analytical autoethnography can further be defined as a form of self-narrative inquiry where the researcher's personal experiences are methodically analysed to address specific research questions (Denzin, 2013). The method seeks to connect individual experiences with larger cultural patterns and theoretical frameworks, aiming to contribute to scholarly discourse and practical insights. According to Faulkner and Lebangood (2024) this reflective and critical methodology can bridge personal narrative with systematic academic inquiry, all while emphasising self-awareness, cultural critique, and methodological rigor, aiming to link individual experiences with broader societal issues. This methodology is particularly suitable for examining academic literacy interventions in South African higher education, as it allows the researcher to critically evaluate their professional practices while engaging with existing literature and contextual realities. By leveraging personal insights, analytical autoethnography enables the researcher to contribute nuanced, context-specific recommendations for addressing gaps in traditional academic literacy interventions in a technology-driven environment.

2.2 Literature review

After identifying and refining the research questions (what academic literacy is, and what is digital literacy), the literature review commenced. Following the initial attempt to search the various databases the scope of the search was refined to include only articles in which HEI is mentioned. To find relevant articles keywords (academic literacy, student success, academic acculturation, digital divide, digital literacy, digital literacy in South Africa, digital frameworks) was used, and articles were included based on the following criteria:

- reference to digital literacy frameworks, digital literacy, academic literacy, or digital literacy and student success
- investigation of the effect of digital literacy and/or the successful implementation of academic literacy interventions

Once possible articles were identified, AI tools such as ResearchRabbit (2022), ChatGPT (OpenAI, 2024), and Perplexity (2024), were used to find similar articles or authors. Following the criteria for inclusion, articles were excluded following the language of publication (languages limited to either Afrikaans or English).

Through this systematic inquiry the aim is to prove that academic literacy, in its current form, needs to be revised, and that this existing intervention is uniquely situated to address issues brought about by the digital divide. The argument will be made that digital literacy could possibly be incorporated into the current offering of academic literacy, allowing students to develop much needed 21st century skills, both for the academic and workplace environment.

3. The South African context

Since the first democratic election in South Africa in 1994 reformation and equal access to education has been a priority for educators and policy makers. Initially the White Paper on Education and Transformation argued for "opening up learning and removing barriers to education for those who had been previously disadvantaged by the past educational system" (Adetiba, 2019). In this regard the South African Council for Higher Education (2017) reported that there is a steady increase in student numbers (by population group) since 1960 (Council on Higher Education, 2023). Despite the South African government prioritising the increase to equal and fair access to Higher Education (HE) since 1994, there are still several challenges hindering equal access to higher education institutions (HEI). The diverse and stratified HEI society enhances the severity of challenges regarding access to educational materials (albeit traditional paper-based or more modern eLearning and e-Assessments) and student preparedness all of which can be seen as the result of cognitive, affective, motivational, socio-cultural, economic[4], and institutional variables (Bunting, 2006; Hill, 2016; Kubler & Sayers, 2010; Naidoo, 2004).

4 69% of SA HEI students were funded via NSFAS in 2020 (Branson, 2023:6).

The controversy surrounding language in South Africa (Ayandibu, 2023; Msiza et al., 2020; Pillay & Barnes, 2020). Language has long since been an issue of contentiousness in South Africa. If one were to ignore the history of language (and politics) in South Africa and solely focus on the challenging nature of academic language, it is evident that academic language acquisition is problematic and seems to be so worldwide. Bourdieu and Passeron (1994) argued that students struggle with the linguistic rules and norms of academic discourse. In their ever-popular quote from 1994 they state that:

> Academic language is a dead language for the great majority of French people, and is no one's mother tongue, not even that of children of the cultivated classes. As such, it is very unequally distant from the language actually spoken by the different social classes. To decline to offer a rational pedagogy is, in this context, to declare that all students are equal in respect of the demands made by academic language…" (Bourdieu & Passeron, 1994, p. 67).

