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Promoting Self-Regulated Learning among First-Year Accounting-Student Teachers: A Student-Empowerment Pedagogical Framework

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Abstract. The advent of the Covid-19 pandemic significantly diminished opportunities for face-to-face learning. This came at the backdrop of the consistent failure of first-year students to cope with the demands of learning in a complex higher educational system, which prioritises autonomous learning. Such a failure has been attributed to the structured and supportive learning environments in basic education, which have not only produced excessively dependent learners, but also a cohort of first-year students with low levels of resilience, self-efficacy, and motivation. Against this exposition, this quantitative study investigated those teaching approaches that lecturers can use to promote self-regulated learning among first-year accounting-student teachers. Guided by the fundamental precepts of the social-cognitive model of self-regulated learning and informed by interpretivism, quantitative data were collected using a Likert Scale questionnaire. The statistical analysis of the data revealed that meaningful and sustainable self-regulated learning can only be promoted by a purely student-centred approach. With an overall mean above 4.0, problem-based learning was found to frequently promote the self-regulated learning of students. Conversely, given an overall mean of just above 2.0, scaffolding and guided instruction were found to rarely promote self-regulated learning. A low standard deviation of below 1.0 on all three teaching approaches suggests a very small variance in the students' scores. On the basis of these findings, the study calls for a pragmatic adoption of radical student-centred constructivist teaching approaches. In line with this recommendation, institutions of higher learning need to capacitate lecturers to teach students problem-solving and self-regulated learning skills.

Keywords: empowering; self-regulated learning; Constructivist approaches

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1. Introduction

The new global context and learning environments, in which students engage in teaching and learning, call for the development and adoption of a pedagogical framework within which students can successfully learn with minimal direct support, supervision and micromanagement. Most importantly, the excessive reliance of students on lecturer support and micro-management to engage in learning activities makes it an even more cardinal and urgent pedagogical call to engender a sustainable culture of self-directed and autonomous learning in and among students (Doulougeri, Vermunt, Bombaerts, Bots & De Lange, 2021; Gallagher & Savage, 2020; Lima, Lima & Bruni, 2020 and Robbins et al., 2020). These calls are also consistent with the provisions of the Department of Higher Education and Training (DHET, 2015) and the educational imperatives of global educational systems which call for independent and autonomous students (Doulougeri, et al, 2021; Gallagher & Savage, 2020; Geduld, 2018; Jayawardena, Van Kraayenoord & Carroll, 2017; Lima et al., 2020; and Robbins, et al., 2020). Alluding to the above, Lima, et al. (2020) argue that the purpose of education should not only be to impart knowledge to students, but also to create lifelong learners with independent thinking abilities. In the same vein, research evidence emerging from recent studies has reignited the need to have serious conversations about student empowerment and its significance on resilience and course-completion rates (Aguiar & Da Silva, 2017; Thobideaux, Deutsch, Kitsantas & Winsler, 2016), especially when viewed from a pandemic-learning perspective.

At the centre of this discourse on student empowerment is the unavoidable digital and online teaching and learning modalities in higher education whose prominence rose exponentially, as a result of the Covid-19 pandemic (Dube, 2020 and Mapuya & Rambuda, 2021). Adverse findings from studies on online and digitally mediated learning suggest that these teaching and learning modalities place much emphasis on students to engage in deep learning with little lecturer guidance and support (Mapuya & Rambuda, 2021 and Robbins, et al., 2020). Furthermore, empirical evidence points out that over and above the emotional and psychological burdens, online learning is cognitively demanding on its own, regardless of the subject content (Doulougeri et al, 2021; Lima et al., 2020 and Robbins, et al., 2020). Recent surveys conducted by Mitchley (2022) and Pijoos (2022), in which students reflected on their phenomenological learning experiences of having to adapt to the new way of learning amid the pandemic, reveal that this adjustment has not been an easy process. The respondents in these two separate surveys echoed similar sentiments that online learning exposed them in terms of how much they depended on face-to-face encouragement and the necessary motivation to successfully navigate through the academic year. Earlier studies by Basilaia & Kvavadze (2020), Coughlan (2021) and Krishnakumar & Rana (2020), provide a very devastating exposition on learning in the 21st century without the much-needed face-to-face lecturer support, guidance and encouragement.

A recent survey by Pijoos (2022), in which the interviewees reflected on their phenomenological learning experiences in the 2021 academic year revealed that 2021 was one of the most challenging academic year for students as a result of the

increasingly diminished direct lecturer support and guidance. The interviewees bemoaned the substantially reduced motivating and encouraging face-to-face interactions with their lecturers. Given the above context, the need to empower these first-year students with self-regulated learning skills, becomes an urgent educational imperative. The idea of self-regulated learning is also consistent with the ethos of student autonomy, self-directed learning and citizenship that are collectively shared by most educational systems across the globe (Gallagher & Savage, 2020; Geduld, 2018; Doulougeri et al, 2021; Jayawardena et al, 2017 and Lima, et al, 2020). Premised on the identified research gap in the afore-mentioned literature perspectives, this study sought to investigate the teaching approaches that lecturers can use to promote self-regulated learning among first-year accounting student teachers.

