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University lecturers' perceptions of the value, availability and accessibility of prescribed study material in South Africa

Nduduzo C Ndebele¹, Mfundo Mandla Masuku² and Victor H Mlambo^{3*}

Abstract: This study explored the pedagogical dimension of the new NSFAS book allowance funding model focusing on the availability of prescribed textbooks, the perceived impact on teaching and learning, and student's academic achievement. The study applied the human activity system approach (HAS) and the activity systems model within this approach as its theoretical framework. A sample of 10 lecturers drawn using convenience sampling participated in semi-structured interviews designed within a phenomenology research framework. In the findings, lecturers reported a significant decline in the availability of prescribed textbooks among students and generally unsuccessful attempts to replace these with open educational resources. Consequentially the lecturers said the suboptimal academic performance was a direct output of the new NSFAS book allowance system. It was recommended that NSFAS engage lecturers in decisions relating to book allowance funding as their pedagogical approaches strongly relied on prescribed textbooks' availability. Universities should support policies and strategies that support the development, evaluation, and use of Open Educational Resources (OER) to increase the benefits of these resources while minimising their risks to students' performance.

Subjects: Educational Research; Higher Education; History of Education

Keywords: Higher education; development; growth; support

1. Introduction and background

The study locates itself within the South African higher education domain. The South African democratic government (of 1994) inherited an unjust higher education system whose inequalities included preferential access to higher education for whites and limited higher educational opportunities for the black majority. The National Student Financial Aid Scheme (NSFAS) therefore became an important policy framework to assist the government in promoting inclusive higher education. However, despite this, the government faced considerable challenges. A report into funding higher education in South Africa commissioned by the government affirmed two important issues, firstly, there is an ever growing demand for higher education and there are more students than the sector can handle and secondly, the country does not have the sufficient means to provide all students with funding given the weak economy. However, current debates and concerns around the NSFAS funding model centre around one primary concern, relating to the dispensing of the study material allowances namely, the growing discontent about how allowances earmarked for prescribed study material purchases are being used by students. This has caught the attention of the Higher Education Ministry, which called for an urgent study to determine the academic implications of a decline in the purchase of study materials, including

prescribed books. Central to this uneasiness was a warning issued by the South African Book Sellers' Association. The association argued that the NSFAS study material allowance deposited into students' personal bank accounts was not necessarily being used for its intended purpose. The *Students' Access to and Use of Learning Materials Survey Report 2020* by the Department of Higher Education and Training (DHET) showed that many university students failed to access prescribed study material. The report shows that 27% of the surveyed students did not buy any prescribed book for their semester (Department of Higher Education and Training, 2020). Of those who bought prescribed textbooks, 49% spent less than a third of their book allowance, indicating a very low investment rate on prescribed textbooks and the use of book allowances towards other needs. Also, the survey showed that 68% of students relied on various forms of online content to substitute or supplement prescribed books. Overall, the study highlighted a lower-than-expected propensity to buy mainstream prescribed student material. While the study looked at the phenomenon from a student perspective, not many studies highlight university lecturers' perceptions on the emerging dynamics of prescribed textbook access under the new NSFAS study material allowance disbursement system. The new system gives qualifying students up to R5200 per year as study material allowances with the freedom to utilise this amount without any form of accountability. This differs from the pre-2019 system that involved giving students book vouchers redeemable at selected bookstores (Chawane 2021).

This study is a response to the multiplicity of views and arguments that digital technologies have an adequate compensatory effect on reduced prescribed textbook purchases (Reinken et al., 2021). Such arguments imply that the new system would therefore not result in any decline in students' academic performance. On the other hand, some researchers, argue that the new system's diminished textbook purchases have resulted in a decline in academic performance, thereby refuting any claims under the compensatory effect argument. For instance, a South African study by Swanepoel et al. (2021) found that some students performed badly at assessments as a result of assuming that online content was better than prescribed study material. Open educational resources (OER) were slowly substituting prescribed material, driven by the above notion of the diminishing role of traditional textbooks in a digitalising world alongside students' personal economic debates on whether to invest in textbooks or use available resources for other purposes (Swanepoel et al., 2021).

The transformation towards a student-managed book allowance system was multi-dimensional and occurred under the auspices of the student-centred funding model that attempts to put the students' interest to the fore (Parliamentary Monitoring Group, 2019). Its consumer dimension was that it would give students the independence to look for the best study material on offer, noting concerns about the manipulative pricing systems that were associated with some of the NSFAS-nominated booksellers (Phakathi, 2019). The technological dimension was that society was moving away from mainstream print material towards more widely available digital content (Department of Higher Education and Training, 2020). One of the reasons behind the changes in the book allowance disbursement process was therefore to enable students to harness emerging technologies that support study content access. It was argued that under the old NSFAS funding system, students were restricted to the use of traditional hard-copy textbooks they had to buy from nominated booksellers (Phakathi, 2019). They could therefore not effectively participate in the online book markets that provided similar prescribed content at much affordable rates. The third dimension was personal, aiming to encourage a sense of personal responsibility in students (Parliamentary Monitoring Group, 2019). There was also a suggested political dimension centred on the view that the transformation was a move to pacify universities in response to students' growing bargaining powers for a student-centred model of funding (Parliamentary Monitoring Group, 2019).

This study, therefore, aimed to develop an understanding of the accessibility and availability of prescribed material and its impact on students' academic performance from the lecturer's perspective in an environment where mostly the student perspectives have been explored. It also

intended to explore the less-discussed view on the impact of OER on students' academic performance in the new NSFAS book allowance funding environment. The following research question guided the study: do lecturers feel that the unavailability of prescribed study material effects the academic development and productivity of students? And between the old and new NSFAS system of study material allowances, which one do lecturers prefer?

2. Literature review

2.1. Definition and types of prescribed textbooks

The University of the Witwatersrand (2021:1) defines prescribed textbooks as books “which the course coordinator (academic staff) list as essential reading and (of which) students are advised to purchase a copy”. Likewise, the University of Pretoria (2022) states that the acquisition of prescribed textbooks is the student's responsibility. Ouahada (2019) believes that prescribed books are part of the four components of a course, the other three being notes, practicals and tutorials. However, they recommend that lecturers should widen choices of prescribed books to increase students' knowledge horizons rather than over-relying on a few, rigid sources. This study argues that despite the growth in the usage of e-books, traditional textbooks purchased from bookshops remain an important element for student academic development in the South African higher educational sphere.

Behnke (2018) highlights the concept of an “authentic” textbook versus a non-authentic one, with the former being formally prepared, reviewed and edited within a professional publishing house environment. Authentic textbooks can be both printed and virtual (Behnke, 2018). This classification places a stigma on textbooks that have not gone through a recognised publishing house, as is the normal practice. Schultz (2017) notes that two disruptive trends have resulted in the questioning of the need for the traditional, printed textbook—the rise of the e-book and the advent of self-publishing. These trends have resulted in an increase in volumes of available study content for university students as well as quality management dilemmas for such content. Schultz (2017) notes that some universities have responded to the trend by developing their own textbooks as part of prescribed course content to ensure better accessibility. However, even with such university developed content, the risks of missing out on the traditional benefits of the textbooks remain.