Although they are referring to French, the mention of a major difference between academic language and mother tongue language should be noted. Hyland (2016) indicates that writing in English for academic purposes can be just as difficult for an English L1-speaker (mother tongue) as for an English L2-speaker (second, or third language speakers). Flowerdew (2019, p. 62-66) contested Hylands argument when he stated that "it is likely that NSs [Native Speakers] will have a broad (non-discipline-specific) command of these language functions before embarking on disciplinary writing". The native speaker (NS) vs non-native speaker (NNS) debate is ongoing, but one could argue that there are two main stances. 1) Academic English can be seen as independent of a speaker's identity or country of origin, or 2) Academic English proficiency is linked to an individual's mother tongue, and subsequently an English L1-speaker will be more proficient in producing texts in Academic English than an English L2-speaker[5]. Elnathan (2021) stated "English is the international language of science, for better or for worse, but most of the world's scientists speak it as a second language", and within the multilingual South African HEI context, this argument adds another layer to the challenges students need to overcome to be successful in their studies. What is undisputedly true is that students require some form of support, an intervention, to help them to (1) adapt to their new academic environment, (2) understand the linguistic requirements of discourse in their field of study, and (3) close the articulation gap. This has been proven time and again (refer to Alexander et al., 2005; Cliff, 2015; McKenna, 2003; Van Dyk et al., 2014; Van Dyk & Coetzee-Van Rooy, 2012). Soh and Connolly (2021) stated that a lack of basic computer literacy skills, and/or any skills allowing students to navigate the digital world, i.e. the learner management systems (LMS) and research platforms – adds to the existing challenges. In a recent study (Paadi et al., 2023) found that some South African students feel that their lack of understanding the digital world has a negative bearing on their academic performance, especially when they are

5 For this article, it is important to take note of the contentiousness of language, to acknowledge the ongoing debate regarding NS and NSS, especially in the South African context where there are 12 official languages which not only allows for a great multilingual environment, but which also creates ample room for misunderstandings, alienation, and challenges.

required to use a LMS and/or complete e-Assessments. In this regard one student stated that the digital world is “not to challenging, but it’s online and there may be many challenges such connectivity problems and some users lack the skills to navigate a digital assessment”. This confirms the opinion that the continuous development and implementation of technology in HEI poses possible challenges for some students.

In summary, while strides have been made towards democratizing access to higher education in South Africa, persistent challenges related to linguistic proficiency, digital inequities, and socio-cultural disparities hinder the realization of truly inclusive education. The compounded effects of these factors necessitate a shift in how universities conceptualize and implement interventions. This brings into focus the critical role of literacies—not just traditional academic literacy but a spectrum of competencies that address the complexities of the modern educational landscape.

4. The literacies

The concept of literacy is widely debated, particularly regarding its various forms. At its core, literacy encompasses the ability to communicate effectively across diverse contexts, including reading, writing, speaking, listening, and visual expression. According to Lisenbee et al., (2020, p. 6) the term "multiliteracies" reflects evolving perspectives on literacy, which have shifted from traditional paper-based constructs to include transliteracies. Figure 3 illustrates this evolution, serving as a foundation for exploring academic literacy within the South African context and its relationship with digital literacy.