1.1 The background

Notwithstanding the widely publicised and documented benefits of online learning (Coughlan, 2021; Mapuya & Rambuda, 2021; Prynne, 2021 and Sintema; 2020), this modality of teaching and learning has nevertheless diminished the much-needed face-to-face, personal and sometimes differentiated lecturer support, which students have always enjoyed in a traditional academic set-up. Mitchley (2022) contends that the 2022 cohort of first-year students will have to endure a very challenging academic year in an ever-changing learning environment. This position is consistent with the earlier warnings of Coughlan (2021), Mapuya & Rambuda (2021), Prynne, (2021) and Wells (2020), who submitted that forced online learning had by nature significantly demotivated, discouraged and marginalised students in many different ways. As observed by Basilaia & Kvavadze (2020) and Cramp & Lamond (2016), there are cases where online learning has been found to amplify the learning deficiencies and challenges of students, especially those who predominantly rely on direct interactions with their lecturers to engage in successful learning. However, these findings do not provide a basis to criticise online learning, but rather they provide opportunities for pragmatic innovative solutions to complement online learning. To this effect, student empowerment becomes an appealing and promising strategy to compensate for the identified adverse findings on digital and online learning.

Accordingly, self-regulated learning has emerged as an ideal student-empowerment strategy which has been glorified and advocated for in various studies (Dinsmore, Alexander & Loughlin, 2008; Geduld, 2018; Klug et al., 2016; Moos & Ringdal, 2012; Zimmerman & Schunk, 2008 and Zimmerman, 2000). The idea of self-regulated learning has undoubtedly emerged as a global educational goal as educational systems across the globe strive to empower and prepare students with the necessary skills to thrive in the 21st-century learning environment. In support of this call, Gallagher & Savage, (2020), Geduld, (2018) and Robbins et al., (2020) argue that this empowers students to use autonomous learning skills, independent decision-making, self-management and problem-solving in deciding what to learn and how to learn it. For Aguiar & Da Silva, (2017) and Thobideaux, et al., (2016), self-regulated learning also helps the students to decide on their learning goals and the necessary time frame within which to pursue and achieve them. Most importantly, the theoretical assumptions of self-

regulated learning are rooted in social constructivist pedagogies, as well as in the underlying principles of multiple intelligences.

The pedagogical ideologies of these social-learning theories resonate very well with the ultimate goals of most educational systems and professional bodies across the globe (Gallagher & Savage, 2020; HEQC, 2010; Lima et al, 2020 and Robbins, et al, 2020). Within the South African context, the call for self-regulated learning among first-year accounting-student teachers finds expression in the provisions of the Minimum Requirements for Teacher-Education Qualifications (MRTEQ) (DBE, 2011 & 2015) and in the Higher Education Qualifications Sub-Framework (2015). This is also sustained by Dixon et al. (2014), who observed the particular type of educator envisaged by the Minimum Requirements for Teacher-Education Qualifications. Self-regulated learning conforms to the idea of lifelong learning, which is expected of an educator in South Africa (Dixon et al, 2014 and MRTEQ, 2015). In its pronouncement on the purpose of the Bachelor of Education Degree, the collective roles of teachers in a school and the expected basic competences of beginner teachers, the Minimum Requirements for Teacher-Education Qualifications (MRTEQ) (DBE, 2011 & 2015) emphasise self-regulation and professional diligence as the basic attributes for a typical educator in South Africa. For Smith, (2001), one of the major recommendations for accounting students has been on the importance of lifelong learning. Subsequently, lifelong learning has been strongly associated with self-regulated learning in an accounting-learning environment (Aguiar & Da Silva, 2017; Lima et al, 2020). Beyond the teaching of accounting as a subject, various bodies and the accounting profession have advocated for the creation of sustainable lifelong learning across the curriculum (DHET, 2015; Lima et al., 2020).

In terms of the expected competencies and attributes (DHET, 2015), this envisaged kind of educator finds expression in the epistemological and ontological views advanced by social constructivists when they advocate for the use of student-centred constructivist teaching approaches in the professional education and training of student teachers (Aguiar & Da Silva, 2017 and Lima, et al, 2010). The social constructivist school of thought does not therefore only subscribe to this envisaged new educator, but it also contributes significantly to the training and development of such educators (Geduld, 2018 and Lima et al, 2020). By placing the student teachers at the core of all teaching and learning initiatives in the professional training and development of educators, the social-constructivist school of thought, therefore, seeks to produce self-regulated educators, who among others, have been exposed to the various forms of learning. Subsequent to these envisaged kinds of educators, as key role players at the centre of the professional training and development of educators, lecturers therefore, have an obligation to contribute towards the realisation of these provisions. Similar to South Africa, many education systems across the globe have educational policies and pieces of legislation that advance the idea of producing self-reliant graduates (Geduld, 2018 and Jayawardena, et al., 2017). Bearing some self-regulation sentiments in their educational-policy documents, these educational systems uphold the role of education in preparing students for a successful career in which

they meet their professional duties, responsibilities and expectations, wherever they may find themselves in life.

