Readability level of prescribed Accounting textbooks used in South African secondary schools

Sithembele Goodman Ndovela(a)*

(a) Lecturer, School of Education, University of KwaZulu-Natal, 10 Lilyvale, 3610, Pinetown, KwaZulu-Natal, South Africa.

ARTICLE INFO

Article history:
Received 15 January 2024
Received in rev. form 25 Feb. 2024
Accepted 10 March 2024

Keywords:
Readability, Flesch Reading Ease, Gunning Fog Index, Comprehension, Textbooks, Accounting.

JEL Classification:
M41; I23

ABSTRACT

The results of a study that investigated the readability of three Accounting textbooks used in South African secondary schools are presented. In South African schools, textbooks remain the primary source of course content that drives the students’ learning of the subject matter. The study followed the traditions of the positivist paradigm. The Flesch reading ease score and Gunning fog index are readability measurement methods that are helpful in measuring the difficulty or challenging nature of text in the Accounting textbooks. Using them assists teachers of Accounting who have the responsibility to choose textbooks that would assist their students to make meaning of the subject matter. Three sections from each textbook were analysed: an introduction section on budgeting, analysis and interpretation section, and section on General Accepted Accounting Principles. These topics are very important in understanding the discipline of Accounting; their readability or accessibility by students play a crucial role in learning the subject of Accounting. The results showed that some textbooks are not readable, or are not straightforward and user friendly, and are thus difficult to understand and engage with. This points to these textbooks being challenging to some Accounting students, especially since to some English is their second language. The recommendations for future research are discussed. It is suggested that authors of Accounting textbooks must consider the readability of the textbooks.

Introduction

In South African schools, textbooks remain the primary source of course content that drives the students’ learning of the subject matter (Wissing et al., 2016). Reading is one of the skills acquired through the teaching and learning process, and a complex skill which involves important perceptual components in the initial stages of learning (Umoke & Nwafor, 2015). Schultz (2014) conceptualises reading as the concept of measuring the ease of reading content based on the structure of writing.

Accounting is one of the subjects regarded as challenging for learners. It is therefore fundamental for students to understand the Accounting textbooks. However, I have observed that the majority of learners struggle to engage with the Accounting textbooks, and it was evident that they could not understand what is written in the text. I have taught in various schools, all of which adopted English as the medium of instruction, despite there being some students whose home language was not English. These students struggled to make meaning of the textbooks. Hence, it is unknown whether or not the challenge lies in the readability of the textbooks. Ngwenya (2014) has constantly emphasised the need to focus on a conceptual approach to teaching, but found that some Accounting teachers still believe in a procedural approach. Teachers quickly move on to the recording of financial transactions without paying attention to teaching the fundamental concepts of the discipline. However, the paradigm shift to teaching Accounting places pressure on teachers to utilise a conceptual approach to teaching, which emphasises the teaching of concepts before moving on to the practical application of concepts. Hence there is a need for Accounting textbooks in schools to be readable and accessible to learners, with a concomitant need to investigate the readability of Accounting textbooks in South African schools.

* Corresponding author. ORCID ID: 000-0003-3858-8656

© 2024 by the authors. Hosting by SSBFNET. Peer review under responsibility of Center for Strategic Studies in Business and Finance.

https://doi.org/10.20525/ijrbs.v13i2.3166

© 2024 by the authors. Licensee SSBFNET, Istanbul, Turkey. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).
The dawn of democracy in 1994 brought some significant changes in the South African education system. The South African Constitution of 1996 states that everyone has the right to receive education in the official language(s) of their choice in public educational institutions where that education is reasonably practicable. However, in South Africa many schools have adopted English as the language of instruction, even though the home language of the majority of teachers and learners is not English. Hence learners continue to learn in English despite the notion that they have limited understanding of the language of learning.

Wissing et al. (2016) argue that textbooks are used as the vehicle of language to convey meaning. However, the majority of first-year students at Tshwane University of Technology were found to have poor English literacy skills (Molepo, 2018). There is therefore a need to investigate the readability and comprehension of the textbooks which students use to access subject matter. Learning Accounting requires a learner to be proficient and fluent in English as a language of learning and teaching. The idea is that if the learner understands English, they will be able to comprehend the vocabulary that characterises Accounting jargon (Dempster & Reddy, 2007).

