Teaching Approaches Compatible with First-Year Accounting Student Teachers' Learning Styles:

Theoretical and Phenomenological Perspectives

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Received: July 12, 2021 Accepted: October 25, 2021 Online Published: October 27, 2021

doi:10.5430/ijhe.v11n2p120 URL: https://doi.org/10.5430/ijhe.v11n2p120

Abstract

Premised on the theoretical assumptions of social constructivism and multiple intelligences, the purpose of this study was to investigate teaching approaches which are compatible with the learning styles of first-year accounting student teachers from both theoretical and phenomenological perspectives. Being a predominantly conceptual study in nature, data was collected from a host of sources on learning styles, teaching approaches, social constructivism and multiple intelligences to adopt a theoretical position. Focus group interviews were then used to collect data from students to establish their phenomenological perspectives. To ensure the validity of data from these focus group interviews, triangulation, peer debriefing and member checking were used. The study established that while not all first-year accounting student teachers are able or do not prefer to learn everything in the same way, social constructivist centred approaches are highly compatible with most of the students' learning styles. Based on literature verdicts and the phenomenological voices of students, the study recommends the application of the principles of social constructivism in accounting lesson presentations. It is also recommended that accounting lecturers should orchestrate all teaching and learning activities around student needs and their learning styles. Furthermore, the study findings provide a sound basis to recommend that students must always be at the centre of all teaching and learning, regardless of the pedagogical beliefs and preferred teaching approaches of the accounting lecturer.

Keywords: accounting, learning preferences, learning styles, teaching approaches, student teachers

1. Introduction and Background to the Study

Although lecturers have been gravitating towards the framework of learning styles because it resonates well with teaching experience, this shift has not necessarily benefited students academically in terms of lesson delivery. Notwithstanding research evidence on pedagogy and subject didactics which is very conclusive that effective and meaningful student learning can only be achieved through student-centred teaching approaches (Bosman & Schulze, 2018; Davids &Waghid, 2020; Killen, 2016; Maddock & Maroun, 2018; Mapuya, 2021). However, despite the availability of this scientific evidence, recent studies by Davids and Waghid (2020), Du Toit (2018), and Mapuya (2021) have found limited application of such pedagogical practices in higher education, thereby leading to a high failure rate among students. To this end, a host of explanations have been advanced to illuminate this problem (Maddock & Maroun, 2018; Oosthuizen & Cassim, 2016; Singh, 2015). Scholars such as Guthrie et al. (2014), Persson and Napier (2014), and Wilmot and Merino (2015) share a collective grave concern that students are failing to cope in the current landscape of tertiary education and the pedagogical practices of lecturers, resulting in the higher failure rate.

In the same vein, Mapuya (2021), Masondo and Fengu (2019, and Raborife (2017) concur that the academic performance of students in accounting is not an exception from this phenomenon. As such, the misalignment between the lecturer's preferred teaching approaches and the students' preferred learning styles has emerged as one of the underlying reasons for the failure of students (Ali & Chan 2017; Bosman & Schulze, 2018; Du Toit, 2018; Hernández-Torrano, Killen, 2016; Mapuya, 2018). From a South African perspective, Bosman and Schulze (2018),

Maddock and Maroun (2018), Makola (2016), Mapuya (2021), Oosthuizen and Cassim (2016), Raborife (2017), Singh (2010) and the Council on Higher Education, (2013) are unanimous that there is an urgent need to address the high failure rates of students in higher education, especially among first- and second-year students.

Thus, Bosman and Schulze (2018), Killen (2016) and Somji (2018), Williams and Williams (2016) are unanimous that this can be achieved through the matching of teaching approaches with the learning styles of students. In this regard, Seyal and Rahman (2015) argue that globally, the concept of learning styles has received overwhelming research attention in pedagogy research over the last three decades. However, there is no scientific evidence to suggest that matching teaching approaches with the learning styles of students will indeed result in improved academic performance (Kirschner, 2017; Simmonds, 2014).