However, Geduld (2018) and Jayawardena, et al. (2017) share a similar concern that this call to empower students with self-regulated learning skills is seriously compromised by professional-teacher training and development programmes. These critics cite that teacher education programmes prioritise subject-content knowledge and the comprehension of pedagogical knowledge at the expense of the fundamental principles underpinning learning, student motivation and development (Geduld, 2018; Jayawardena, et al. 2017 and Robbins et al. 2020). The above views endorse the sentiments of Zimmerman (2002), who warned that while many students come to the learning environment with various learning skills, they are rarely taught about self-regulated learning. In the views of Zimmerman (2002), without proper instruction and guidance on self-regulated learning, most of these students will never learn and acquire the skills necessary for self-regulated learning. Consequently, these students will struggle to succeed in their studies, and they may never reach their highest potential academically.

Having located self-regulated learning in the social-constructivist pedagogical orientation, it is cardinal to indicate that there is overwhelming research evidence on the educational benefits of constructivist- teaching approaches and their advancement of meaningful learning (Bosman & Schulze, 2018; Davids & Waghid, 2020; Maddock & Maroun, 2018; Mapuya, 2021 and Van Wyk, 2016). However, be that as it may, not much research attention had been given on how the social-constructivist embedded notion of self-regulation can be promoted. Yet, in advocating for constructivist teaching approaches, constructivists advance the notion of self-regulation as one of the fundamental end results of these approaches (Davids & Waghid, 2020; Geduld, 2018; Mapuya, 2021 and Van Wyk, 2016). Thus, this school of thought has thus far, not provided any evidence-based specific constructivist teaching approach that could be used to promote the envisaged self-regulation among students. By and large, the findings from research conducted on self-regulated learning in many countries across the globe, such as South Africa, the United States of America, Iran, Canada, Australia and Hong Kong, point to the need for lecturers to modify their traditional teaching approaches, in order to promote and develop the self-regulated learning abilities of students (Aguiar & Da Silva, 2017; Doulougeri et al, 2021; Geduld, 2018; Klug et al, 2016 and Moos & Ringdal, 2012). It is against this background that this study was deemed necessary, in order to determine the teaching approaches lecturers can use to promote self-regulated learning among first-year accounting-student teachers.

1.3 The Research Objective

Informed by the foregoing exposition, the objective of this quantitative study was to determine the teaching approaches which lecturers can use to promote self-regulated learning among first-year accounting-student teachers.

1.4 The Research Question

Consistent with the research objective above, the study investigated and answered the following question:

- Which teaching approaches can accounting lecturers use to promote self-regulated learning among first-year accounting-student teachers?

2. The Literature Review

In this section of the study, the researcher draws from the literature perspectives to define self-regulation and contextualize it in accounting education. Guided by the literature verdicts, the researcher further deliberates on the importance and implications of self-regulation in education and the teaching profession. The research findings in educational psychology and theory from many disciplines suggest that the learning environment has the potential to support and promote self-regulated learning, as well as to encourage active participation in the students' own learning. Against this assertion, this section looks at the major findings emerging from such research and goes on to provide some recommendations to accounting lecturers on how to promote self-regulated learning among their students.

2.1 Self-Regulation defined

The concept of self-regulated learning has not evolved drastically since its inception in educational psychology almost three decades ago. Omidire (2021) also refers to it as self-directed learning, which is a situation in which students assume full responsibility and control over their process of learning. As an ardent advocate of self-regulated learning, Zimmerman (2000) views it as a student's self-generated thoughts, ideas, sentiments and well-planned actions that are periodically and regularly adapted to attain personal goals. Pintrich (2002) later expanded this view of self-regulated learning to include the students' purposeful control of their cognitive strategies, their motivation, metacognition and the learning environment. Looking at this definition, this study submits that self-regulated learning is consistent with the assumptions of multiple intelligences, as advanced by Sternberg (2006) and that it also resembles some social constructivist learning ideologies. For instance, like the proponents of self-regulated learning (Lima et al., 2020 and Zimmerman, 2000), social constructivists advance that learning is an active and participatory process, in which students are responsible agents in the process of creating and acquiring knowledge (Mapuya, 2021). The advocates of both social constructivist learning and self-regulated learning argue with a united voice that those involved in curriculum implementation should model and teach students planning, goal setting, reflection and self-evaluation (Davids & Waghid, 2020; Doulougeri et al, 2021; Maddock & Maroun, 2018; Van Wyk, 2016 and Zimmerman, 2000).