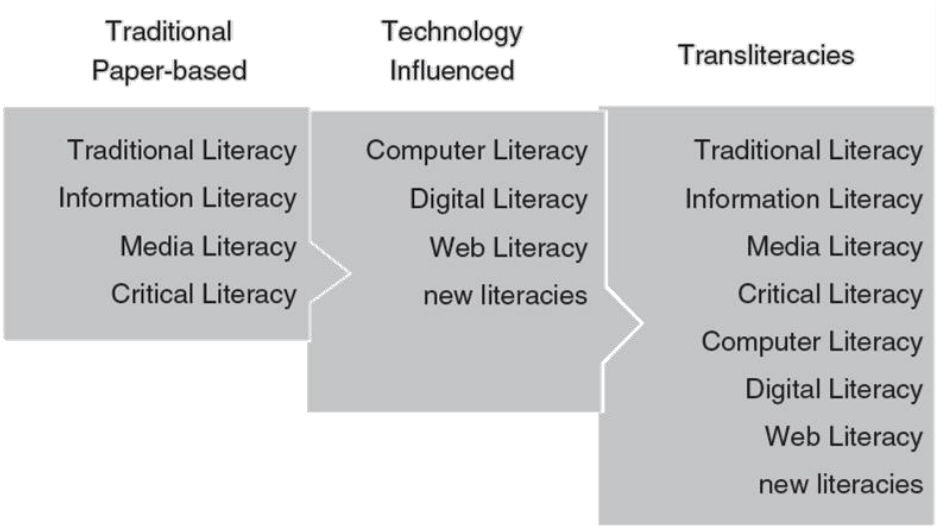

Figure 3 From traditional – to transliteracies (Lisenbee et al., 2020, p. 12)

The evolution of the literacies can therefore be seen as a logical progression from print to digital – or as depicted in Figure 3, from traditional to transliteracies. Following this logical progression of the development, traditional literacy refers to fundamental skills such as reading, writing, listening, speaking, viewing, and visual representation, and are said to be indicators of an individual's literacy level(s) which, when developed enable individuals to comprehend,

evaluate, create, and engage with information effectively (Common Core State Standards Initiative, 2010).

- Information literacy is defined as a "set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning." (Association of College & Research Libraries, 2016).
- Media literacy—predating the technologically driven era—refers to the ability to identify, interpret, and utilize sources beyond traditional media formats (Lisenbee et al., 2020).
- Critical literacy, as explained by the International Literacy Association, (2018) encompasses the ability to critically evaluate various forms of information, including written texts, visual applications, and spoken words, while
- Computer literacy, as explained by Anderson (1983) pertains to an individual's capability to use a computer in personal, academic, and professional environments. Digital literacy is defined as "the ability to find, evaluate, utilize, share, and create content using information technologies and the internet", while
- Web literacy specifically refers to the skills necessary for navigating online environments (Lisenbee et al., 2020). Web literacy is categorized into three pillars: (1) finding online information; (2) interpreting that information; and (3) sharing it effectively. Notably, being web literate also involves the ability to disseminate information via web-based platforms.
- New literacies explore advances in technology and social practices through five key processes related to online reading, research, and comprehension: (a) identifying important questions; (b) locating significant information; (c) evaluating information critically; (d) synthesizing information; and (e) using reading and writing for effective communication (Leu et al., 2004).
- Transliteracy refers to the ability to communicate across different mediums on various platforms using diverse tools (Lisenbee et al., 2020). This concept underscores the transformation inherent in all forms of literacy mentioned above.

The continuous evolution of what it means to be literate—coupled with rapid technological advancements—complicates the definition of literacy itself. However, by categorizing literacies into three groups: traditional literacies, technology-influenced literacies, and transliteracies, the transformation of literacy becomes evident. The development of technology significantly influences the literacies necessary for successful adaptation within higher education environments. Given these developments in teaching and learning practices, any intervention aimed at improving throughput rates must evolve in tandem with contemporary definitions of literacy. However, it seems that South African interventions in academic literacy have yet to be updated to meet the needs of 21st-century students.

5. Academic literary in South Africa

Academic literacy refers to an established intervention in HEI in which the acculturation and academic language developmental needs of *first-time students* are addressed (Alexander et al., 2005; Cliff, 2015; Council on Higher Education, 2017; McKenna, 2003; Nel & Janse van Rensburg, 2022; Van Dyk et al., 2014). Carstens (2013) defines academic literacy as "being multiliterate and combining a range of abilities that are conducive for making meaning as well as mediating and negotiating knowledge". Van Dyk and Van de Poel (2014, p. 46) add that academic literacy is "more than just being able to read and write". Flowerdew (2014, p. 17) also contributes to this argument by stating that academic literacy refers to the development of higher order thinking and that it not only serves as a prerequisite to produce information – in an acceptable academic language – but that this skillset has a significant impact on the cognitive development and ultimate success of students. Therefore, one could state that academic literacy refers to a student's ability to be multiliterate, transfer knowledge, and move between different discourse communities, or in simpler terms, a student's ability to access, process and produce information responsibly within their academic environment.