From the above classifications, prescribed textbooks can be virtual or physical, internal or external, free or purchased, self-published or publishing company published. The principal deciding factor in what qualifies as a prescribed book or not is the course coordinator. The concept of personal volition in study material choice is not new and lecturers are generally directly or indirectly empowered to make choices on the type and form of prescribed material (Cox & Trotter, 2017).

2.2. Functions of prescribed textbooks

As highlighted above, some scholars are wary of the risks of losing the traditional benefits of mainstream prescribed textbooks (Schultz, 2017). Prescribed textbooks serve critical pedagogical functions. Ibragimov et al. (2016) found that textbooks had many functions beyond content transmission from authors to readers. These were “informational, transformational, systematising, organisational and procedural, fixing and self-controlling, self-educational, scientific—research, integrating, coordinating, and social” (Ibragimov et al., 2016:343). The multiplicity of the roles played by textbooks called for enhanced quality management processes that should ensure that universities take part in textbook creation. Furthermore, the authors contended that a prescribed textbook is not only informational but is part of the teaching and learning methodology. In the context of this study, prescribed textbooks guide the instructor, helping them to deliver more effective lessons although there are risks of overdependence on these resources. Undoubtedly, it becomes important for one to note that the availability of prescribed textbooks is beneficial for both the lecturers and the students. For the student, it ensures access to information which is vital

in terms of academic development and progression, while for the lecturer, it ensures the delivery of quality content. The lesson is an interaction of the teacher, the prescribed textbook and the student supported by other forms of content (Leshota, 2020). This places the prescribed textbook beyond a simple resource important for the student's comprehension of course content to an integrated resource that links the student to the instructor.

According to Behnke (2018), authentic textbooks are written in comprehensible language styles that resonate with a study's content and context. They offer benefits of language improvement in readers. The same author asserts that while some academic material is written and presented in "user-friendly" mode, the risk that this comes with is the development of poor comprehension skills among readers. Textbooks are also associated with an improved grasping of key concepts compared to other sources. Morgan (2014) notes that textbooks support critical, verbal reasoning and analytical thinking and this is the main function of their content and structure. Authentic textbooks go beyond content presentation, focusing on how the reader is both stimulated and engaged. Ouahada (2019), however, found that prescribed textbooks were not always positively perceived by students, with some viewing them as difficult to understand—thereby making the course difficult to understand. Other negative views on textbooks are on their unavailability and costliness. The price of textbooks in South Africa has become another considerable challenge for students from a poor socio-economic background. Costly textbooks comprise one facet of a larger crisis in tertiary funding that has seen widespread student protests in the South African higher education sector (Nkosi, 2014). This study argues that the R5200 yearly allowance from NSFAS for the purchase of prescribed textbooks is simply not enough to cover the cost of study material. This was confirmed by one student who said, "I depleted the money in the first semester, In the second semester, I had to buy from my own pocket, These books are expensive, [We need] an awareness campaign to help make studying a lot easier for disadvantaged students." (Nkosi, 2014).

3. Lecturers' perceptions on open educational resources (OER)

Some studies have focused on university and college lecturers' perceptions of open educational resources (OER). A study by Reinken et al. (2021) showed that lecturers' quality assessment for OER depended on personal teaching methodologies and preferences. In terms of teaching methodology, lecturers preferred OER that supported student engagement and motivation, related and supported course goals and objectives and was relevant to the student groups' context. In terms of content, lecturers mostly valued correctness, followed by intelligibility and coherence. Furthermore, Karunanayaka et al. (2013) are of the opinion that OER is a major breakthrough in higher education which promotes sharing, adaptation and contextualisation of course content. Using OER can be very cost effective since development of new course content is both expensive and time consuming. However, there is a need for awareness raising and capacity building for both lecturers and students to exploit the full potential of OER. In a study of three South African universities, Cox and Trotter (2017) found that lecturer adoption of OER was dependent on a multiplicity of factors that included university policies and digital infrastructure. Of interest to this study is the content aspect of OER and on this Cox and Trotter (2017:301) found that the availability of "relevant OER of requisite quality" played a major role in influencing adoption. Cox and Trotter (2017) note that even when lecturers had the awareness, capacity, access and rights to use OER, if the quality and relevance parameters were not met adoption was very unlikely. Nonetheless, Yuan et al. (2008) noted that OER was gaining increased attention for the potential to transcend demographic, economic, and geographic educational boundaries and to promote life-long learning and personalised learning. The rapid growth of OER provides new opportunities for teaching and learning and, at the same time, challenges established views about teaching and learning practices in higher education.

4. Prescribed textbooks, OER and academic performance

Fischer et al. (2015) found that tertiary education students making use of module- supported OER did not perform any worse than those making use of authentic textbooks. Such findings were considered critical for African students who struggle to access authentic, prescribed textbooks . At

the same time, Fischer et al. (2015) caution that these resources go through varying processes of quality control, with some going through none. This quality management aspect is considered a risk that can adversely affect users.

University of the Pacific, (2020, n.d.) cautions that OER sources are exposed to objectivity, accuracy, relevance, currency and authority issues. Their sustainability is also questioned, especially with regard to how long content creators can carry on developing reputable content without stable incomes. University of the Pacific, (2020, n.d.) also notes the methodological teaching and learning challenges that come with OER, especially the limited interaction between students and lecturers. Regardless, some scholars see OER as liberating academic content for low-income students, considering the ever-escalating costs of prescribed textbooks (Jenkins et al., 2020; Stein et al., 2017). While this study supports the need to accelerate the adoption of OER in South Africa's higher education system, it notes that the trend has not only been driven by an increase in the price of textbooks, but also by the massification of higher education. Though OER could benefit both students and lecturers, Cox and Trotter (2017) note that factors such as infrastructural access, legal permission, conceptual awareness, technical capacity, and material availability can influence how quickly OER is adopted. This confirms that studies which suggest that OER quality management, rather than the mere availability of OER is what eventually affects students' academic performance.

5. Financial aid and prescribed textbooks

Book allowances are a form of student financial aid earmarked for the purchase of study material. Pingel et al. (2018) believe that effective student financial aid programmes have four core characteristics: they are student-centred, they are flexible, they are goal-oriented and measurable, and they are inclusive. The Department of Higher Education and Training (DHET) acknowledges the student-centric aspect of student allowances (Parliamentary Monitoring Group, 2019). Various sources advocate funds use accountability as an important indicator of financial aid integrity. In a South African study, Mngomezulu et al. (2017) recommend accountability mechanisms for all forms of student aid to ensure that received assistance meets the desired goals. They highlight a link between financial aid and its responsible use on the one hand and positive academic achievement on the other. Nguyen et al. (2018) highlight the fact that even with adequate funding, poor utilisation and lack of goal orientation can result in students failing to complete their studies. Among other challenges, students may be convinced or even coerced to utilise funding for purposes it was not allocated for (Nxumalo, 2020). The above scholars hint that varying levels of government or academic institution involvement are needed in the utilisation of financial aid that includes book allowances. They suggest that merely providing funding is not adequate to ensure that the desired academic goals are achieved. Evidence from South African studies indicate that higher education institutions are making progress to ensure students access imprint and e-books through institutional libraries. Processes such as including the issuing of study guides and reading packs for most disciplines have been adopted to ensure access. However, Elitha van der Sandt, chief executive of the South African Book Development Council lamented the lack of support for the book industry in South Africa, arguing that "there is still no [government] book policy or any other plan to increase access to books". It points to the book industry not being a priority—there is no dedicated plan to assist the industry (Nkosi, 2014).