Self-regulated learning, which is an indispensable prerequisite for life-long learning, is further viewed by Smith (2001) and Zimmerman (1986), as a process whereby individual students assume control over their learning, thinking, learning efforts and behaviour as they acquire knowledge and skills. In the views of Schraw et al. (2006), self-regulated learning refers to the students' abilities to understand and control their learning environment. In their qualification of the above position, Doulougeri et al., (2021) and Geduld (2018) concur with Schraw et al. (2006) that self-regulation is characterised by goal setting, self-understanding, self-monitoring and self-reinforcement. Informed by the above

perspectives, this paper, therefore, submits that self-regulation is all about self-awareness, self-directiveness, goal setting and the determination to achieve these goals strategically. In short, self-regulated learning is purposeful and intentional learning.

While Zimmerman & Schunk (2008) caution that self-regulated learning must not be mistaken for the mental ability or academic performance of students, this paper argues that self-regulated learning is a major determinant of academic performance. In making this submission, this study supports the findings of Lima et al., (2020) and Thobideaux, et al., (2016), whose studies found a positive relationship between self-regulated learning and academic performance in accounting. To this end, Schraw et al. (2006) remark that self-regulation is rather a self-directive individual process and initiative which comprises of a set of behaviours, in which students metamorphose their mental abilities into habits and skills, through a developmental process (Butler, 2002), which is rooted in the notion of feedback and guided practice (Geduld, 2018 and Paris & Paris, 2001). In the context of accounting education, self-regulation is demonstrated when students take ownership of their studies, by taking the initiative to study accounting and practice systematically and purposefully, on their own, without any push from the lecturer. Most importantly, self-regulation manifests itself in the students' ability to set up academic targets for themselves and not only to develop the necessary study schedule to achieve these targets, but they also adhere to this schedule.

To provide an illuminating view of self-regulated learning, Zimmerman (2000) developed a cyclical model of three phases. This model shows the main processes and subsequent processes demonstrated and modelled by self-regulated students to achieve their academic goals. Coming first among these three phases is the foresight phase, which looks at the students' motivational beliefs and processes (Geduld, 2018). For Doulougeri et al., (2021), these motivational beliefs and processes include thoughtful planning and goal-setting that directs efforts and the commitment to learn towards the attainment of these goals. Consequently, the foresight phase basically sets the tone and lays the foundation for learning. In the analysis of Geduld (2018), as well as Zimmerman's model (2000), it was suggested that task analysis and motivational beliefs about oneself are two inextricably intertwined forethought categories. In their study, Doulougeri et al, (2021) argue that the process of task analysis is shaped, informed and guided by the motivational beliefs of the students. For instance, how a student analyses an academic task, allocates time, engages in planning, selects the most appropriate learning strategy, sets goals and objectives to be attained is dependent on the student's motivational beliefs. Geduld (2018) interprets these motivational beliefs to include perceptions of one's self-efficacy, intrinsic interest in the task, expected outcomes and goal orientation.

Zimmerman (2002) identifies performance as the second phase of the cyclical model of self-regulated learning. In Zimmerman's (2002) perspective, this phase covers primary and secondary processes that unfold when students engage in learning. As indicated by Doulougeri et al., (2021), these processes influence the

students' focus, attentiveness and performance towards the attainment of the set learning goals. Thus, the phase of performance ideally looks at everything that happens as students are actually engaged in the learning process. To clarify this phase, Zimmerman (2002) identifies two distinctive classifications in performance processes, namely, self-control and self-observation. In Geduld's (2018) analysis of this second phase of the self-regulated learning model, students who are self-regulated are thought to employ diverse task strategies, to make use of imagery, to concentrate on the learning task and to ask for help.

Doulougeri et al, (2021) agree with the earlier views of Zimmerman (2002) that most importantly, in this phase of the model, students make use of various self-management strategies to accomplish the learning task and their academic goals. In the work of Geduld (2018), the third phase of the self-regulated learning model is about self-reflection and is concerned with processes that follow the students' efforts to learn and influence how they react to their academic achievements. For Zimmerman (2002), it is in this phase of the model that students who are self-regulated evaluate and review their achievements and carry out performance-casual attributions. Geduld (2018) qualifies this claim by arguing that these attributes can either be negative or positive and from them, students can derive self-satisfaction, or adopt behaviours that are defensive and adaptive to influence their approach to similar and different tasks in future.