Accessing, processing, and producing information are crucial to student success and therefore interventions such as academic literacy, assisting students to fully acculturate into the academic community and subsequently to participate in the academic discourse are necessary. The three constructs, namely, (1) accessing information in an academically ethical manner; (2) processing information strategically; and finally (3) producing an academic text, can be regarded as three core principles which could influence a students' ability to graduate from an HEI. Despite various opinions regarding the nature and perspectives on academic literacy, the broader academic community agrees that this intervention aids in the (further) development of skills which enables students to access, process, and produce information. To achieve this, students should be able to understand how to manage their time, read at an acceptable speed and level of understanding, understand the basic structure of the written academic discourse in their specific disciplines (including the language of their discipline), know how to structure a cohesive and coherent argument, and how to find reputable academic information to integrate into their own writing (Leki, 2017; Leu et al., 2004; Prensky, 2001; Prensky, 2009). In addition, it is important to acknowledge that none of the above-mentioned can be achieved if a student cannot demonstrate a fundamental level of computer and information literacy.

Despite an agreement regarding the broad skillsets an academic literacy intervention should aim to develop, there is an ongoing debate regarding the understanding of academic literacy. First there is what is known as the autonomous model, and secondly the less dominant ideological model (Boughey & Mckenna, 2016). The autonomous model refers to a view where reading and writing constitute a set of "skills focussing on the encoding and decoding of a printed text" (Street (1984, p. 28). Street (1984, p. 16-39) defined the autonomous literacy model as a cognitive skill and regards literacy as a tool for acquiring knowledge and information. The technical component of language is highlighted in this autonomous model, which can prove to be problematic as no one is a mother tongue speaker of English for

Academic purposes. The second model, the ideological model, focusses on the social practice of literacy thereby eliminating the "imposition of a western conception of literacy on other cultures" (Street, 2006, p. 2). It is in this model where the need for students to reflect on their own learning process and the development of critical thinking abilities is highlighted, where self-directed learning is encouraged, and where a definite shift towards a more student-centred teaching and learning approach are seen. The social nature of learning, as asserted by Vygotsky (1978), is integral to this model and collaborative learning as well as the acknowledgement that knowledge is actively constructed by individuals through meaningful interactions with content and other is key.

Based on the above-mentioned it is evident that there is a central debate regarding academic literacy. On the one hand one can follow the autonomous model, where academic literacy is seen as a set of neutral skills and competencies that students need to develop to effectively engage with academic texts and discourse, academic literacy skills are standalone, universal, and transferable across contexts (or context-independent), i.e., all students should be able to master the "shared" skills needed to encode and decode a text. On the other hand, the ideological model sees academic literacy as being embedded in social and cultural contexts and that the values of the discourse community (the academic community) will influence the acceptable practices. Street's argument (Street, 1984, 2006) that literacy is diverse and that individuals engage differently with written and spoken language emphasises the social construction of literacy has had lasting impact on literacy studies. Approaches to student writing and literacy in academic contexts can be conceptualized using three overlapping perspectives (Lea & Street, 1998, 2006; Street & Lea, 2000). These perspectives/models can be (briefly) summarised as:

- **Study skills:** Academic literacy is seen as the development of specific skills needed to be "academic literate". This approach refers to an *en masse* presentation of remedial lessons/interventions (Johl, 2002; Lea & Street, 1998; Warren, 2002). This approach can however be perceived as problematic since there is no specific focus, i.e., the approach is not discipline specific (Wingate, 2007, p. 396).
- **Academic socialization:** This process involves orienting students to academic learning and acculturating them into the subject's specific discourse and genre conventions (Lea & Street, 2006; Street & Lea, 2000).
- **Academic literacies:** This skill is concerned with "meaning making, identity, power, and authority, and foregrounds the institutional nature of what counts as knowledge in any particular academic context" .(Lea & Street, 2006; Street & Lea, 2000).