It is widely acknowledged that textbooks are an important instructional material produced to help schools and other educational institutions to support teachers, learners, students and lecturers in following the curriculum (Fru, 2012). Textbooks are very important reading material for providing content and a good background for students’ learning (Thakrar et al., 2009). In South Africa, textbooks are the material most commonly used during teaching and learning, and most of the work done by learners is based on textbooks. Therefore, textbooks must be used by teachers and learners to enhance teaching and learning (David, 2012). Apple (2013) anticipates that 75% of the time spent in classrooms and 90% of that spent on homework tasks involves using text materials. This emphasises the importance of textbooks in the learning of learners. The South African Department of Education emphasises that each learner must have his/her own textbook for a particular subject or learning area (Department of Education, 2016).

Accounting textbooks are used by both teachers and learners in secondary schools. Much is known about the importance of Accounting textbooks in teaching and learning, but less is known about their readability. This study seeks to examine the readability of Further Education and Training (FET) Accounting textbooks used to induct Accounting learners into the Accounting language. Few studies have been conducted on the readability of Accounting textbooks (Chiang et al., 2008; Davidson, 2005; McCallum & Peterson, 1982; Razek et al., 1982), including in South Africa, which is why this study on the readability of Accounting textbooks in South Africa is important. This study adds to the already existing body of knowledge about the readability of Accounting textbooks.

The key research question of this study is: What is the readability level of prescribed Accounting textbooks used in South African secondary schools?

**Literature Review**

This section discusses the scholarly debate on the conceptualisation of readability, and empirical research conducted on the readability of Accounting textbooks. Little research has been conducted on the readability of Accounting textbooks, especially in the South African context.

**Readability**

Readability is the concept of measuring the ease of reading content based on the structure of the writing (Schultz, 2014). Some scholars conceptualise readability as the extent to which the reader finds the written text understandable and comprehensible through the written style adopted (Najafi, 2010; Umoke & Nwafor, 2015). It is therefore believed that readability is about the reader’s understanding and the comprehensibility of the written text. If the reader can read something fast, but without understanding anything about the text, it is a futile exercise (Widyaningrum, 2014). This author further states that readability is the study of the text and how it is suitable for the readers. This conceptualisation is in line with the phenomenon under investigation, as this study aims to measure and predict the readability of FET Accounting textbooks for the learners at whom they are aimed.

Some scholars argue that readability is the function of the text and measures the textual difficulty for the reader (Chiang et al., 2008; Harmon-Jones et al., 1997; Kithinji & Kass, 2010). Snyman (2004) declares that when measuring the textual difficulty, readability requires interaction between the reader and the text. This focuses on the actual reader who is reading the text. Various factors determine readability and whether the text is easy to read or not, such as average sentence length, the number of new words a passage contains, and grammatical complexity of the language (Richard & Schmidt, 2010). DuBay (2004), in a similar vein to Richard and Schmidt (2010), holds that readability is what makes some texts easier to read than others.

There is a clear distinction between readability and understandability or comprehensibility (Chiang et al., 2008; Harmon-Jones et al., 1997; Kithinji & Kass, 2010). Readability is an attribute of the text due to the style of writing. In contrast, understandability is viewed as related to the attributes of the reader; understandability indicates whether the reader comprehends the material presented in the text.

Dale and Chall (1949) assert that a book is readable for a particular group only if it is comprehensible or understandable. Readability is conceptualised as the sum of all the elements of a given piece of printed material that affects the success that a group of readers have with it (Dale & Chall, 1949). In this case, success refers to how a group of readers understands the printed material. It also includes the way they read it and find it interesting. Dale and Chall (1949) highlighted several factors that determine such success,
Besides the printed material itself, which include the reader's skill in reading, their intelligence, experience, maturity, interest and purpose. Skills mean the approaches used by the reader to easily understand what is written. Some readers are intelligent by nature; they could read the document and understand it from the very first time. Some readers are experienced due to their level of education, or perhaps they are used to reading. Therefore, they are familiar with the concepts used in the printed documents. Readers have different interests and purposes regarding what they are reading. If the reader is interested in what he/she is reading, they can understand it much better.