2.2 The Importance and Implications of Self-Regulation in Education and in the Teaching Profession

The rationale and ultimate benefits of promoting and developing self-regulated learning among students have been widely reported by various researchers across the globe (Doulougeri et al., 2021; Gallagher & Savage, 2020; Geduld, 2018; Klug et al., 2016 and Robbins et al., 2020). Undoubtedly, various research studies have confirmed that by empowering students to engage in self-regulated learning, lecturers develop the abilities of these students to self-monitor and control their behaviour, thoughts, motivation and cognitive processes. This enables students to engage in learning successfully in an ever-changing learning environment and to respond to the complex challenges and demands of higher education and the global idea of citizenship and lifelong learning. Most importantly, it also prepares and empowers students to be able to face and deal with the challenges they will encounter in their daily lives, which is the one of the central ideas of multiple intelligences. Thus, self-regulated learning prepares students for life beyond their academic studies. In addition, other empirical investigations have reported on how self-regulated learning promotes and enhances the academic achievements of students (Aguiar & Da Silva, 2017; Doulougeri et al., 2021 and Lima, et al., 2020).

In highlighting the importance of self-regulated learning, Zimmerman & Schunk (2008) refer to the metacognitive element. Aguiar & Da Silva (2017) concur with Zimmerman & Schunk (2008) that this metacognitive element of self-regulated learning comprises of three types of knowledge, which are, declarative knowledge, procedural knowledge and conditional knowledge. Subjecting and submitting these three types on knowledge to a pedagogical lens, Geduld (2018) shares similar views with Aguiar & Da Silva (2017) that declarative knowledge

refers to a student's knowledge about oneself. For Zimmerman & Schunk (2008), this includes the students' awareness of those factors that influence their learning and academic performance. Guided by the above perspectives, this paper, therefore, argues that since declarative knowledge helps students to be aware of the factors that can potentially impact their performance in accounting, they are likely to develop and adopt strategies to either circumvent or mitigate these factors, thereby exemplifying the practical implications of self-regulated learning in accounting education. The analogy presented above helps to illuminate the importance of self-regulated learning from a student-driven perspective.

Deliberating on procedural knowledge, Geduld (2018) supports the earlier sentiments of Zimmerman & Schunk (2008) that it looks at the students' knowledge of the various strategies and necessary procedures to use and follow when engaging in a learning task. This is very cardinal in accounting education, especially in light of the fact that different accounting topics and content areas require students to use different learning strategies and to follow different procedures when dealing with the subsequent learning activities. For instance, strategies and procedures suitable for dealing with bank reconciliations, may not be necessarily effective for calculating depreciation. This type of knowledge is therefore important in ensuring that the students employ the most effective, relevant and meaningful learning strategies and procedures that are consistent with the topic, content and the task they are currently dealing with. This analysis of procedural knowledge, as a component of metacognition resonates with the idea of multiple intelligences as propounded by Sternberg (2006), who would have referred to it as practical intelligence. Drawing from the fundamental assumptions of the theory of multiple intelligences, as pioneered by Sternberg (2006), this paper argues that self-regulated learning promotes and advances the analytical, practical and creative intelligences of students, thereby promoting their holistic development.

Like the idea of practical intelligence as sustained in the theory of multiple intelligences (Sternberg, 2008), conditional knowledge is perceived by Aguiar & Da Silva (2017) and Shuy et al., (2010) to be concerned with the students' knowledge and understanding of the underlying reasons and time required to use a given strategy. In clarifying the above, this paper assumes that while students can use various learning strategies to engage in various learning activities, their ability to decide when and how to use a certain learning strategy is a function of conditional knowledge. This paper, therefore, postulates that since self-regulated learning promotes the students' ability to justify, select and decide when to use a specific strategy, they are empowered to be in control of their learning processes and the learning environment itself. This is because students can respond in ways that are consistent with the prevailing realities in the learning environment. In the South African context, declarative knowledge, procedural knowledge and conditional knowledge are loosely consistent with the provisions and qualities of the educator envisaged in the Minimum Requirements for Teacher-Education Qualifications (MRTEQ) (DBE, 2011 & 2015) and the Higher Education Qualifications Sub-Framework (2015).

In advocating for self-regulated learning, Zimmerman & Schunk (2008) cite motivation as one of the benefits to students. Accordingly, Zimmerman & Schunk (2008) argue that self-regulated learning naturally evokes the motivation of students. Of central concern to the motivation component of self-regulated learning are the ideologies and attitudes that influence how students use and develop their cognitive and metacognitive skills. Geduld (2018) subscribes to this view and adds that this aspect of motivation refers to both the self-efficacy and epistemological beliefs of students. In the unanimous views of Aguiar & Da Silva (2017) and Moos & Ringdal (2012), self-efficacy looks at the extent to which a student is confident that they can successfully perform an academic task and achieve a specific goal. Further to the above, the researcher proposes that dealing with and teaching students who at one point have experienced failure in their studies justifies the call for deliberate and thoughtful attempts to restore the self-efficacy of these students.