From this brief discussion it should be evident that the varying approaches to academic literacy can cause problems regarding the exact nature of academic literacy, and one's definition of, and approach to academic literacy will depend on one's position and academic background in relation to the field of study. However, if one considers the purpose of academic literacy, while keeping the low throughput-rates and evidential problems with high school education in mind, the argument can be made that there is room for both an autonomous and ideological model,

while only a combination of the three above mentioned perspectives would suffice in the South African HEI context.

Following the drive to incorporate technological advances into teaching practices (multimodal, hybrid teaching) educationists are experiencing and facilitating the transition from paper-based to screen-based communication and teaching and learning, which is inevitably changing the skills needed to access, process, and produce information. If we, as educationists, are experiencing the transition, how is it affecting students? Figure 4 depicts some of the perceived challenges with the move to a more technologically driven teaching and learning approach.

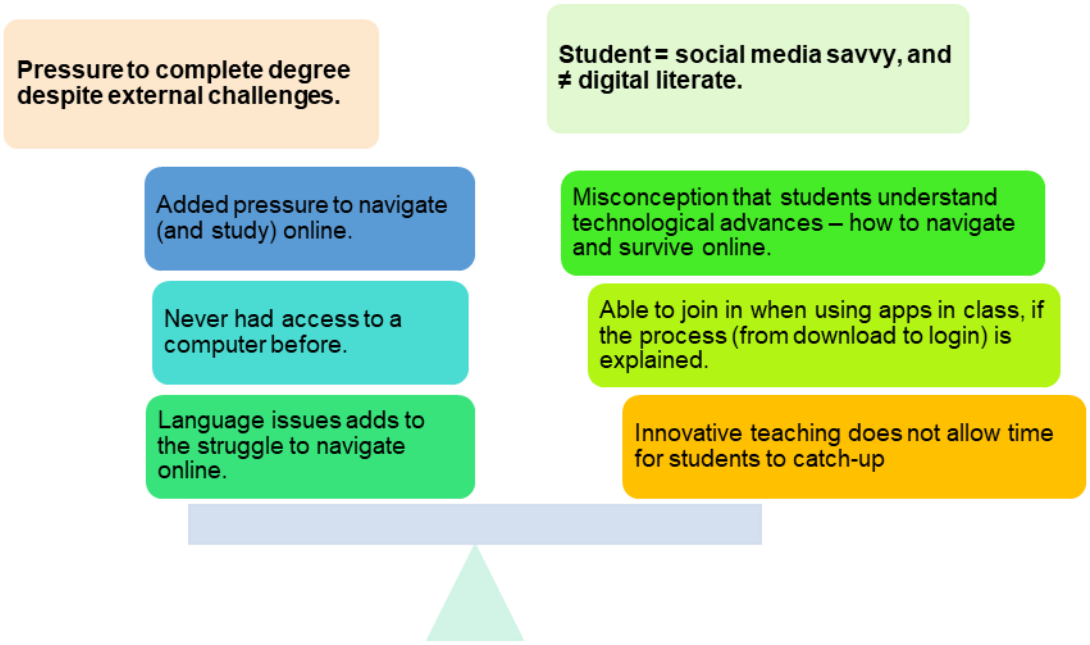

Figure 4 Digital divide adding pressure to student success

While it may seem that all students are digitally adept, Figure 4 reveals a more nuanced reality (as experienced in my own classes), where many students face significant obstacles in adapting to technology-mediated learning. This underscores the need for targeted support to ensure that all students can successfully navigate the digital landscape.

In addition to the existing challenges students might experience during the acculturation process they are believed to have already mastered the skills of navigating the online environment, which is not true for all students. Despite growing up in the digital era not all students are digital natives, and even more so not all students are digitally literate. It is important to make a clear distinction between digitally literate and being social media savvy. Although students are more adept at using social media, not all have had the opportunity to work on a computer, search for information, or to work on educational websites before enrolling for a tertiary qualification. To illustrate this, one need only think about the most recent online research article one has read, which will activate thinking about the process of identifying and opening that specific article. Let me attempt to summarise the process (from my perspective – Figure 5).