On the contrary, evidence from empirical studies demonstrates that there is no relationship between learning styles and academic performance (Goldhill, 2016; Khazan, 2018; Kirschner, 2017; Roberto et al., 2020; Simmonds, 2014). By the same token, Khazan (2018), Kirschner (2017) and Simmonds (2014) jointly reject this whole idea of learning styles and instead, advocate for differentiated instruction. Similarly, studies by Bosman and Schulze (2018), Khazan (2018), Kirschner (2017) and Simmonds (2014) have produced convincing statistical evidence to refute the idea that matching teaching approaches with the learning styles of students leads to improved academic performance. However, based on literature verdicts, the researchers advance that matching teaching approaches with the learning styles of students has a direct impact on the quality and depth of learning.

Hence, some scholars are still advocating for the matching of teaching approaches with the learning styles of students (Chetty et al., 2019; Jansen van Rensburg, 2014; Silver, 2013; Skae et al., 2020; Somji, 2018) for the effective attainment of learning outcomes. Scholars in support of this idea claim that matching teaching approaches with learning styles of students results in meaningful and effective learning (Chetty et al., 2019; Killen, 2016; Skae et al., 2020; Somji, 2018). Similarly, based on teaching experience, this study maintains that one does not need to look at statistics to be convinced that matching teaching approaches with the learning styles of students can indeed result in meaningful and effective learning, which in essence, should culminate in improved academic performance.

In the same vein, Hernández-Torrano et al., (2017), and Skae et al., (2020) concur that some learning barriers can be easily addressed by matching teaching approaches with the learning styles of students. Given the contradicting findings from studies into the phenomena under investigation, this study has found no conclusive scientific evidence on the effectiveness of matching teaching approaches with the learning styles of students towards improving academic performance (Hernández-Torrano et al., 2017). In fact, Bosman and Schulze (2018), Khazan (2018) and Skae (2018) concur that there is very limited scientific evidence to substantiate the claim that learning styles make a significant difference in learning. Despite these opposing views, a claim which has consistently and frequently emerged from literature in this regard is that matching teaching approaches with the learning styles of students resonates well with the imperatives of educational psychology.

Given the foregoing conflicting verdicts, it is perhaps necessary to distinguish between learning styles and learning preferences. In the views of Chetty et al. (2019), Silver (2013), and Somji (2018) while learning styles and learning preferences can be viewed in the same immediate context, they both lead to meaningful learning. In addition, despite the polarised debates and inconclusive scientific evidence on the correlation between the matching of teaching approaches with learning styles and academic performance, most scholars share a similar conceptualisation, understanding and definition of learning styles (Bosman & Schulze, 2018; Chetty et al. 2019; Goldhill, 2016; Hawk & Shah, 2007; Khazan, 2018; Kirschner, 2017; Roberto et al. 2020; Samarakoon et al. 2013; Simmonds, 2014; Silver, 2013; Skae et al., 2020; Somji, 2018).

According to Samarakoon et al. (2013), a learning style is an individually unique technique used by individual students to engage in learning and recalling information. Similarly, Bosman and Schulze (2018), concur with Hawk and Shah (2007) that a learning style is the way a student starts to focus on, processes, stores, internalises and remembers difficult and newly acquired information. Concurring with the above scholarly views, Chetty et al. (2019) conclude that a learning style demonstrates genetic coding, adaptations to the environment and personality development of the students. Killen (2016) views a learning style as the way a student prefers to engage in learning. Killen (2016) takes this position based on the observation that not all students are able to learn subject content and engage in learning activities in a similar way.

However, a more illuminating definition of a learning style is presented by Keefe (1988) who define it as a composite of characteristics, physiological, affective and cognitive qualities that function as relatively stable descriptors of how a student perceives, interprets, interacts with and responds to the learning environment. Notwithstanding culture, every student has an individually appealing preferred learning style which some researchers

believe is as distinctively personal as a signature (Seyal & Rahman, 2015). Evidently, it is important to note that while the idea of learning styles emphasises that students learn differently, Willingham et al. (2015) assert that these are not differences in cognitive and academic ability but instead, in the students' preferred methods to engage in learning and process information.

Drawing from the above literature perspectives, this study defines a learning style as a technique or method which the student uses and relies upon to study or to learn, receive, absorb, incorporate, understand, interpret and store new information and to be able to recall that information and apply it to respond to questions. In addition to the above, this study advances that because all students are unique in a special way, a learning style varies from student to student and from one learning activity or context to the other. Informed by literature findings, this study further argues that student-centred teaching approaches are in a superior position to meet and satisfy the dynamic learning needs of individual students in the learning environment which are linked to their preferred learning styles. However, based on the findings from a study by Nuzhat et al. (2011) which found 73% of its participants to have multiple preferred learning styles, it is misleading to suggest that a student may have only one preferred learning style.