6. Theoretical framework: The human activity systems approach (HAS)

This study applied the human activity systems approach (HAS) as its theoretical framework. HAS is associated with the works of Peter Checkland (1999) who extensively researched soft systems in response to the failures of a traditional systems approach (hard systems) to resolve business challenges (Burge, 2015, n.d.). The HAS is an organised interrelation of human beings and resources designed to meet defined goals. Human activity systems focus on one or more of the following: achieving goals for an individual, achieving goals for a group or collective, achieving goals for the broader external environment (Rousseau et al., 2018). This incremental

goal-seeking and achievement process involves the manipulation of inputs, processes and outputs within a clearly defined and bounded environment (Calvo-Amodio & Rousseau, 2019). Thus, human activity systems are generally described as open systems, albeit that some activities may occur within closed systems that have no direct connection with the wider environment (Burge, 2015, n.d.). the dominance of natural people-driven activities is what distinguishes HAS from other technical and socio-technical systems (Burge, 2015, n.d.) .

According to Calvo-Amodio and Rousseau (2019: 94), human activity consists of definable parts and these have three core characteristics. They can be ideological/conceptual or physical, “produce persistent structures, processes, and meanings”, and are influenced by the capabilities of involved units (Calvo-Amodio & Rousseau, 2019: 93). Human activity systems are therefore non-random and are formed with the intention of addressing or responding to human needs, especially the need to optimise relationships with the environment. It is in this same environment that goals, objectives and purposes emerge. Rousseau et al. (2018) identify five capabilities of human activity systems. These are “purposeful, flexible, adaptive, collaborative, learning, and appreciative.” Thus, a human activity system, as alluded to earlier, is purpose-driven and flexible, which allows it to adapt to its environment (Rousseau et al., 2018). It is also a product of collaborative interrelationships in which parties can learn from past activities.

Looking at the above from an input-process and output perspective also supported by HAS, the study’s focus is on the interaction of inputs, processes and outputs relating to prescribed student material availability and the outcome this produces. The system’s activity of interest is therefore teaching and learning as perceived by university lecturers. This input-process-output relationship is further explored within the activity systems model.

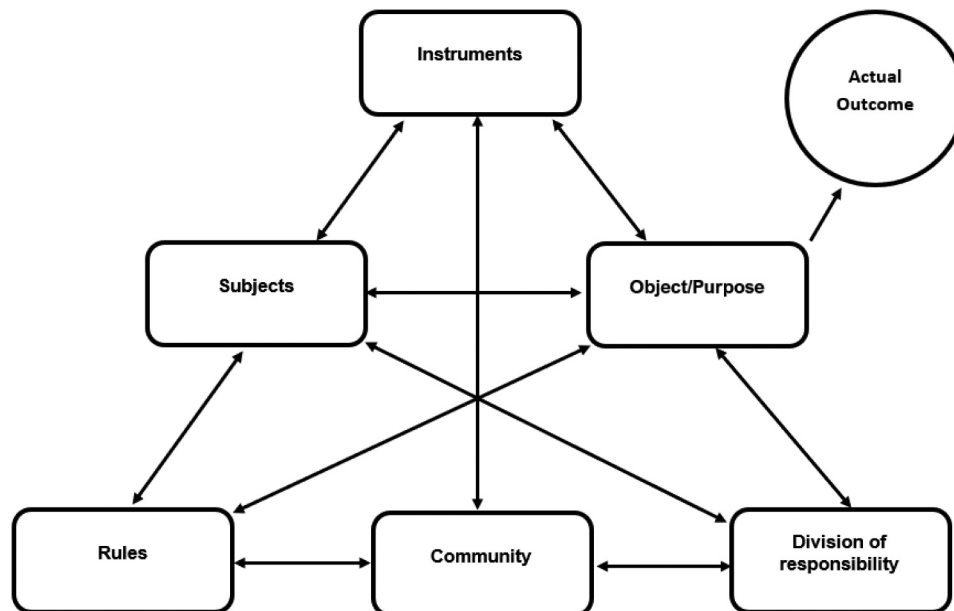
7. The activity systems model (ASM)

Koumara and Plakitsi (2020) present the HAS as a function of several entities, specifically, tools, subjects, rules, objects, division of labour, community and the object based on the works of Engeström (1987). They perceive the Engeström triangle, also referred to as the activity’s systems model (ASM), as a depiction of a HAS at play.

Lindblom and Alenljung (2020) state that the figure 1 is a depiction of a HAS in which human beings are empowered subjects that could influence their environment. The ASM as a function of

Figure 1: Activity systems model

Source: Engeström (1987)



HAS as presented by (Koumara & Plakitsi, 2020) bears much relevance to this study's components. Figure 1 shows how several important factors that play a crucial role within an activity. These factors are continuously shaping and being shaped by all other factors within the activity, hence the double-sided arrows

Relating the above to this study, "instruments" refer to prescribed study material, "subjects" to university students and lecturers, "rules" to teaching and learning guidelines (specifically the use of prescribed textbooks for studies) and "community" to the university environment and its stakeholders. The 'division of responsibility aspect relates to how stakeholders share their roles and responsibilities in an attempt to reach a given and agreed purpose (the "object"). In this study, the division of responsibility of interest is that between students as recipients of knowledge and lecturers as givers. The HAS adopted for this study is used in an attempt to explain the interaction of the above entities in the production or non-production of desired academic output given the new NSFAS book allowance disbursement method. Burge (2015, n.d.) comments that the multiplicity of parties involved in the HAS means that conflict is a common phenomenon. Using the triangle it is possible to foresee areas of potential conflict that are depicted by the smaller triangles within the whole (Fujita & Brett, 2008). For instance, looking at the uppermost triangle, a conflict among the subjects, the instruments/tool and the object may ensue as a result of the subjects (in this study's case lecturers and students) not agreeing on the optimum instruments that can effectively and efficiently enable the attainment of the desired academic object.

8. Methodology

This study applied a qualitative research methodology and used semi-structured interviews to collect data. The study used a qualitative phenomenology design. The object of this design was to facilitate the understanding of the lived experiences of social actors of interest through their own words (Creswell & Creswell, 2017). Its advantage to this particular study was that it empowers the respondent's voice taking it as the key source of information undiluted by external views (Creswell & Creswell, 2017). Convenience sampling was used to select 10 participants who all lectured full-time at the university. The sample size was determined using the "saturation point" approach (Kumar, 2018), meaning that the researchers reviewed the collected data to identify whether later collection efforts yielded any data that was significantly different from the data collected in the early collection attempts. Data were analysed using inductive thematic analysis on Atlas.ti., version 8 and classified into systems approach components of inputs, processes, and outputs.