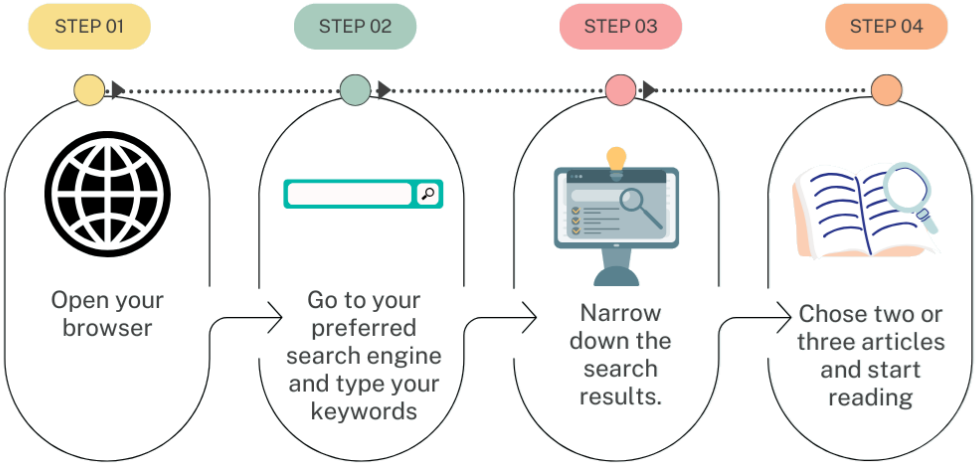

Figure 5 Steps to finding an academic article: Post-graduate and up

In contrast to the more streamlined process outlined in Figure 5, first- and second-year students may encounter significant challenges, as illustrated in Figure 6.

Figure 6 Steps to finding an academic article: First- and second year students

As Figure 6 highlights, the seemingly straightforward task of finding an academic article can be fraught with complexities for students who may lack the requisite digital literacy skills. Although the process of finding an academic article will most definitely differ between individuals, and although not all students will experience difficulties when trying to find a relevant academic article, the reality is that in the South African context it is highly likely that there will be students who have yet to do a simple web search on anything but a cell phone in your class.

Keeping in mind that some students might have yet to work on a computer, or use the internet for anything but social media, our expectations of first-year students might be skewed (considering the support they receive). During their first year it is expected of students to be able to find and read an online article, complete e-assessments, participate in discussions (most probably in class but also on the institutional LMS), access learning materials on the LMS, prepare for classes (LMS), submit assignments, navigate institutional websites/LMSs to find information relevant to them, access online timetables, access results (online), send and receive emails (there is a good possibility that the institution might have a preferred email provider – in which case the students will have to set-up or access the new email address). Is it possible, without any doubt, to say that all first-year students will be able to complete these tasks?

What about the existing interventions such as academic literacy? While academic literacy includes the development of specific skills needed to access, process, and produce an academic text, it also includes more general skills, such as reading strategies, time management, and ethical academic conduct, needed to successfully acculturate to the academic environment. The problem is that the crucial digital literacy skills has yet to be added to these interventions. Yes, academic literacy does (in most cases) include a computer and information literacy component, but this component is not developed to encompass the digital literacy needs of students. The existing computer and information literacy components are set to educate students on the basic Microsoft Office functionalities, the difference between hardware and software, what academic integrity refers to and how and where to find information on institutional websites. Furthermore, it aids students in understanding how a library works, how to use online search engines, and how to use resources such as RefWorks. While educators continue to find pioneering approaches to teaching and learning and improve the online presence and eLearning offered in their modules, students are struggling to navigate learning management systems and execute basic online functionalities.

To address this issue educators first need to acknowledge and understand that millennials are not necessarily digitally literate despite being digital natives: simply because someone was born in the digital era does not mean that they know how to navigate the online environment. Referring to the evolution of literacy as explained by Lisenbee et al. (2020), it seems that academic literacy includes aspects from the traditional paper-base, and some of the technology influenced literacy – computer literacy is included. The problem seems to be that the higher

education system needs to start including so-called *Transliteracy* in the various interventions offered to improve student success. Indeed, if we were to add digital literacy to our offerings, we would already be addressing some of the problems students encounter.