Empowering such students with self-regulated learning skills, therefore, becomes an appealing pedagogical approach. Aguiar & Da Silva (2017) support this idea by adding that self-regulated learning can help students to overcome low self-efficacy and negative self-talk with positive goal setting, positive self-instruction and a sense of belief in oneself, as an able student. Advocates of self-regulated learning argue that this will not only increase the students' levels of persistence and perseverance in their studies, but it should also challenge and inspire them to adapt their learning strategies (Lima et al, 2020). On the other hand, Geduld (2018) remarks that the epistemological beliefs of students are concerned with their ideologies regarding the nature and origin of knowledge. This paper, therefore, maintains that such ideologies are fundamental in shaping the students' learning behaviour and efforts because they inform the students' ultimate views on knowledge acquisition. Further to the above, to provide a more illuminating framework of self-regulated learning, the study argues that these components should not be viewed in isolation, but rather as complementary forces working together to benefit the students.

To advocate for the importance of self-regulated learning, the researcher presents a practical analogy and illustration in that empowering students to engage in self-regulated learning is like teaching hungry students how to fish and giving them the necessary fishing tools, as opposed to giving them a fish. Giving the hungry students a fish amounts to feeding them for the day, but teaching them how to fish is feeding them for life because whenever they are hungry, they can always go to the river and fish on their own. Students who have mastered self-regulated learning can always stand on their own in their studies and in life, finding solutions to their challenges both individually and creatively. It is therefore important to reiterate that the proper and successful implementation of self-regulated learning is highly correlated with the academic performance of students and their ultimate success in their studies (Aguiar & Da Silva, 2017; Lima, et al., 2020; Thobideaux, et al., 2016).

While this study cannot quantify the reduced demand for support and supervision on the part of lecturers, the researcher can argue with confidence that

self-regulated learning significantly reduces the time lecturers spend giving direct support and supervision to students in their learning endeavors. This frees time for other professional and academic demands that are always competing for the lecturers' limited time. Students who have successfully internalized and mastered self-regulated learning skills can confidently engage in creative thinking and problem-solving, which is one of the essential requirements for a 21st-century student to succeed in higher education and the teaching profession and in life as a whole (Jayawardena, et al, 2017). Considering the evidence-based educational importance and implications of self-regulated learning presented above, this paper advances the argument that if lecturers fully subscribe to the sustainable development and promotion of a culture of self-regulated learning, students who are struggling academically should improve.

3. The Research Methodology

The research design, the study participants and the research instruments are discussed in this section of the study. The researcher also deliberates on the development of the research instrument and the actual data collection.

3.1 The Research Design

The study was guided by the epistemological abstractions of interpretivism and constructivism (Cohen et al., 2017 and Nieuwenhuis, 2016). In keeping with the views of Maree (2016) and Nieuwenhuis (2016), who concur that interpretivism accentuates the meanings that individuals ascribe to their daily experiences in real life, the students had to make some thoughtful, conscious reflections on their pedagogical experiences in the learning environment and to ascribe meaning to these experiences and express these meanings quantitatively on a numerical scale. Being typically interpretivist in nature, the study was concerned with how the first-year accounting student teachers interpreted and rated the given pedagogical approaches, based on their experiences and the meanings which they ascribed to these experiences, in the light of the statements they were rating for each approach.

3.2 The Participants in the Study and their Demographic Data

In direct alignment with the research aim and the questions, all the first-year B.Ed. accounting student-teachers participated in this study. It therefore follows that the population of this study was all the 121 first-year accounting B.Ed. student teachers at a university of technology in South Africa. Thus, a purposely selected sample of 121 participants was considered adequate to provide valid, credible and reliable information on the teaching approaches which can be used to promote self-regulated learning and improve the learning ability of the students.

The questionnaire was administered to a group of 121 first-year accounting-student teachers, 53 of whom were males while the female student teachers amounted to 68. Typical of a first-year cohort in the South African higher education landscape, this group of participants was diverse in terms of the individual profiles of the individual students, all coming from different high schools, with different expectations about the learning environment. The researcher believes that these variations in the demographic details of the study

participants undeniably informed their scores on the various teaching approaches and their perceptions on self-regulated learning.

Table 1: Sample Profile of the Study Participants (N=121)

Gender	Number of Participants	Percentage of the Total Population
Males (1)	53	43.80%
Females (2)	68	56.20%
Total Population size	121	100%

3.3 The Research Instruments and the Data Analysis

Informed by the literature verdicts on problem-based learning, scaffolding, guided instruction and learning ability, (Killen, 2016; Mapuya, 2021, Mapuya & Rambuda, 2021; Mokoena & Materechera, 2015; Van Wyk, 2016 and Vygotsky, 1978), the researcher developed a questionnaire with a Likert scale. Table 2 below shows how the students scored each one of the six statements under the three types of teaching approaches. Drawn from the relevant literature, these statements were meant to establish the students' perceived ability of the three teaching approaches in promoting their self-regulated learning and learning ability. This Likert scale is therefore cardinal in interpreting and understanding the quantitative data generated by the study in the form of measures of central tendency. The Likert scale was presented in the questionnaire as:

Never=1	Seldom=2	Sometimes=3	Often=4	Always=5
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The quantitative data generated were analyzed by using the measures of central tendency, which comprises of descriptive statistics (Leedy & Ormrod, 2015 and Maree, 2016). To this effect, the mean and standard deviation were used to quantify the students' scores per individual statement and teaching approach. In the views of Leedy & Ormrod (2015), the purpose of descriptive statistics is to present an illuminating view of the data's appearance, how broadly they are spread, and the correlation between the variables in the data. In line with the sentiments of Pietersen & Maree (2016), descriptive statistics were used to summarise the data through location or centrality, which covers the mean and the dispersion, which deal with the standard deviation. Cohen et al, (2017) concur with Leedy and Ormrod (2015) that dispersion looks at how the data are spread around the average. The SPSS Version 25 was used to validate and confirm whether the statements posed by the researcher presented a homogeneous picture of problem-based learning, scaffolding and guided instruction. The questionnaire's reliability was also assessed using SPSS.

4. The Discussion and The Findings

The quantitative findings will be presented in terms of how the students rated each of the individual six statements under the three broad teaching approaches. This presentation of the quantitative data serves to quantify and express in numerical terms how the first-year accounting-student teachers perceive and rate their self-regulated learning experiences and their abilities under the various

teaching approaches. In so doing, this will help the researcher to determine the teaching approaches that accounting lecturers can use to promote self-regulated learning among first-year accounting-student teachers. Accordingly, Table 3 below presents these quantitative findings.

4.1 Presentation of the Findings

Table 3: Presentation of the Participants' scores on the 18 Statements

Teaching Approaches and Learning Abilities				
Teaching Approach		Statement	Mean	Standard Deviation
Problem-based learning	PBL1	My self-regulation in learning anything in accounting is promoted when I am able to produce and derive new concepts, principles and understanding through my first-hand interactions and experiences with the learning environment.	4.95	1.03
	PBL2	I feel confident to take the initiative to study and engage in learning activities when the lecturer teaches me in ways that allow me to discover new knowledge in accounting in my own way.	4.89	0.75
	PBL3	Problem-based learning gives me courage and confidence in my studies.	4.81	1.19
	PBL4	I am more resilient in my studies, when I am learning through problem-solving.	4.77	0.83
	PBL5	Problem-solving helps me to endure difficult learning tasks.	4.68	0.74
	PBL6	Problem-solving improves my motivation to study.	4.51	0.68
		Overall Mean	4.77	0.87
Scaffolding	S1	My self-regulation in learning anything in accounting is promoted by adult guidance or collaboration with more capable peers.	2.21	0.66
	S2	I feel confident to take the initiative to study and engage in learning activities when the lecturer leads and supports my learning, in order to discover new knowledge in accounting and to draw my own conclusions.	2.48	0.64
	S3	Scaffolding gives me courage and confidence in my studies.	2.67	0.84
	S4	I am more resilient in my studies when learning in a scaffolded-learning environment.	2.36	0.61
	S5	Scaffolding helps me to endure difficult learning tasks.	2.28	0.77
	S6	Scaffolding-solving improves my motivation to study.	2.51	0.58
		Overall Mean	2.42	0.68

Guided instruction	GI1	My self-regulation in learning anything in accounting is promoted when the lecturer helps me to learn and understand new subject content, without necessarily giving me the information directly.	2.89	0.36
	GI2	I feel confident to take the initiative to study and engage in learning activities when the lecturer guides me to discover new knowledge in accounting and to draw my own conclusions.	2.01	0.42
	GI3	Guided instruction gives me courage and confidence in my studies.	1.89	0.69
	GI4	I am more resilient in my studies when learning through guided instruction.	1.77	0.98
	GI5	Guided instruction helps me to endure difficult learning tasks.	1.69	0.83
	GI6	Guided instruction improves my motivation to study.	2.13	0.71
Overall Mean			2.06	0.67

4.2 Discussion of the Findings

With an overall mean of 4.77, problem-based learning has emerged as a teaching approach whose ability to promote self-regulated learning among the first-year accounting student-teachers ranges from often to always. The reliability of this finding is corroborated by a standard deviation of 0.87 which indicates high levels of consistency and less variability in the students' scores. In interpreting the quantitative findings regarding which this teaching approach can be used to promote the self-regulated skills of students, reference can be made to the means on statements PBL1, PBL2 and PBL3, which are all above 4.80, which is very close to 5.0, a score which denotes always. The united voice emerging from the quantitative data confirms that students are unanimous that problem-solving is a superior-teaching approach in promoting their self-regulated learning skills. This finding endorses the earlier verdicts of Jacobs, (2016), Killen, (2016) Lombard & Themane, (2015), Ormrod, (2014b), Sternberg (2007) and Vygotsky, (1976), whose work associates constructivist learning and self-regulated learning skills with problem-based learning. Earlier studies by Jensen & Frederick, (2016) and Yadav (2016) have also produced a similar verdict.