9. Results

The study's sample consisted of 10 university lecturers from one of the South African universities. Participants 1 to 3 were from the Arts Faculty, 4 and 5 from the Faculty of Commerce, 6 to 8 from the Faculty of Education, and 9 and 10 from the Science Faculty.

10. Inputs: The perceived learning benefits of prescribed textbooks

The benefits of using prescribed material included enhanced academic writing skills, and analytical and critical thinking skills. These are on top of the core advantages of getting rich educational content that meets module needs as highlighted below:

(Prescribed textbooks) add value to students' academic performance. Students can read and critique what they are reading and improve their vocabulary. (Participant 2)

(Prescribed textbooks) help us as lecturers to understand and track student's performance and it is easy to assume that students who do not have the prescribed textbooks may encounter difficulties in the teaching and learning process (Participant 5)

The lecturers' views on why prescribed textbooks were critical for learning are summarised below:

Table 1. Perceived learning benefits of prescribed textbooks

Factor	Participants
Enhances academic writing, vocabulary	1, 3
Develops analytical skills	1, 3, 8
Supports critical thinking	1, 3, 8
General research skills	4, 8
Interpersonal skills	4
Rich, in-depth content	All

The lecturers, therefore, saw prescribed material not only as a source of academic content but as exemplary material that students can refer to for the development of writing, research, and critical thinking skills. Thus, prescribed textbooks had wider benefits beyond simply being reference sources for the course or module content. Lecturers had a strong view that prescribed textbooks represented the desired study material input. It was further revealed that students who did not have the prescribed textbooks are regarded as students who are at risk and require extra interventions to improve their performance, as reflected by Participant 7:

We cannot just turn a blind eye to a student without study material and expect academic excellence, therefore, a tutorial programme was introduced to support students who are not performing due to various reasons such as lack of purchasing power of study material. (Participant 7)

Other inputs were alternative sources, which are discussed next.

11. Inputs: The quality of alternatives and student coping mechanisms

According to the feedback from participants, without prescribed textbooks, students resorted to using a material whose input did not guarantee the desired knowledge output but instead reduced teaching and learning process efficiency, directly contributing to sub-optimal academic performance. Open educational resources were the most discussed substitutes and because these contained a lot of irrelevant material, it took longer for students to get the critical output needed to understand study concepts or answer questions:

Students concentrate on irrelevant content – academic efficiency is compromised. The Internet has too many unreliable sources. On the internet, you find all sorts of information which is not reliable or relevant to the module. (Participant 6)

Another issue is when exam time comes, we assess students based on what is in the prescribed textbooks, this increases the risk of failing for those without prescribed study material, hence the tutorial programme and extra classes becomes an important support pillar. (Participant 7).

Participant 6's words summarise much of the lecturers' criticism of non-prescribed academic material, especially that which is obtained from the internet, including OER:

When the material is prescribed by a university, it means some assessments have been done – including the integrity, reliability, and relevance of sources. There are many self-produced, unreviewed material, and textbooks on the internet. (Participant 6)

However, while in partial agreement with the above, Participant 3 has another view and reflects that:

Textbooks are expensive and the NSFAS allowance at times cannot cover the cost of all the textbooks a student would need, hence the internet and other sources of information become an option for students. (Participant 3)

Table 2. Learning risks presented by unprescribed study material

Factor	Participant
Irrelevant content	Participants 1,2,5,8,9
Insufficient content	Participants 1, 2, 5,8, 7, 9, 10
Unreliable, untested content	Participants 2, 7, 9, 10, 11
Over-summarised content	Participants 5, 6, 8
Highly generalised content	Participants 2,5,8,9
Content that lacked originality	Participants 1, 5
Poorly written—vocabulary	Participants 2, 5, 6

Three broad issues were raised above, namely, the integrity of a source including how it was produced, reviewed and how it is presented, the reliability of the source, and its relevance to what the lecturer is trying to put across. To summarise, the academics highlighted several challenges that came with the unprescribed study material that students resorted to in an attempt to avoid buying prescribed material. Table 1 and 2 below reflects the participants' different sentiments on prescribed textbooks' perceived learning benefits. It becomes essential to note that most participants agree that the prescribed learning can benefit one's development .

The above weaknesses and demerits of unprescribed OER are strongly, but negatively, associated with the core values and capabilities that students develop when using prescribed material. Values such as picking up good vocabulary that helps interpersonal skills (Participant 4), developing analysis and critical thinking skills (Participants 1, 3 and 8), and enhancing writing skills and a sense of scholarship (Participants 1 and 3) are suppressed when one uses unreviewed OER which seems to focus mostly on providing content—content that is, according to the lecturers, arguably unreliable.

According to academics, students, therefore, risked exposure to unsuitable content that reduced their probability of meeting desired course and academic goals. There was a strong view that prescribed textbooks were the most reliable study materials that could be available to students. Nonetheless, most participants noted that interventions were useful to help those who did not have access to study material and were designed to ensure academic progression.

12. Processes: Teaching and learning efficiency

The interviewed academics directly referred to the learning efficiency concept and how it was affected by the unavailability of study material among students. Participant 5 commented that prescribed material increased student productivity. This productivity was compromised unless a student obtained access to prescribed material, including through sharing such sources with others:

Of course, there is, for a student to be more productive they would need the necessary material to partake in the course effectively without it, it is highly impossible. Unless the student has other opportunities to learn and utilizes those opportunities, for instance, if the student makes use of the learning material provided by the library or belongs to a study group. (Participant 5)

Participant 10 also noted that:

“From an educational perspective, the value of textbooks cannot be overestimated. However, we also need to take into cognizance that some books from certain disciplines are costly as compared to other disciplines. Hence there is a likelihood that students will not be able to

afford all the prescribed books, thus study groups, sharing and online sources become coping mechanisms. (Participant 10)

Prescribed material also enhanced problem-solving in cases where students encounter challenges. Common points of reference between the student and lecturer eased problem-identification and assistance processes, as highlighted below:

When students are using prescribed textbooks, it is easy to identify problematic areas and easy for them to ask me questions for assistance. Moreover, these textbooks contain practical examples that help one understand and relate to what is being taught in class (Participant 6).

Students without prescribed material were also noted as a challenge to teach. They demanded extensive provision of study notes to compensate for their inability to access detailed content from textbooks. This slowed down teaching and negatively affected students who had prescribed textbooks who will also attend lectures:

The challenge is that the lecturer has to provide everything for students and those that do not have the materials are affected and fail. (Participant 4).

In Participant 7's view, self-oriented learning flourished when students had their prescribed textbooks, creating a situation where lecturers only needed to summarise content safe in the knowledge that the corresponding detail is readily available in prescribed textbooks:

Very central in self-oriented learning—lectures summarise and textbooks give detail. (Participant 7).

Thus, it takes longer than necessary as well as having too many loosely connected sources for students to understand concepts in courses, and at the same time there was always a risk that they may completely fail to grasp the same concepts.