Adelberg and Razek (1984) and Widyaningrum (2014) share a similar view that readability involves readers' ability to comprehend and to understand communication initiated by the writer of textbooks. Readability measures how well the text conveys the intended meaning to the reader. If the reader does not comprehend or understand what is written, that text would not be regarded as readable. DuBay (2004) declares that readability attempts to measure the ability of the reader to decipher the intended message and symbols. Readability is therefore finding the right fit between the students' reading ability and text difficulty (Widyaningrum, 2014).

Smith and Smith (1971) view readability as an objective and quantitative measure of the ease of comprehension or understanding of written matter. Some readability evaluation methods have been designed to measure the readability of textbooks or any written documents. Readability serves to measure whether the text is comprehensible or difficult for the particular group it is addressed to. This correlates with Gecit’s (2010) findings that readability allows students to read the text fast and be able to comprehend what is being read. It can also be seen as the state of being understandable with ease or with difficulty by the reader.

This study aims to measure whether Accounting learners can read fast and comprehend what is written in the prescribed Accounting textbooks.

### Empirical Review

#### Readability of Accounting Textbooks

A study by Flory et al. (1992) sought to determine the difference in the readability of selected intermediate Accounting textbooks, using the following readability evaluation methods: the Flesch reading ease score and Gunning's fog index (GFI). The results show that differences in the readability of textbooks are a key variable in the textbook selection process; they also believe that textbook readability is likely to impact student performance. There is an academic debate by Crismore (1981), who argues that lowering the readability level of textbooks does a disservice to students, because this does not challenge their comprehension and interpretation skills. Flory et al.’s (1992) findings showed a few differences in the readability of seven intermediate Accounting textbooks. This study measures the readability of prescribed Accounting textbooks used in South African secondary schools.

A study by Traugh et al. (1987) revealed no significant difference in the readability of Accounting principles textbooks used by first-year college students. A random sample was used to select paragraphs for which the GFI was computed. Although the material covered in textbooks increased in complexity, the writers of these books supplied text aimed at students completing the first year at college. Results indicated that authors have been successful in writing for the appropriate level of students; however, when choosing Accounting textbooks, selection can be made based on peripheral issues, such as the quality of the overall teaching package available to help enhance the students' learning experience. It was therefore proven that there had been no change in the readability of Accounting textbooks over time.

Chiang et al. (2008) conducted a study on the readability of financial accounting principles textbooks. Comparisons were made of overall readability, chapters, and topics. Readability scores were obtained using the following four readability evaluation methods: Flesch reading ease score, Flesch-Kincaid grade level index, GFI, and the SMOG procedure. It was found that the readability of accounting textbooks had a significant impact on students’ learning or academic achievement. The researchers reviewed different textbooks, all with different readability levels. They analysed different book chapters, and found few differences in the four selected chapters within each textbook. Some chapters were more difficult to read than others. It was suggested that accounting teachers should be aware of the readability level when choosing a textbook for financial accounting principles.

Bargate’s study (2012) used the cloze procedure, Flesch reading ease score, and GFI as the readability evaluation methods to assess managerial accounting and financial management textbooks, with 281 full-time BCom registered students. The findings suggest that three of the four investigated textbooks were less readable; they were suitable rather for postgraduate studies. Only one textbook was found to be readable. These findings highlight how some textbooks may cause frustration to the students. All of the readability evaluation methods used provided similar findings.

A mixed-method study conducted by O'Reilly-Bargate (2008) used a positivist paradigm to describe and explain the phenomenon by experience and observation, and an interpretive paradigm to understand the subjective world of human experience. Unstructured interviews with staff and students were used to elicit perceptions and usage of prescribed management and financial management textbooks. The quantitative method used was the cloze procedure, drawn from readability studies of applied linguistics, where cloze tests are completed by the students. Textbooks investigated were two of those prescribed for the Managerial Accounting and Financial Management (MAF) III course for students at the Howard College campus of the University of KwaZulu-Natal in 2005. Purposeful sampling was used to request volunteers, with six students volunteering out of a population of approximately 350 students. The results demonstrated that the textbooks were at a readability level that students ought to be able to read. However, students did not
use textbooks often, but depended on worksheets and notes provided by the accounting lecturers. The students thought that these textbooks were not suitable for them. The lecturers interviewed stated that they did not have a choice regarding the two textbooks used, as these were imposed on them. They indicated that the textbooks are above the level of students’ comprehension, because they were not written in South African English. The cloze scores suggested that, on average, the students were reading the textbooks at the Frustration Level, and hence the two accounting textbooks investigated were less readable.