It is against the foregoing exposition, coupled with the high failure rates among first-year accounting student teachers within a South African context that this study was conducted to investigate the teaching approaches which are compatible with the learning styles of first year accounting student teachers. Among other questions, students were asked to reflect on their previous learning experiences considering their learning styles and suggest how they preferred to be taught for a meaningful and effective learning experience. By investigating teaching approaches which are compatible with the students' learning styles, it is anticipated that this study will create awareness among accounting lecturers to strike a balance between their pedagogical beliefs and the learning styles of students when planning for instruction and presenting lessons.

2. Aim of the Study

Given the above context, the aim of this study was twofold. The study sought to investigate teaching approaches which are compatible with the first-year accounting student teachers' learning styles from a theoretical perspective and to determine if there is any significant effect on the matching of teaching approaches with learning styles of students and academic performance. In keeping with these aims and to satisfy them, the researchers investigated the following research questions:

3. Research Questions

1) What are the teaching approaches which are compatible with the first-year accounting student teachers' learning styles?

2) How does the matching of teaching approaches with learning styles affect academic performance?

4. Research Approach and Research Design

Informed by the study aim, which was to investigate teaching approaches which are compatible with the learning styles of first year accounting student teachers, this study followed a qualitative research approach, putting much emphasis on the students' voices. A Table of Uniform Random Numbers was used to select forty-eight students from a population of one hundred and twenty-one students. The students were then divided into eight groups of six students for the focus group interviews. Triangulation, peer debriefing and member checking were used to ensure the validity of data from these focus group interviews. Given the exposition that researchers had to critically examine a host of relevant studies and literature on learning styles and teaching approaches and make conclusions based on the findings from these studies, this study also drew from the epistemological precepts of interpretivism as collectively submitted by Creswell (2016), Denzin and Lincoln (2011), Terre Blanche, Durrheim & Painter (2011) and Nieuwenhuis (2020). It therefore follows that the various sources of literature which were consulted in this study held and embraced different views regarding teaching approaches which are compatible with the learning styles of students.

Thus, by following a theoretical approach, this study subscribes to the fundamental principles of multiple realities (Gray, 2014; Creswell, 2016; Leedy & Ormrod, 2015; Terre Blanche, Durrheim & Painter, 2011). These multiple realities regarding literature's views on which teaching approaches are compatible with the learning styles of first year accounting student teachers were obtained through a rigorous interrogation of relevant literature which the researchers arrived at a negotiated meaning through robust debates and discussions.

5. Literature Review

5.1 The Matching of Teaching Approaches with Learning Styles and Teaching Approaches Used in Accounting Education and Educational Implications

Research on learning styles reveals that there are several ways through which students prefer to learn, for instance, by hearing, seeing, doing, reading and asking questions. Despite these differences in learning styles, research shows that a common characteristic shared by students is that they learn best when lessons are presented using approaches that support their learning. Research is also conclusive that although there is a host of learning preferences, students are likely to prefer a few learning styles as op posed to a single style. Given the above, it is therefore important for lecturers to pay attention to the patterns in the learning styles of students. To put this into perspective, an accounting student teacher who prefers visual learning can also be a very verbal, social and may prefer learning difficult accounting topics such Financial Statements and Bank Reconciliations using their primary thinking and analytical skills.

Yilmaz-Soylu and Akkoyunlu as cited by Seyal and Rahman (2015) suggest that while all students share common psychological and social characteristics in the process of learning, there may be differences in individual preferences in acquiring information, knowledge and in ascribing meaning to learning experiences. For this reason, Seyal and Rahman (2015) argue that studying the learning styles of students therefore becomes very important for lecturers to have adequate understanding of the learning processes of their students. With the radical transformation of the landscape in higher education that has been necessitated by information and communication technology, it becomes even more crucial to understand the learning styles of students.

In support of the sentiments of Chetty et al. (2019), Faisal (2019), Husin (2017) and Seyal and Rahman (2015) argue that understanding the learning styles of students helps lecturers to present lessons in suitable ways that promote and facilitate quality and effective learning. Husin (2017) and Skae et al. (2020) suggest that in so doing, students can reap maximum benefits from their learning experiences. By the same token, an earlier study by Too (2009) suggests that it is important for lecturers to be aware of the learning needs, abilities, capacities and learning styles of their students. Accordingly, Too (2009) argues that this is necessary to create and enhance an effective learning environment.