13. Processes: Teaching and learning effectiveness

The teaching and learning effectiveness theme emerged in response to the relationship between access and availability of prescribed study material and student academic achievement. All interviewed academics believed that students who lacked adequate prescribed study material generally recorded sub-optimal performance, with some failing their courses. As obtained from the interviews, learning effectiveness referred to the degree to which course objectives were met. Participant 2, as highlighted under the perceived learning benefits of prescribed textbooks theme above, commented that prescribed study material helped to develop critical thinking and encourage analytical skills. In Participant 8's view students without prescribed material end up copying and pasting material in response to assessment questions as a coping mechanism for failing to understand the course:

For instance, with my module. It will require a student to apply themselves. In applying themselves they need to discuss particular phenomena or topics. Without rich knowledge from a textbook, students won't be able to discuss that particular subject and they end up copying and pasting those short summaries. (Participant 8)

Such situations were quite frustrating for the lecturers as well:

I discovered that this particular student copied a journal verbatim and submitted it. Imagine. That shows that the student does not have the necessary tools, which means there is no way I as a lecturer will be happy with such a student. (Participant 1)

Table 3 below summarises common reasons why students with no access to prescribed material perform badly.

Table 3. Why students without prescribed textbooks generally perform badly

Factor	Participant
Failing to relate to/understand relevant concepts	All participants
Failing to apply critical, analytical and other skills	Participants 1, 2, 4
Generalising answers—lack of depth	Participants 1, 2, 6, 7, 8, 9, 10, 11
Failing to follow through with the teaching process	Participants 1, 2, 5, 7, 9, 11
Resorting to plagiarism	Participants 1, 2, 6, 8
Inefficiencies in self-directed study	Participants 1, 2, 4, 8

The above relates to the generally accepted role of prescribed materials in university learning. They promote self-learning while reducing excessive reliance on the lecturer; they guide the course direction; they support the development of course-relevant skills and they add detail and broader context to lecture notes. However, as noted, students had challenges harnessing these benefits owing to poor access to prescribed study material.

14. Outcomes: Poor academic performance

All the interviewed participants found a direct link between the prescribed study material and students' academic performance in a module. The absence of prescribed study materials was linked to poor student performance in assessments, including examinations:

Students without learning material (s) are very unlikely to perform at their level best because they are limited towards the access of knowledge in order to make successful completion of a particular course. They lack the necessary knowledge required and therefore to some may even result in failure of a particular module. (Participant 5)

Sub-optimal academic performance, as highlighted above resulted when students perform below their capabilities even when they do pass. Participant 5 saw a direct link between the prescribed study material and the successful completion of a course and ultimately a programme with students who lacked the latter facing this risk. Participant 1 linked prescribed material to examination content. Without prescribed material upon which exams are drafted, students would not do well:

There is a correlation between the academic performance of a student and not having prescribed study material ... they won't have anything to study for their exams. (Participant 1)

Thus, students risked complete failure, reduced levels of success and delayed success because of not accessing prescribed study material. Another participant saw students who were not exposed to prescribed material as at risk of poor professional performance in the world of work. highlighting the far-reaching effects of this phenomenon:

Students end up mischannelling the money to fund their personal things rather than buying study material. This affects them negatively in the long run as they may go out in the world unprepared. (Participant 7)

A long-term objective was equipping students with core competencies associated with a particular study area. Lack of prescribed study material jeopardized the attainment of this, creating graduates who were not ready for the professional challenges ahead.

15. Outcomes: Personal and professional frustrations of lecturers

The participants also highlighted that lack of prescribed material and the likelihood of its resulting in low student performance posed reputational risks to lecturers as professionals and the modules they taught. This was in addition to the frustrating efforts of developing more study notes and

presentations which increased their workload while producing very few positive outcomes. This was captured in Participant 9's view:

Disappointing and frustrating (to lecturers), at the end of the year the auditors ask whether we are teaching them or not – the pass rate goes down. (Participant 9)

A course or programme's reputation can also fall as a result of under-resourced students' display of poor skilling and competence. Also, because modules fail to achieve optimum knowledge levels they can be perceived as having lost their value.

This also corresponds with Participant 7's previously discussed the view that students leave university without the professional skills associated with a module (the poor academic performance theme) causing external stakeholders to doubt university capabilities in turning out competent graduates. Lecturers' competencies were bound to be questioned when students failed as a result of not using prescribed material, a matter that many openly resented. Thus, prescribed textbook unavailability posed reputational challenges for lecturers and this suggests that they should be critical stakeholders in decisions relating to students' book allowance management processes.

16. Book allowances: new versus old system

The participants interviewed generally believed that the previous system where book allowances were redeemable in bookstores resulted in enhanced learning efficiency and learning effectiveness. Almost all recommended the book voucher system in its original or amended form. Table 4 reveals that most participants would prefer to revert to the old system because this ensured students had the prescribed textbooks.

Recommended amendments were that the voucher system should empower students to buy books from wherever they wanted rather than from a few selected shops that were often very expensive:

NSFAS can make a voucher that is redeemable anywhere because listed shops are very expensive. (Participants 9)

This view was also shared by Participants 6 and 10. Participant 3 believed that students should get 50% in cash and 50% in vouchers or should get open vouchers but have the right to claim any unused balances in cash. Participant 5, like Participant 10 also questioned the comprehensiveness of the current funding arrangement and recommended further dialogue aimed at enhancing book allowance utilization accountability.

I think it is the responsibility of the NSFAS to find strategies to ensure the effective utilisation of its funding by its beneficiaries. (Participant 5)

Table 4. Recommendations on book allowance disbursement option changes

Factor	Participant
Revert to the old system in its original form	Participants 5, 7, 8
Revert to the old system but use open vouchers	Participants 6, 9, 10, 11
50% voucher and 50% cash—hybrid forms	Participants 1
NSFAS textbook purchasing pool	Participants 2, 4
Strategies that focus on student accountability	Participants 1, 6, 8
Enhance other access options—libraries	Participants 1, 3, 8
Further dialogue to develop new strategies	Participants 1, 3, 5, 10

This highlights the low confidence in the new system, albeit without concluding that the old system was perfect either. Participant 1 saw the political side of any intended changes, but acknowledged that these would be necessary to improve prescribed textbook accessibility and availability:

We are in a society where everyone believes that I have a right to do whatever I want with the money given to me. However, there are ways such attitudes can be curtailed either by the government or the university. It would be difficult for them but it should be given a trial.
(Participant 1)

The above Participant hints at possible resistance to any changes to the current system no matter how beneficial they could be to students' academic performance. The following section further discusses this and other views from the interviewed lecturers.