Richards and van Studen (2015) used the Flesch formula, SMOG and GFI to measure the readability impact of international reporting standards, to assess whether narrative annual report disclosures have become more difficult or easier since adoption of International Financial Reporting Standards (IFRS). Companies listed on the NZX50 on either 21 August 2006 (before IFRS was implemented in New Zealand) or 15 May 2010 (after the implementation) were sampled. Findings suggested that the adoption of IFRS has added complexity and resulted in reduced readability of annual report disclosures and resulted in considerably longer and more complicated reports with more tables.

Analysis of the readability of textbooks is not a new phenomenon in the commerce discipline. Klare published an academic paper in 1963, which focused on the readability of business law, evaluating 21 business law textbooks in United states of America. Stratified sampling based on chapters was used to sample the textbooks. This study employed the Flesch reading ease score and found a significant difference in readability. Most of the textbooks were found to be at the Flesch reading ease level of about 30-50, suggesting that they were equivalent to the college readability level. It was recommended that the university lecturers should select textbooks with easier readability, closer to 50 rather than 30, as some students find it difficult to read textbooks with a reading level above 50.

Plucinski et al. (2009) measured the readability of introductory financial and managerial accounting textbooks, using the Flesch-Kincaid grade level evaluation, based on the average sentence length and average number of syllables per word. Findings suggested that faculty should consider readability when selecting textbooks. It was found that long sentences hinder students’ comprehension when used extensively. These findings will help textbook editors to use them to adjust the authors’ expectations. One of the selected textbooks was found to be readable compared to the others, and the faculty was advised to select the more readable textbooks.

A study by Plucinski (2010) analysed the readability of intermediate accounting textbooks. Digital (computer) files of each of the six target chapters of each textbook were obtained from their publishers or authors. The results indicated no evidence to prefer one book over the other, suggesting no significant difference in the readability of the textbooks. Thus the faculty can consider factors other than readability when choosing the textbook for intermediate accounting, such as the text’s pedagogical approach, coverage of material, exhibits, and supplements (Plucinski, 2010).

Tinkler and Woods (2013) conducted a study on the readability of principles economics textbooks using the Flesch-Kincaid grade level score. This score emphasises the simplicity of language and sentence structure, but the cohesiveness of a text is more important to readability (Tinkler & Woods, 2013). They used the Coh-Metrix to evaluate the frequency of words used in the sampled textbooks, by measuring the concrete words, which are words for which it is easy to form a mental picture (‘house’ is a good example of concrete word readability) (Tinkler & Woods, 2013). The researchers sampled three topics in each textbook, focusing only on the text-heavy sections (not the equations and diagrams incorporated in textbooks). The results suggested that readers bring many things to the reading experience, including aptitude, ability, language background, and learning style. It was also found that non-native speakers have preferences which are different from those of native speakers.

Plucinski (2011) conducted a study on the readability of seven cost accounting textbooks, finding that some chapters were more readable than others, with one chapter being more readable than all of the others. The researcher analysed only the text-heavy sections of the textbooks, using the Flesch-Kincaid evaluation method. The results clearly indicated that one text (Hansen - lowest Median Grade Level of 12.3) was the most readable, while that with the highest MGL of 14.3 (Blocher) was less readable and was difficult for the intended group of readers to read. Therefore, the faculty should consider not choosing this textbook when selecting cost accounting textbooks.

Research by Gosselin et al. (2021) reviewed and analysed the readability of financial and corporate disclosures. It is imperative for Accounting researchers to investigate the readability of financial and non-financial disclosures. This helps users of financial information to understand organisational behaviours. The researchers reviewed 138 papers published between 1950 to 2020, which assisted in understanding the complexity and issues of readability.

**Research and Methodology**

This study employed the traditions of the positivism paradigm. The positivist paradigm aims to prove or disprove a hypothesis (Junjie & Yingxin, 2022), using measurable data from highly standardised tools such as questionnaires, or psychological tests. This paradigm is used in this study because the aim is to measure the readability of prescribed Accounting textbooks used in South African secondary schools. A quantitative approach was used, which ontologically takes the position that there is one truth. It provides an objective reality that exists independent of human perspectives. This suggests that the readability formulae used in the study provided results without the interference of the researcher. It is also believed that the data is available out there and is waiting for the researcher to collect it. Park et al. (2020) declare that the quantitative approach aims to measure and predict the phenomenon. In this study, the
readability of three prescribed Accounting textbooks used in South African secondary schools was measured and the results were generalised. Two readability evaluation methods were employed: the Flesch reading ease score and the GFI.