Despite studies which suggest that the absolute use of the lecturer-centred teaching approach is not relevant to accounting students and accounting education in particular, (Wilmot et al., 2015), recent empirical evidence seem to indicate that accounting has been predominantly taught using lecturer-centred approaches (Sartorius & Sartorius, 2013; Mapuya, 2020 & 2021; Wilmot et al., 2015). These approaches have proved to be less effective in both creating an academically supportive learning environment and in stimulating active student participation which is a prerequisite for success in accounting.

The above analysis is consistent with the collective views of Davids and Waghid (2020) and Mapuya (2021) who caution that the lecturer-centred teaching approaches lead to dependant students, which is not a feasible and sustainable model for professional development of accounting student teachers. From the foregoing submissions, it is evident that these approaches should be used very sparingly and cautiously in accounting education. To this end, Akalu, (2017) suggests that in cases where it is necessary and applicable, the lecturer-centred approaches should not be used in isolation of approaches which support active student participation. Rather, they must be used as complementary teaching approaches to support a predominantly student-centred learning environment in accounting education (Mapuya, 2020).

Earlier studies by Ko and Chung (2014), Liu and He (2014) and Visser and Vreken (2013) have revealed that the lecturer-centred-approach does not accommodate the diversity of students in the learning environment, but rather selects a few able minded students. Visser and Vreken (2013), argue that this approach holds that lecturers impart their knowledge to willing and able recipients. This contradicts the pedagogical position taken by Davids and Waghid (2020) and Mapuya (2021) who concur that lecturers should act as facilitators who assist students in their learning processes as opposed to being transmitters of knowledge and absolute sources of knowledge.

In their work on principles for effective teaching, Ambrose et al. (2010) assert that a much broader framework which encourages and promotes reflective student learning as opposed to narrowing down their learning styles has been found to promote and improve the attainment of learning objectives. Among others, reflective student learning entails establishing a link between prior learning and new knowledge, learning by experiences, self-regulation and student autonomy, all of which find expression in the assumptions of social constructivist teaching approaches (Chetty et al., 2019; Mapuya, 2021; Roberto et al., 2020). Thus, despite the endless debate on the relationship

between learning styles and academic performance, accounting lecturers need to adopt teaching approaches that enable students with different learning styles to learn effectively and meaningfully. To this end, they need to create a suitable mix of different learning opportunities to ensure that all students can learn effectively (Visser & Vreken, 2013).

Although students have individually subjective learning styles which they use to study and prepare for tests and exams, research evidence repudiate that they can perform better academically when lesson presentations are informed by these learning styles (Silver, 2013; Kirschner, 2017; Pashler et al., 2008; Simmonds, 2014). On the contrary, study findings by Roberto et al., (2020) support the earlier verdicts of Bosman and Schulze (2018) that matching teaching approaches to the learning styles of students creates favourable opportunities for students to engage in learning effectively and meaningfully, thereby improving their learning (Rahman et al., 2016). These findings imply that there is still no conclusive and convincing scientific evidence to claim that matching teaching approaches with the learning styles of students improves academic performance. Therefore, the researchers argue that while favourable learning opportunities improve student learning, there is no guarantee that they will result in improved academic performance.

From a South African perspective, curriculum implementation should pay attention to the learning styles of diverse ethnic groups (Jansen van Rensburg 2014). In South Africa, where racial dynamics and issues of access are still widely contested in higher education, Sartorius and Sartorius (2013) and Jansen van Rensburg (2014) caution that, there is a good cause to the matching of teaching approach to learning styles for it addresses how students prefer to learn (Mapuya, 2021). In support of the above, Bosman and Schulze (2018) argue that the matching school of thought considers the congruence between the lecturer, the students, the subject matter and the learning activity at hand.