Contrary to the collective views of Daniel & Bimbola, (2010), Killen, (2016), Van Wyk, (2016) and Vygotsky, (1986), who all support guided instruction and scaffolding as empowering student-centred teaching approaches, this study found these two approaches to diminish the self-regulated learning ability of students. This finding finds expression in the overall means for both scaffolding and guided instruction, which are 2.42 and 2.06 respectively. Based on the Likert Scale used in this study, these scores suggest that scaffolding and guided instruction seldomly promote the self-regulated learning skills of students. The very close respective standard deviations of 0.68 and 0.67 attest to the high levels of agreement and concurrence among the students' scores, thereby vindicating the reliability of this finding.

In making this interpretation, the researcher acknowledges that these scores can also be a reflection of the lecturer's use of scaffolding and guided instruction, rather than their ability to promote the self-regulated learning skills of students.

Undoubtedly, this study corroborates the work of Lombard & Themane, (2015), Ormrod, (2014b) and Vygotsky, (1976) regarding constructivist-teaching approaches of scaffolding and guided instruction in promoting student participation in the teaching and learning process. However, a new perspective that has emerged from this study is that these two approaches fall short of promoting sustainable self-regulation of students beyond the classroom because they are predominantly lecturer centred. While both scaffolding and guided instruction can be creatively used to promote the enthusiasm and resilience of students in the short run, during class time, when the lecturer is in class presenting a lesson, this enthusiasm and resilience is not sustainable outside the immediate learning environment, in which the lecturer plays an active role in promoting them. Beyond the classroom, the enthusiasm and resilience generated by the lecturer through scaffolding and guided instruction is non-existent, yet these are the central attributes of self-regulated learning.

In support of the above findings, the researcher submits that self-regulated learning is all about the students themselves while scaffolding and guided instruction are rather about the lecturer. The motivation to learn and the other complementary self-regulated learning attributes ignited by the lecturer during the lesson presented should therefore be articulated in the context of problem-based learning. This submission is made in view of the notion that self-regulated learning goes beyond the classroom and it is not bound to any time frame or physical constraints.

5. Conclusion

Since the aim of this study was to determine the teaching approaches which lecturers can use to promote self-regulated learning, the problem-based learning approach was found to be the most effective and suitable one to this effect. Scaffolding and guided instruction were found to seldom promote self-regulated learning because of their reliance on the lecturer. Given the possibility and practicability of teaching students how to engage in self-regulated learning, this paper suggests that there is a need for distinctive policies on self-regulated learning in education, the integration of self-regulated learning into the curriculum, as well as in the professional training and development of lecturers. The paper further recommends creating awareness among lecturers of their roles in promoting and developing self-regulated learning among their students. With accounting being a predominantly practical discipline, which requires regular practice, the researcher submits that accounting students need to be empowered to engage in self-regulated learning on a continuous basis. In this way, self-regulated learning would not only compensate for the shortcomings of lecturer-centred approaches towards the realisation of meaningful learning, but it would also give accounting students more exposure to the content and the various learning activities in accounting. This call resonates very well with the collective pronouncement of the Department of Basic Education and the Department of

Higher Education and Training in their respective aims to produce self-directed learners and students.

5.1 Limitations of the Study

Being a purely quantitative study in nature, the researcher acknowledges that this study lacks qualitative data to corroborate and triangulate the quantitative findings. To provide a more illuminating view of the students' scores of the six statements under the three teaching approaches, the questionnaire could have included an open-ended section, in which students qualified their scores with the relevant narrations (Pietersen & Maree, 2016). Undoubtedly, this would also have vindicated the reliability of the questionnaire and the credibility of the ultimate study findings (Leedy & Ormrod, 2015; Lewis et al., 2014 and Maree, 2016). However, in keeping with the research objective and the research question, it was found appealing to obtain numerical data on these teaching approaches and to express the findings quantitatively (Maxwell, 2017).

5.2 Implications

Despite the limitations mentioned above, the study has produced adequate statistical evidence to imply that on a comparative basis, purely student-centred teaching approaches are more effective in promoting self-regulated learning than lecturer-centred pedagogies. The statistical data and the subsequent findings provide a sound basis to intensify calls for the radical and pragmatic adoption of the recent concepts of student empowerment. Policy makers and programme designers should be part of the conversations to include problem-based learning as a core element of training programmes for undergraduate teachers. In order to make the visions of most educational systems of lifelong learning citizens and the pedagogical assumptions of social constructivism a lived reality, there is a need to align the pedagogical practices of lecturers towards independent and autonomous learning.

5.3 Possible Future Research

Given the identified gap emanating from the absence of qualitative data in this study, a mixed-methods study, with multiple data-collection instruments is, therefore, highly recommended for further research to interrogate these quantitative verdicts. It is also suggested that future research should include the narrative and reflective phenomenological experiences of students with the different teaching approaches in the light of the phenomena investigated in this study.

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