6. Digital literacy

Digital literacy is a multifaceted concept that has evolved with the increasing integration of technology in teaching and learning practices. It encompasses various competencies, including the ability to read, interpret, and manipulate media such as text, sound, and images to generate and apply new knowledge from digital contexts (Jones-Kavalier & Flannigan, 2006). It involves developing digital skills, defined as the ability to use ICT tools to access and manage information and proficiency in basic technological tasks like sending emails, using software such as Microsoft Word, and conducting online data searches (Mohammadyari & Singh, 2015). According to Law et al. (2018), digital literacy is the ability to access, manage, understand, and create information safely using digital technologies, aligning closely with academic literacy. It also involves leveraging digital tools across multiple competency areas (Tour et al., 2022). Furthermore, Takavarasha et al. (2018), describe it as a synthesis of technological and information literacy, emphasizing critical thinking, e-safety, collaboration, and cultural understanding.

While these definitions provide a comprehensive overview of digital literacy, Jones and Hafner (2021) compiled a list of necessary skills for success in "doing old things in new ways." These skills include the ability to quickly search through and evaluate vast amounts of information; create coherent reading pathways through interconnected texts; discern truth from misinformation within a complex information ecosystem; establish connections between disparate ideas and experiences; capture and edit digital photos and videos; produce complex multimodal documents that integrate text, graphics, video, and audio; maintain dynamic online profiles while managing extensive social networks; navigate online environments and digitally augmented physical spaces; and protect personal data from misuse amid constant surveillance by peers and corporations.

Despite these insights into digital literacy as a functional construct, there is criticism regarding its autonomous nature. It seems that digital literacy is seen as an autonomous construct, and that it refers to a list of skills all individuals could develop and then apply to different situations. Socio-cultural scholars criticise this autonomous point of view and argues that it is not as easy to transfer these digital skills from one context to another, and that simply acquiring these skills does not guarantee their effective transfer across different contexts. Communication in digital spaces is influenced by cultural factors, context, and situational circumstances (Gee, 2015; Tour et al., 2022). Recognizing literacy as a "social practice that varies from one context to another" Street (2009) suggests that different modes of literacy necessitate distinct skills based on specific contexts. Tour et al. (2022), further emphasize that the transition beyond print-based

practices occurs when individuals engage with digital environments. Pangrazio et al. (2020), assert that although the debate surrounding the precise definition of digital literacy continues, how "digital literacy is conceptualized" carries significant implications for pedagogy and research in this domain. This ongoing discourse mirrors the debates surrounding academic literacy, highlighting a persistent contention regarding what it truly means to be literate in contemporary society.

What is noticeably clear from the existing literature is that we are faced with various overlapping concepts between digital and academic literacy. The similarities are evident in several key areas. First, both require the critical evaluation of information. In academic literacy, this involves assessing the credibility and reliability of sources such as journal articles or academic books. Similarly, digital literacy entails evaluating online information for accuracy and identifying misinformation or fake news. Second, effective communication is central to both domains. Academic literacy emphasizes formal writing and proper citation in academic essays, while digital literacy includes crafting professional emails, creating multimodal presentations, and adhering to appropriate online etiquette. Third, research skills are pivotal to both literacies. Academic literacy encompasses developing research questions, conducting literature reviews, and synthesizing academic texts, whereas digital literacy involves using search engines effectively, navigating digital databases, and managing reference tools such as EndNote. Lastly, multimodal composition links these literacies by promoting the integration of text, graphs, and tables in academic arguments and extending to digital storytelling, video editing, and interactive presentations in digital literacy.

The constructs of digital literacy and academic literacy are both nuanced and contested, with overlapping yet distinct elements. Students must be empowered to navigate and master various facets of digital literacy, such as ICT literacy, digital competence, and techno-literacy. However, a clear consensus on the definition of academic literacy in the South African context is still lacking. Given the evolving nature of both concepts and their inherent interconnectedness, it becomes imperative to reconceptualize academic literacy to incorporate digital literacy. This integration is crucial to address the complex challenges faced by students in the 21st century and to equip them with the necessary skills for academic success.