Aldajah et al. (2014) and Faisal (2019) are unanimous that to provide students with quality and effective learning experiences, lecturers should pay attention to the extent to which their teaching approaches are compatible with the learning styles of students. In advancing the above narrative, Faisal (2019) argues that the amount and depth of knowledge which students can learn from the content presented in the learning environment depends on the compatibility between the learning styles of students and the teaching approaches used by the lecturer to deliver that content. The arguments presented by Aldajah et al. (2014) and Faisal (2019) above are very crucial when considering the views of Killen (2016) who observed that almost 20% of the differences in the academic performance of students can be attributed to learning ability, which is, how well a student can learn within the context of a given learning environment. Corroborating evidence to this school of thought comes from the studies of Brown and Wilmot (2020), Chetty et al. (2019) and Husin (2017) whose findings reaffirm that learning is largely diminished if the teaching approach does not support the learning styles of students and promote their ability to learn.

Researchers such as Hernández-Torrano et al. (2017) and Skae et al. (2020) have hypothesised that the lecturers' failure to match or strike a balance between the students' preferred learning styles and teaching methods in accounting would result in lower motivation. This may lead to poor performance and perhaps in attrition. The above sentiments confirm the earlier findings of Rahman et al. (2016) which found a positive relationship between the matching of teaching approaches with the learning styles of students and motivation for learning. In another study by Williams and Williams (2016), it is suggested that matching teaching approaches with the students' learning styles effectively affects learning. A reason advanced for this is that this matching may enhance more stimulating and supportive learning experiences. In resonance to studies on matching of teaching approaches to learning styles, Bosman and Schulze (2018), Killen (2016) and Somji (2018) have found that learning outcomes were significantly affected when students were presented with learning materials that were matched with their learning style. Somji (2018) has found that learning in matched conditions was found to be significantly superior to learning in mismatched conditions.

An investigation by Chetty et al. (2019) reveals that students are disappointed and frustrated when there is a mismatch between their learning styles and the lecturer's teaching approaches. In concluding that mismatching teaching approaches with learning styles usually prevents students from reaching their full academic potential, the study by Chetty et al. (2019) has endorsed the findings of Rahman et al. (2016). Similarly, a study by Husin (2019) demonstrates that matching teaching approaches with the learning styles of students allows students to acquire and retain more knowledge and to subsequently perform better academically.

Conversely, researchers like, Kirschner (2017) and Simmonds (2014) present a different view as they suggest that mismatching of preferred teaching approaches to preferred learning styles can help students to overcome weaknesses in their cognitive styles and to develop a more integrated approach to their learning. Further research after Kirschner

(2017) and Simmonds (2014) continues to argue that mismatches in teaching and learning styles can also benefit students by stimulating learning and fostering flexibility in learning (Khazan, 2018). Considering the above, it is apparent that learning and matched conditions may, in certain contexts, be significantly more effective than learning in mismatched conditions. However, as argued by Bosman and Schulze (2018), Khazan (2018) and Skae (2018) the absence of adequate scientific evidence to corroborate these assertions makes the study phenomena a highly contested issue in academic circles.

5.2 The Importance of Matching Teaching Approaches with the Students' Learning Styles in Accounting

Student diversity in the learning environment challenges lecturers to acknowledge and consider the dynamic learning needs of individual students. Among others, this includes acknowledging and appreciating that the learning styles of students are individually different. To this effect, there is quite convincing and conclusive evidence from studies on pedagogy and related literature perspectives to argue that lecturers need to recognise and consider the learning styles of students as part of embracing student diversity in the learning environment (Brown, & Wilmot, 2020; Chetty et al., 2019; Husin, 2017; Rahman et al., 2016; Skae et al., 2020).

Kirschner (2017) and Simmonds (2014) maintain that changing and switching between teaching approaches during lesson presentation can provide for the various aptitude levels of students, their cultural background and their self-awareness levels as students. It is therefore important that accounting lecturers view accounting students to be differently unique and dynamic in their learning preferences and processes. In view of the above views and informed by Vygotsky's (1978) pedagogical assumptions, this study argues that lecturers should use teaching strategies which promote inclusive teaching, active student learning, collaborative learning and group work. In this way, the researchers of this paper are convinced that accounting student teachers are given opportunities to experience peer directed learning and realise their full academic potential in accounting. This is one of the major underlying assumptions of cooperative learning, which falls under Vygotsky's ideologies of social constructivist learning (Vygotsky, 1978).