17. Discussion

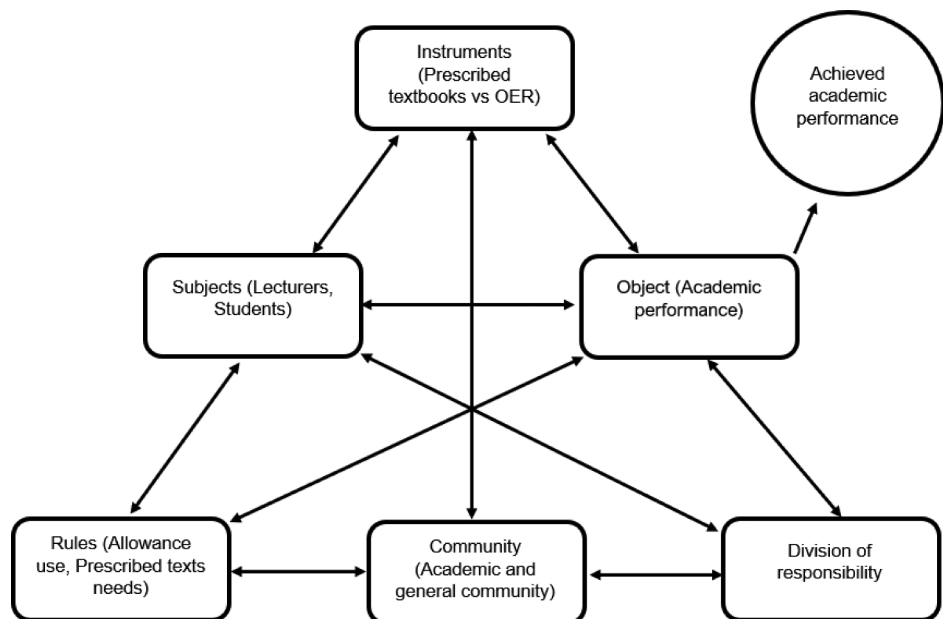
17.1. Thematic view of findings

Four themes emerged in the study guided by the human activity systems approach input-process-output view. Discussing the findings from a thematic perspective, two input categories, *the perceived learning benefits of prescribed textbooks* and *the quality of alternatives and student coping mechanisms* as themes highlight prescribed textbooks and OER as inputs of interest in the learning process. The lecturers, like Behnke (2018) and Ibragimov et al. (2018), saw prescribed textbooks as the desired key input that comes with important learning benefits like critical analysis and thinking, and independent scholarship in addition to rich, well-tested, relevant content. OER was discussed as a poor coping mechanism for students with no or limited access to prescribed books and, like University of the Pacific, (2020, n.d.), the lecturers associated these with risks of irrelevance, being poorly written and unreliable, and having overgeneralised content. This contrasted with views that OER was a credible form of academic material that facilitated academic achievement at a lower economic cost (Jenkins et al., 2020). It becomes abundantly clear that textbooks are very important for the academic development of students, and those who possess prescribed study material are more likely to progress academically (Behnke, 2018; Ibragimov et al., 2016). The lecturers thus pointed out that the unavailability of prescribed content adversely affected learning efficiency and learning effectiveness, a view shared by (Swanepoel et al., 2021), as students firstly missed out on the undeniable benefits of prescribed textbooks and secondly were exposed to the poor content and quality risks of OER. Textbooks play multiple roles, such as transformational, systematising, organizational and procedural, fixing, and self-controlling (Ibragimov et al., 2016). Hence, having textbooks allows students to be more receptive and adaptive to the teaching and learning process (The University of the Witwatersrand, 2021). Support interventions such as extended consultation and tutorial times cannot be seen as a replacement for the need to have textbooks. Two process themes emerged: *teaching and learning efficiency* and *teaching and learning effectiveness*. Low teaching effectiveness in the absence of prescribed material also came with an element of personal frustration for lecturers. The outcome of the above input-process scenario was a sub-optimal academic performance that also came with the threat of academic reputational damage to lecturers.

17.2. The activity systems model under HAS

Discussing the above findings from the HAS approach and the ASM under this approach as presented by Koumara and Plakitsi (2020) and Lindblom and Alenljung (2020) respectively, there is evidence of perceptually strong links among the instrument, the subject, and the object. Lecturers as subjects believe that prescribed textbooks (the instruments) are indispensable to the attainment of short-term and long-term academic achievement. This achievement was viewable from a systems perspective where prescribed study materials were inputs that facilitated

Table 5. The ASM as adopted for this study based on findings



learning efficiency and effectiveness. Table 5 describes the activity system model and reflects how different competents in a system (administration, culture, teaching norms, etc) affect choices.

Several scholars, including Swanepoel et al. (2021), have seen a direct link between prescribed material availability and academic performance. At the same time, there is conflict over the evolving nature of prescribed material as the model's instrument with lecturers highlighting a negative attitude towards students' use of OER. The literature reveals students as highly constricted by pricy textbooks vying with meager financial resources (Reinken et al., 2021) while there is another view that it was the abuse of funds rather than the cost of textbooks that resulted in students lacking these resources (Nxumalo, 2020). Burge (2015, n.d.) notes that such conflict within a system is a common reality emanating from the multiplicity of perspectives among parties to human activity. The resolution of such conflicts is considered a critical milestone toward the attainment of systems objectives.

18. Student-centred-funding model and the availability of prescribed books

In summary, two conflict areas are: whether OER can be readily adopted and used as prescribed study material and whether the NSFAS book allowance is best disbursed as a transfer to the student's bank account—as well as whether there should be any accountability mechanisms involved. This conflict, as noted, exists mainly between the lecturer and the student and points to a potential flaw of the student-centered model in considering multiple stakeholder needs. As highlighted by the DHET (2019) the model puts the student's needs first, including in prescribed textbook purchase decisions. It, unfortunately, neglects the textbook's role in the lecturer's ability to deliver effective and efficient lessons as well as the personal pressures like overworking that come with teaching an under-resourced student with resource-restricted self-education abilities (Leshota, 2020).

Applying this observation to the ASM, the new system attempts to ensure that the same or improved level of academic performance is enhanced by changing the accessibility and availability of the instrument while not affecting the subject (lecturers). This generally goes against the holistic demands of changes within a system (Calvo-Amodio & Rousseau, 2019). Additionally, this points to

the challenge of excluding the input of other system components and the risks of sub-optimal systems performance that can result from poorly aligned change (Calvo-Amodio & Rousseau, 2019). Looking at the book allowance change dimensions discussed in the introduction and background sections, change was focused on the technological, consumer, political, and student personal development aspects but failed to engage the pedagogical dimension in which lecturers are key custodians.

The impact of the highlighted systems changes as shown is perceived to have affected the pedagogical processes, reducing learning efficiency and effectiveness (as systems processes). The desired output of optimal academic performance, as asserted by the lecturers, has been compromised. However, there is an urgent need to address the expensive nature of textbooks in South Africa as it has become a barrier to promoting quality teaching and learning that is inclusive. Other researchers have also found that student aid mechanisms can reduce academic goal achievement in the absence of adequate goal-directing and process-monitoring mechanisms (Mngomezulu et al., 2017).