7. Conclusion and recommendations

With the increased presence of ITC in HE – incorporating technology into teaching and learning practices – it is important to be aware of the impact that technology has on the teaching of literacy as well as the skills needed to successfully navigate the "new" HE environment. Lisenbee et al. (2020) argue that regardless of the terms used to describe 21st century literacy skills, ICT will be used to access, process, and produce information. As initially explained one can distinguish between different traditional and 21st-century literacies (refer to Figure 3). It is however evident that within the South African context we have yet to move to incorporate what

Lisenbee et al. (2020) grouped as the third literacy group – the Transliteracies. As previously stated, most of the current academic literacy offerings include some of what is referred to as the technology influenced literacies, but there is a glaring gap regarding support in the development of crucial digital literacy skills.

It is quite possible to include digital literacy in an academic literacy offering. Firstly, both these literacies can be seen either as an autonomous or ideological model. Autonomous model referring to a set of neutral skills and competencies that students need to develop to effectively engage with academic texts and discourse, these skills are standalone, universal, and transferable across contexts (or context-independent), i.e., all students should be able to master the "shared" skills needed to encode and decode a text. If approached as an ideological model literacy is seen as being embedded in social and cultural contexts and that the values of the discourse community (the academic community) will influence the acceptable practices. This model further asserts that it is not as easy to transfer these skills from one context to another, and that communication in the digital sphere will be influenced by culture, context, and circumstance. In addition, academic and digital literacy are compatible in terms of the skills needed to become proficient in each.

When comparing the basic skills associated with academic and digital literacy, students who master these skills should be able to search through and evaluate large amounts of information; separate the 'true' from the 'fake' in a complex information eco-system; make distinctions between essential and non-essential information, fact and opinion, propositions and arguments; distinguish between cause and effect, classify, categorise and handle data; create coherent reading pathways through linked texts; make connections between widely disparate ideas and domains of experience; understand relations between different parts of a text, be aware of the logical development; interpret different kinds of text type (genre) and show sensitivity for the meaning that they convey and the audience that they are aimed at making meaning (e.g., of an academic text) beyond the level of the sentence.

In addition to the shared skills (although used on different mediums) there is another crucial link between academic and digital literacy. Guerrero-Nieto (2007, p. 223) refers to Vygotsky's concept of mediators (the intervention of a third element to help develop abilities) when they state that the "individual does not establish a direct relationship with the world, but that this relationship is mediated through the use of tools". Vygotsky (1978) differentiated between three kinds of mediators, (1) material tools – anything designed to master nature (from a wheel to a laptop), (2) psychological tools – these tools evolve as humans do and refers to higher intellectual processes, (3) other human beings – establishing relationships between mental representations and the world. Language and dialogue with others (sociocultural), educators, and peers can be seen as mediators in the learning process. However, Fotos and Browne (2004, p. 7) Li (2006, p. 16), Warschauer, 1997) and Guerrero-Nieto (2007, p. 223) state that technology is also a mediator in the learning process. If technology is considered as a tool to

mediate between students' minds and the world, it means that we could use technology to improve L2 language acquisition (in this regard I refer to my initial statement that English for academic purposes is a L2 for everyone) and essentially student success.

Enhancing students' digital literacy will allow educators to try and close the achievement-gap, and subsequently better equip students to navigate the digital HE environment. It is evident from this discussion that aspects of the Transliteracies need to be included in South African interventions, and that our current inclusion of computer and information literacy is not adequate anymore. Academic literacy, as an intervention aimed at the (further) development of crucial literacy skills needed to acculturate to the HE environment and complete a tertiary degree, is uniquely situated to enhance digital literacy (which shows several overlaps with academic literacy). Considering the need to develop new skills (acculturation process), and Vygotsky's scaffolded approach to learning (and mediation) it seems obvious that our current academic literacy offering needs to be re-evaluated to better support students.

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