The three textbooks that were analysed were selected through random sampling, where each sample has an equal probability of being chosen. A sample chosen randomly is meant to be an unbiased representation of the total population. One prescribed Accounting textbook was selected from each Accounting FET grade, so one Grade 10, one Grade 11 and one Grade 12 prescribed Accounting textbook was analysed. One section from each textbook was analysed: ‘Internal control processes’ from the Grade 10 and Grade 11 textbooks, and ‘Independent auditors’ report’ from one Grade 12 prescribed Accounting textbook. The names of all prescribed Accounting textbooks used in this study are pseudonyms. All of the prescribed Accounting textbooks analysed were written by the same authors.

Results

This section presents the results that were revealed by the readability formulae, which estimated the readability level of each text (Table 1 and 2).

<table>
<thead>
<tr>
<th>Books</th>
<th>Content analysed</th>
<th>Readability level</th>
<th>Explanatory notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitaza – Grade 10</td>
<td>Internal control processes</td>
<td>29</td>
<td>College</td>
</tr>
<tr>
<td>Hlekanini – Grade 11</td>
<td>Internal control processes</td>
<td>20.6</td>
<td>College</td>
</tr>
<tr>
<td>Khala – Grade 12</td>
<td>Independent auditors’ report</td>
<td>36.4</td>
<td>High school or college</td>
</tr>
</tbody>
</table>

The most commonly used readability evaluation method is that created by Rudolph Flesch in 1948. He developed a formula based on two aspects: average sentence length and number of syllables per word. His formula is based on commonly used English (O’Reilly-Bargate, 2008). Table 1 shows the results from the Flesch reading ease evaluation method. The research results show that none of the Accounting textbooks that were analysed are readable.

The Khala textbook is difficult to read. This Accounting textbook is supposed to be read by high school or college students. Some Accounting learners are not English first language speakers. The reading level of the Khala Accounting textbooks might be difficult for the majority of Grade 12 learners. According to Flesch’s reading ease evaluation method, the Khala Accounting textbook has a readability level of 36.4.

The Kitaza Accounting textbook and Hlekanini Accounting textbook are very difficult to read. Both textbooks are suitable for undergraduate university students. The results show that the Kitaza textbook has a readability level of 29 and the Hlekanini textbook a readability level of 20.6. The fact that both readability levels are below 30 suggests that these textbooks are supposed to be read by college students.

The GFI formula was developed by Robert Gunning, a businessman, in 1952 (DuBay, 2004; Loughran & McDonald, 2014). DuBay (2004), Loughran and McDonald (2014) agree that the GFI estimates the number of years of formal education that the reader needs in order to be able to understand the written text. The lower the GFI, the more readable the text is, and vice versa.

<table>
<thead>
<tr>
<th>Books</th>
<th>Content analysed</th>
<th>Readability level</th>
<th>Explanatory notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitaza – Grade 10</td>
<td>Internal control processes</td>
<td>17.2</td>
<td>Easily understood by an average college graduate</td>
</tr>
<tr>
<td>Hlekanini – Grade 11</td>
<td>Internal control processes</td>
<td>20.1</td>
<td>Easily understood by an average college graduate</td>
</tr>
<tr>
<td>Khala – Grade 12</td>
<td>Independent auditors’ report</td>
<td>18.3</td>
<td>Easily understood by an average college graduate</td>
</tr>
</tbody>
</table>

All of the textbooks analysed are supposed to be read by secondary school learners. However, the results show a very high GFI score, which indicates lower readability.

The Kitaza textbook has a GFI score of 17.2, while the Hlekanini textbook has a GFI score of 20.1, and the Khala textbook a GFI score of 18.3. According to these GFI levels, an average college graduate can easily understand the textbooks analysed. However, it is very difficult for Grade 10 and Grade 11 learners to understand them. All of the analysed textbooks are multi-authored, and this finding
could be triggered by the fact that authors have different styles of writing. O'Reilly-Bargate (2008) reported similar results in her study of two managerial accounting textbooks and two financial management textbooks.