This paper further advances that combining different teaching approaches benefits accounting student teachers in the learning environment, regardless of their preferred learning styles. Research evidence demonstrates that students can experience effective learning when words and visuals are combined together than from the use of either of them alone (Kirschner 2017). In concurrence with this school of thought, Lawrence (2014) advocates for differentiated learning and rejects the idea of a one size fits all approach to teaching and learning. For instance, an earlier study by Mayer et al. (2003) found that the use of multimedia when presenting lessons stimulates and fosters learning which is meaningful to students. Simmonds (2014) attribute the above observations of Mayer et al. (2003) to the fact that multimedia facilitates the active cognitive processing of subject content. In agreement with the above views, Kirschner (2017), argues that the call for differentiated teaching, learning materials and contexts stems from the notion that individuals learn differently.

Hence, this study's call for the matching of teaching approaches with learning preferences. However, Kirschner (2017) warns that there is a host of challenges with the idea of learning styles. Among these challenges, Kirschner (2017) argues that a student's learning styles may actually differ from the one which results in meaningful, efficient and effective learning. In support of this view, studies of Goldhill (2016) and Khazan (2018) found no scientific evidence to support the idea of matching of learning styles to promote academic performance of students. Thus, although students can have individually subjective learning preferences for studying and preparing for tests and examinations, research rejects the claim that they can learn better when taught using approaches which match their preferences (Goldhill, 2016; Khazan, 2018).

Nevertheless, this paper submits that lecturers should assist students to understand how studying styles differ from learning process and preferences. This recommendation is consistent with the sentiments of Hernández-Torrano et al. (2017), who identified the need for lecturers to teach students of different learning preferences and their outcomes. In advocating for this school of thought in pedagogy, researchers such as Chetty et al. (2019) and Faisal (2019) maintain that recognising and considering the learning styles of students enables lecturers to ensure that their teaching approaches appeal to these learning styles of students. Accordingly, Somji (2018) cautions that students learn and process subject content in ways that are individually unique and different. It therefore becomes important for lecturers to have a sound understanding of the students' learning styles. Equipped with the knowledge and understanding of different learning styles, Somji (2018) is convinced that lecturers will be able to differentiate their teaching to accommodate individual students in the learning environment.

There are important benefits for students in using different teaching approaches to present accounting lessons (Somji, 2018). The process of learning involves complex, different and dynamic developmental steps such as creating

structures, repetition and building on prior learning (Chetty et al., 2019). As such, Jansen van Rensburg (2014) and Skae et al. (2020) argue that students benefit from teaching approaches which provide them with differentiated ways to engage in learning. Moreover, Husin (2017), and Seyal and Rahman (2015) concur that there is a positive relationship between the matching of teaching approaches with the learning styles of students and their ability to learn, including attitude towards the subject.

Samarakoon et al. (2013) argue that both lecturers and students are beneficiaries of knowledge on learning styles. Accordingly, accounting lecturers can develop and design pedagogy to suit the learning styles of their students. Studies by Chetty et al. (2019), Skae et al. (2020) and Somji (2018) have found this educational practice to have a resounding effect on the effectiveness and meaningfulness of the teaching and learning experiences. On the other hand, accounting students can be empowered to identify the best learning methods and techniques which are compatible with their individual learning styles. Samarakoon et al. (2013) argue that this can result in improved learning experiences and educational satisfaction.

5.3 The Distinctive Learning Styles and Their Implications in Accounting Education

Premised on the nature of accounting as a discipline and the content which students are exposed to, especially in the first and second year of their studies, a few learning styles have been found applicable to accounting education. From a South African perspective, the researchers argue that these learning styles are consistent with the aims of accounting as enshrined in the Curriculum and Assessment Policy Statement of Accounting (Department of Basic Education, 2015). This study further submits that the provisions of the minimum requirements for teacher education qualifications also find full expression in these learning styles and types of students (Department of Higher Education and Training, 2011). For clarity and simplicity, the researchers present these learning styles as types of students one would find in a typical learning environment for accounting.

Despite the absence of scientific evidence to corroborate the suggestions made on teaching approaches and practices which are compatible with these learning styles, this study draws from the sentiments of Mapuya (2018), Reeves et al. (2008), and Wyk and Dos Reis (2016) on the importance of theory in accounting education. Accordingly, Wyk and Dos Reis (2016) subscribe to the earlier views of Reeves et al. (2008) that the use of theories in educational practice is very important in creating and enhancing learning environments that support students and offer them effective learning opportunities. In lieu of the above, this study contends that teaching approaches and practices in accounting education should be informed by theory. However, one cannot ignore the need to interrogate and establish the applicability, relevance and effectiveness of these theories through scientific investigations.