19. OER as a response to student book allowance changes

Concerning the conflict over the use of OER as prescribed material, the highlight of the interviews is that lecturers do not see these as credible, reliable sources that can effectively replace or even supplement prescribed textbooks in the way envisioned by the DHET. These views on reliability and relevance are not unique to the interviewees and are shared by other universities (University of the Pacific, 2020, n.d) and scholars (Behnke, 2018). This general anti-OER perspective however creates a risk that both students and lecturers may miss out on the wide availability and low-cost benefit of some more reliable forms of OER available in the academic environment (Cox & Trotter, 2017). Also, Cox and Trotter's view that OER adoption occurs at the volition of the lecturer after gaining confidence with it as well as institutional policy support are reflected in the findings. The lecturers did not discuss any OER support policies and strategies or any technical challenges with this resource. The main issue of contention was its content relevance, quality, and methodological appeal versus the prescribed textbook. This resonates with findings by Reinken et al. (2021) that lecturers valued OER content quality and scientific appeal and its ability to encourage academic goal achievement.

Some lecturers, however, rigidly held to the view that content quality was only guaranteed in published prescribed textbooks, completely dismissing or diminishing the academic role of alternatives, and sticking to the idea of an authentic textbook as an in-house publishing, physical copy as described by Ibragimov et al. (2016) and Behnke (2018). Against this, Ouahada (2019) warns that prescribed textbooks are not a panacea for students learning problems and that some result in low academic achievement due to their complexities in the presentation of material. This view encourages lecturers to move towards the acceptance of OER, albeit after rigorous evaluation, as a way of adapting to academic content access evolution and also helping students perform well while also expending fewer of their meager resources on textbooks, as encouraged by Cox and Trotter (2017). However, with lecturers believing that it was book allowance misuse rather than a genuine lack of funds on the student's part, that resulted in constrained access to prescribed textbooks, the economic argument for the use of OER has its complications. This turns the debate into an argument about whether pedagogical dimensions should be compromised in support of funds use misallocation—a debate hinted at but not wholly discussed in this paper.

The findings also capture the involvement of multiple stakeholders in the relationship between prescribed study material, lecturers and students, and the object of academic achievement. The community aspect of the ASM, therefore, includes the NSFAS, official booksellers, and the world of work—as recipients of graduates and universities, with NSFAS being tasked with implementing the main rules that determine the availability and use of book allowances for their right purposes. Booksellers are part of the community that appears in the lecturers' recommendations as part of revised book purchasing models or part of the restored old NSFAS model.

The availability and accessibility of the prescribed textbooks are critical in consolidating interpersonal skills and developing analytical and general research skills. The dependence on unprescribed study material has become a challenge to students' academic development. The overuse of and reliance on the internet and other sources may expose students to information that is not relevant to the subject at hand, thus increasing the possibility of failure.

20. Conclusion and recommendations

In conclusion, the analysis of the study's problem from a HAS perspective using the ASM was beneficial in decomposing the prescribed textbook availability problem into individual components and identifying points of conflict that affect the realization of academic achievement. The subject aspect of the new NSFAS funding model focuses on the student, not the lecturer despite both being directly impacted by prescribed textbooks. The instrument aspect presents a debate between the use of prescribed textbooks and OER. This debate, despite being relatively old, appears to have intensified under the DHET's perspective that the new NSFAS book allowance disbursement system will facilitate students' access to digital learning material—a view that lecturers, based on their experiences refute. Yet in all this, the academic system is expected to produce optimal performance in students. In such a scenario, it is challenging to envisage the achievement of the desired output when severe conflict remains unresolved in two of the most critical spheres that relate to this study. These are the balancing of the economic and consumerist issues associated with students' book allowance uses versus pedagogical issues associated with the lecturers' interests in the availability of prescribed textbooks and the resolution of the disruptive and evolving roles of OER.

The study recommends a system that finds common ground between both students and lecturers as beneficiaries of prescribed textbooks. Systems that enhance student accountability without completely taking away their independence were viewed as a potential compromise to the problem. Any changes to the prescribed book funding allowance should incorporate lecturers' input, specifically on the impact that this will have on the student's desired academic performance versus the former's pedagogical approaches. Another recommendation is the development of OER policies that support open content development and evaluation to ensure that they meet the criteria of relevance, reliability, and originality and in turn, support the development of core skills associated with prescribed textbooks. NSFAS should consider funding internally developed OER in universities to support reliable and relevant academic content availability. University lecturers need to be engaged as custodians of course-specific OER to increase their adoption of it. Establishing common ground between how the student book allowance is spent and what OER material can be prescribed for use in the university reduces the conflict between subjects (lecturers and students) and the object of academic achievement while also asseverating the conflict between prescribed textbooks and alternative study material. Overall, the management of such conflicts is anticipated to improve students' academic performance.

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References

- Behnke, Y. (2018). Textbook effects and efficacy. In E. Fuchs & A. Bock (Eds.), *The palgrave handbook of textbook studies* (pp. 383–398). Palgrave Macmillan.
- Burge, S. (2015). System thinking: approaches and methodologies an overview of the soft systems methodology (pp. 1–14). Burge Hughes Walsh. <https://systemsthinkersanonymous.com/wp-content/uploads/2016/11/Soft-Systems.Methodology.pdf>
- Calvo-Amodio, J., & Rousseau, D. (2019). The human activity system: Emergence from purpose, boundaries, relationships, and context. *Procedia Computer*