**Discussion**

The research results show that none of the prescribed Accounting textbooks that were analysed are readable by their intended audience. The Flesch reading ease method predicts the readability of text by measuring the commonly used English (O'Reilly-Bargate, 2008). There is no difference between the prescribed Accounting textbooks that were assessed. The study by Flory et al. (1992) found few differences in the readability of seven intermediate accounting textbooks. This current study showed no difference in the readability level of all the prescribed Accounting textbooks. Some learners who speak English as their second language experience poor academic proficiency in English (Dempster & Reddy, 2007). The Flesch reading ease method shows an average score of 28.7 among the prescribed Accounting textbooks assessed. This may be because Accounting has its own specific jargon. These findings are in agreement with those of McNaught (1994), who found that some South African learners have difficulties in science when their home language is not compatible with the language of science.

Scholars (Apple, 2013; David, 2012) emphasise the importance of textbooks in teaching and learning. If textbooks are not readable for learners, this might be problematic. The research findings seem to be similar to those of Traugh et al. (1987) on Accounting principles textbooks used by first-year college students, who found no difference between the books — the difference being that in that study the textbooks investigated were found to be readable.

This study shows that the prescribed Accounting textbooks that were investigated are not readable. Chiang et al. (2008) hold that readable textbooks have a positive impact on students’ performance, and investigated the readability of four managerial accounting and financial management textbooks. Chiang et al. (2008) found these books not to be readable, as was revealed in the current study. The study findings suggest that the prescribed accounting textbooks used in South African secondary schools trigger frustration in the learners.

The Kitaza Grade 10 prescribed Accounting textbook shows a GFI score of 17.2. This textbook was identified as difficult to read, since it was deemed suitable for postgraduate students. Accounting learners are introduced to Accounting for the first time in FET in Grade 10. It was mentioned earlier that Accounting has its own language. Accounting learners in Grade 10 are likely to face challenges in understanding discipline-specific concepts.

The research results of this study and others have proven that textbooks are not appropriate for the intended readers. The Hlekani and Khala textbooks showed GFI scores of 20.1 and 18.3 respectively. It is assumed that Grade 11 learners therefore do not gain a proper understanding of Accounting theory, which might negatively affect their performance in Grade 12.

Richards and van Staden (2015) measured the readability impact of international reporting standards. Using a Flesch reading ease evaluation method, most textbooks were found to have a score of between 30-50, meaning they were difficult to read. Lecturers were urged to select the textbooks with scores that indicated that they were most readable. This is congruent with the findings of the Flesch reading ease evaluation method used in this study.

**Conclusion**

The researcher selected sections on internal control processes from the Kitaza (Grade 10) and Hlekani (Grade 11) textbooks. The researcher also selected the section on independent auditors' reports from Grade 12 textbooks. All of these textbooks were written by the same authors. All of the prescribed Accounting textbooks investigated were found to be very difficult to read. According to the GFI, readers must have more than 12 years of formal education to understand the text in these books when reading them for the first time. This might be because they were written by three different authors together, who might have different styles of writing. Learners read these textbooks at a level that indicates frustration. This might cause learners to lose interest in the subject of Accounting and lead to poor performance (Bargate, 2012).

The analysis from the two readability evaluation methods used provided similar and objective results. Accounting teachers should take into cognizance the readability level of Accounting textbooks. However, it was not the purpose of this research to choose the most suitable Accounting textbook. The paper contributes to the body of already existing knowledge on the readability of Accounting textbooks.

The readability of accounting textbooks is an imperative phenomenon. This research study investigated the readability of prescribed accounting textbooks. It is suggested that future research should explore the views or experiences of accounting teachers themselves on readability and comprehension of Prescribed Accounting textbooks used in South African secondary schools.

**Acknowledgements**

Author Contributions: The development of the paper and all other aspects of the paper were my own efforts. Language editing was done by Ms Leverne Gething (professional language editor). All authors have read and agreed to the published version of the manuscript.
Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to restrictions.

Conflicts of Interest: The authors declare no conflict of interest.

References


Molepo, M. C. (2018). The impact of Information literacy training on academic achievement and success of the first year entering undergraduate students at Tshwane University of Technology, Polokwane campus library.


**Publisher’s Note:** SSBFNET stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

© 2024 by the authors. Licensee SSBFNET, Istanbul, Turkey. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).