5.3.1 Visual Accounting Students

Simmonds (2014) and Somji (2018) assert that these students retain information and learn better when the lecturer uses visual aids such as images, diagrams and video clips. In addition, visual students can understand visual data which is presented in maps, graphs and charts very well. To teach these students and appeal to their learning style, Somji (2018) suggests that lecturers should use storytelling and phrases which provoke the imagination of students. This conforms to the notion of scaffolding as advanced by Vygotsky (1978). Moreover, students can be given activities in which they develop mind maps. From the above analysis, it can be argued that the idea of guided instruction as argued by Frey and Fisher (2008) also finds expression and relevance when teaching visual accounting students.

To bring this into perspective, a variety of accounting topics such as Accounting Concepts, Generally Accepted Accounting Principles (GAAP), Ethics and Professionalism, The Accounting Equation and Financial Accounts and Financial Statements can be introduced using a mind map, which consists of key words, processes and steps. These will help students to have an overview of the topic and visualise the learning task at hand. From these mind maps, students can obtain some significant insight into the content, and prepare themselves accordingly. Research evidence suggests that when students have some clear expectations in terms of the learning content, they are bound to develop intrinsic motivation. Further to the above, regardless the mode of delivery, the accounting lecturer should request students to write down notes and explanations during the lesson presentation. This is important because students look at the lesson presentation and try to visualise what is being presented.

When presenting topics which involve calculations such as Cost Accounting, Budgeting and Fixed Assets, it is important that the lecturer writes down all the workings, step by step, in simple and clear terms. Visual workings and calculations help the visual accounting student not only to learn easily, but to also remember the various steps and processes involved in the workings and calculations. Pre-recorded lessons in which the lecturer demonstrates certain difficult calculations can also be shared and played for students.

In advocating for the use of constructivism to satisfy the learning needs of the visual accounting students, this paper submits that these suggested mind maps, charts, diagrams and video clips constitute what Vygotsky (1978) referred to psychological tools (Eggen & Kauchak, 2014). This study further advances that following the above guidelines when teaching visual accounting students is in line with the principles of constructivism which emphasises the use of psychological tools to enhance and promote learning (Eggen & Kauchak, 2014; Vygotsky, 1978). Constructivists believe that providing students with the necessary psychological tools enhances and transforms their mental functioning (Gredler & Shields, 2004; Vygotsky, 1978). The students will use these psychological tools to learn subject content and engage in learning tasks. It is therefore advanced in this paper that psychological tools play an important role in the visual students' learning and understanding of accounting and their ultimate academic performance in the subject.

5.3.2 Aural Accounting Students

Aural students respond very positively to sound, recordings, music and rhythms. These students effectively learn by listening or through oral interaction (Kayalar & Kayalar, 2017). They are good at recalling conversations and a very emotional response is ignited in them when music accompanies learning. To each these students effectively, lecturers need to use class or group discussions and encourage students to be actively engaged in those discussions. Lectures can also provide students with audio recording of the lesson presentation. Paring students and asking them to explain concepts, steps and processes to each other also supports the aural students in accounting education. It is further suggested that lecturers should also encourage students to engage in loud problem-solving activities.

In a typical learning environment for accounting, debates and discussions can be used when presenting lessons on topics such Ethics, Internal Control and Indigenous Bookkeeping Systems. The content covered in these topics can be easily learned and understood through debates and discussions. For instance, the topics of Ethics and Internal Control by nature requires students to engage in robust discussions of what constitutes proper ethical conduct and internal control systems from an accounting perspective, guided by the Generally Accepted Accounting Principles.

In keeping with the above guidelines when teaching aural accounting students, this paper suggests that it is the socialisation of the teaching and learning process which is compatible with the requirements of aural accounting students. This justifies the use of social constructivist approaches in accounting education as pioneered by Vygotsky (1978).