- Science*, 153, 91–99. <https://doi.org/10.1016/j.procs.2019.05.059>
- Chawane, M. (2021, March 4). Does NSFAS Still Issue Out Book Vouchers? 2021. JoziWire. Johannesburg. <https://joziwire.co.za/2021/03/does-nsfas-still-issue-out-book-vouchers/>
- Cox, G., & Trotter, H. (2017). *Factors shaping lecturers' adoption of OER at three South African universities*. University of Cape Town. https://zivahub.uct.ac.za/articles/book/Factors_shaping_lecturers_adoption_of_OER_at_three_South_African_universities/10007135
- Cox, G., & Trotter, H. (2017). Factors shaping lecturers' adoption of OER at three South African universities. In Hodgkinson-Williams & P. B. Arinto (Eds.), *Adoption and Impact of OER in the Global South* (pp. 287–324). African Minds.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications. Carlifornia.
- Department of Higher Education and Training. (2020, December) *Students' access to and use of learning materials Survey Report 2020*. https://www.usaf.ac.za/wp-content/uploads/2021/02/DHET_SAULM-Report-2020.pdf
- Department of Higher Education and Training (DHET). (2020nd). *Students' Access to and Use of Learning Materials Survey Report 2020*. https://www.usaf.ac.za/wp-content/uploads/2021/02/DHET_SAULM-Report-2020.pdf
- Engeström, Y. (1987). *Learning by expanding: An activity-theoretical approach to developmental research*. (pp. 1987). Orienta-Konsultit.
- Fischer, L., Hilton, J., Robinson, T. J., & Wiley, D. A. (2015). A multi-institutional study of the impact of open textbook adoption on the learning outcomes of post-secondary students. *Journal of Computing in Higher Education*, 27(3), 159–172. <https://doi.org/10.1007/s12528-015-9101-x>
- Fujita, N., & Brett, C. (2008). Rethinking analysis of progressive discourse in asynchronous online learning: An activity theory perspective." *Conference: Creating a learning world: proceedings of the 8th international conference for the learning sciences, ICLS '08, June 23-28, 2008*. Utrecht, The Netherlands. International Society of the Learning Sciences.
- Ibragimov, I. D., Dusenko, S. V., Khairullina, E. R., Tikhonova, N. V., & Yevgrafova, O. G. (2016). Recommendations on the textbooks creation as information and teaching tools of education management. *International Electronic Journal of Mathematics Education*, 11(3), 433–446. <https://doi.org/10.29333/iejme/343>
- Ibragimov, I. D., Dusenko, S. V., Khairullina, E. R., Tikhonova, N. V., & Yevgrafova, O. G. (2016). Recommendations on the textbooks creation as information and teaching tools of education management. *International Electronic Journal of Mathematics Education*, 11(3), 433–446. <https://doi.org/10.29333/iejme/343>
- Jenkins, J. J., Sánchez, L. A., Schraedley, M. A., Hannans, J., Navick, N., & Young, J. (2020). Textbook broke: Textbook affordability as a social justice issue. *Journal of Interactive Media in Education*, 1(3), 1. <https://doi.org/10.5334/jime.549>
- Karunanayaka, S., Fernando, C., & de Silva, V. (2013). Designing an online learning environment on open educational resources for science education. *Asian Association of Open Universities Journal*, 8(1), 1–11. <https://doi.org/10.1108/AAOUJ-08-01-2013-B001>
- Kharwa, M. (2019, August 28). NSFAS's decision to pay students cash has decimated textbook sales – The result could be an academic tsunami. <https://www.dailymaverick.co.za/article/2019-08-28-nsfass-decision-to-pay-students-cash-has-decimated-textbook-sales-the-result-could-be-an-academic-tsunami/>
- Koumara, A., & Plakitsi, K. (2020). The degree that nature of scientific knowledge aspects are included in the science classes of Greek high schools. *World Journal of Education*, 10(5), 1–17. <https://doi.org/10.5430/wje.v10n5p1>
- Kumar, R. (2018). *Research methodology: A step-by-step guide for beginners*. Sage. Carlifornia.
- Leshota, M. (2020). Teacher–textbook relationships in mathematics in contexts of limited resources. *African Journal of Research in Mathematics, Science and Technology Education*, 24(3), 375–386. <https://doi.org/10.1080/18117295.2020.1847833>
- Lindblom, J., & Alenljung, B. (2020). The ANEMONE: Theoretical foundations for UX evaluation of action and intention recognition in human-robot interaction. *Sensors*, 20(15), 1–49. <https://doi.org/10.3390/s20154284>
- Mngomezulu, S., Dhunpath, R., & Munro, N. (2017). Does financial assistance undermine academic success? Experiences of at risk students in a South African university. *Journal of Education (University of KwaZulu-Natal)*, 68, 131–148. https://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S2520-98682017000100008
- Morgan, K. E. (2014). Decoding the visual grammar of selected South African history textbooks. *Journal of Educational Media, Memory, and Society*, 6(1), 59–78. <https://doi.org/10.3167/jemms.2014.060104>
- Nguyen, T. D., Kramer, J. W., & Evans, B. J. (2018). The Effects of Grant Aid on Student Persistence and Degree Attainment: A Systematic Review and Meta-Analysis of the Causal Evidence. CEPA Working Paper No. 18-04. Stanford Center for Education Policy Analysis.
- Nkosi, B. (2014, October 3). *Students hurt by pricey textbooks*. Mail and Guardian. <https://mg.co.za/article/2014-10-03-students-hurt-by-pricey-textbooks/>
- Nxumalo, S. (2020, February 5). *Students accused of using NSFAS cash allowances to live lavish lives on campus*. Independent Online. <https://www.iol.co.za/mercury/news/students-accused-of-using-nsfas-cash-allowances-to-live-lavish-lives-on-campus-43434468>
- Ouahada, K. (2019). Course evaluation for low pass rate improvement in engineering education. *Education Sciences*, 9(2), 1–27. <https://doi.org/10.3390/educsci9020122>
- Parliamentary Monitoring Group. (2019, September 4). "Question NW467 to the Minister of Higher Education, Science and Technology." <https://pmg.org.za/commit-tee-question/12136/>
- Phakathi, B. (2019, August 26). *NSFAS defends cash for books, citing financial freedom*. Business-live. <https://www.businesslive.co.za/bd/national/education/2019-08-29-nsfas-defends-cash-for-books-citing-financial-freedom/>
- Pingel, S., Sponsler, B. A., & Holly, N. (2018). Redesigning state financial aid: Principles to guide state aid policymaking. Updated August 2018. *Education Commission of the States*. <https://www.ecs.org/wp-content/uploads/Redesigning-State-Financial-Aid.pdf>
- Reinken, C., Greiff, P., Draxler-Weber, N., & Hoppe, U. (2021, September). Quality of OER from the Perspective of Lecturers—Online Survey of Quality Criteria for Quality Assurance. In *International*

- Conference on Business Informatics Research* (pp. 36–50). Springer, Cham.
- Rousseau, D., Billingham, J., & Calvo-Amodio, J. (2018). Systemic semantics: A systems approach to building ontologies and concept maps. *Systems*, 6(3), 32. <https://doi.org/10.3390/systems6030032>
- Schultz, L. A. (2017). Navigating the minefield of self-publishing E-Textbooks. *Information Systems Education Journal*, 15(5), 15. <https://files.eric.ed.gov/fulltext/EJ1151721.pdf>
- Stein, S., Hart, S., Keaney, P., & White, R. (2017). Student views on the cost of and access to textbooks: An investigation at University of Otago (New Zealand). *Open Praxis*, 9(4), 403–419. <https://doi.org/10.5944/openpraxis.9.4.704>
- Swanepoel, C., Yu, D., & Beukes, R. (2021, October 12) *Why students don't attend lectures: what we found at a South African university*. News24. <https://www.news24.com/parent/learn/tertiary-education/why-students-dont-attend-lectures-what-we-found-at-a-south-african-university-20211011>
- University of Pretoria. (2020nd). *Guidelines for Prescribed Materials*. 2020. https://www.up.ac.za/media/shared/391/pdfs/guidelines-for-prescribed-material-s-4706-20_22.zp215012.pdf
- The University of Pretoria. (2022Nd). *Guidelines for prescribed materials*. https://www.up.ac.za/media/shared/391/pdfs/guidelines-for-prescribed-material-s-4706-20_22.zp215012.pdf
- University of the Pacific. (2020nd). *OER Pros/Cons and Evaluation Methods*. 2022. <https://scholarlycommons.pacific.edu/oer/pro-con-oer.html> (accessed February 15, 2022)
- The University of the Witwatersrand. (2021, August 13) *Science: Prescribed, Recommended & Open Textbooks*. 2022. https://libguides.wits.ac.za/science_prescribed
- Yuan, L., MacNeill, S., & Kraan, W. G. (2008). *Open educational resources-opportunities and challenges for higher education*. University of Bolton. https://www.oerknowledgecloud.org/archive/OER_Briefing_Paper.pdf



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