5.3.3 Verbal Accounting Students

Verbal students use linguistic skills and words both in speech and in writing to learn and understand subject content (Skae et al. 2020). The lecturer should also exploit the fact that usually, the verbal students can speak in public very well. To teach these students, the lecturer should present the lesson using verbal teaching and provide students with writing activities during the lesson presentation. Furthermore, students should be given an opportunity to present and discuss some aspects of the lesson. To this effect, Somji (2018) proposes that when teaching verbal accounting students, the lecturer should provide students with multiple opportunities for presentations and discussions. Another important suggestion sustained buy the work of Frey and Fisher (2008) regarding the teaching of verbal students is that lecturers should give verbal students key words that can lead them to the correct answer. This school of thought further advances and supports the idea of scaffolding, which is one of the major pedagogical assumptions propounded by Vygotsky (1978).

Narrowing down to the teaching of accounting, lecturers can use scaffolding when introducing a new accounting topic, giving students some hints on how to do Bank Reconciliations and drawing up Financial Statements. In fact, the researchers of this study maintain that numerous accounting topics can be presented using scaffolding to stimulate and activate the students' thinking and reasoning abilities. It is further advanced by this study that the use of scaffolding in accounting education in essence promotes and develops all the multiple intelligences of accounting students. Premised on its design and application principles as suggested by Vygotsky (1978), scaffolding itself challenges accounting students to think analytically, practically and creatively.

5.3.4 Social Accounting Students

In the scholarly views of Skae et al. (2020), social students learn and process information very well and effectively through personal interactions and engagements with other students. Kayalar and Kayalar, (2017) further note that social students enjoy working with other students and that they are usually leaders in the making. Informed by the above perspectives, this study recommends that when teaching social accounting students, lecturers should allow students to discuss and share ideas with their classmates. This is envisaged to be very effective and important when dealing with Bookkeeping of sole trader: recording of credit: transactions (DJ, DAJ, CJ, CAJ, GJ); Ledgers, Debtors'

and Creditors' lists, Trial Balance; Accounting equation, Financial statements - sole trader, Adjustments, closing transfers, General Ledger, Income Statement, Balance Sheet, Notes to financial statements, Analysis and interpretation of financial statements and notes.

Furthermore, group work, role play and debates can be used to teach social accounting students for effective and meaningful learning experiences which are compatible with their learning preferences. Again, this pedagogical approach is enshrined in the assumptions and principles of social constructivism as sustained by the work of Vygotsky (1978). Bandura (1980) and Vygotsky (1978) have produced compelling scientific evidence in support of the socialisation of the learning process. Of importance to the work of Bandura (1980) and Vygotsky (1978) is that the subsequent pedagogical views pronounced in their work is that the multiple intelligences of students can be promoted and sustained through the socialisation of the learning process.

5.3.5 Logical Accounting Students

In the views of Simmonds (2014), logical students learn very well through reasoning and logic. Chetty et al. (2019) add that these students prefer categorising, classifying information and solving problems using numbers. Somji (2018) goes on to suggest that the strength of logical students lies in analysing cause and effect relationships. Within the immediate context of this study, one would expect logical students to do very well in analysing the effects of transactions to the accounting equation and the financial statements of a business.

When teaching logical students, Simmonds (2014) suggests that lecturers should give them problem solving activities. In support of this suggestion Kayalar and Kayalar (2017), further propose that lecturers should include activities which require, and thus stimulate the critical thinking of students. Skae et al. (2020), further propose that lecturers should encourage accounting students to work on their own. Students should be asked to provide some interpretations on accounting information which is abstract and visual. In accounting education, this would involve information on GAAP principles, the accounting equation and Financial Statements. Again, lecturers can ask accounting students to make a conclusion after giving them all the necessary facts and evidence. This view points to scaffolding.

5.3.6 Physical and Tactile Accounting Students

As argued by Kirschner (2017), physical and tactile accounting students learn by doing and putting into practice what they have learned. Accordingly, Kayalar and Kayalar (2017) suggest that to teach the physical and tactile accounting students, lecturers should provide students with hands on experiences. To this effect, Simmonds (2014) recommends the use of role playing when presenting lessons. In light of this recommendation, the researchers of this paper propose that this is very applicable when teaching Accounting topics such as financial statements, learners can role play being an income statement or balance sheet, introducing themselves and explaining to others their importance in the financial survival of a business.

Additionally, lecturers can use real life experiences such as case studies when teaching physical and tactile accounting students. The researchers in this study concur that case studies provide learners with practical opportunities to interrogate theory and put it into practice through interacting with and interviewing people directly involved in the learning task on hand. In essence, this reverts back to the researchers' envisaged socialisation of the learning process. It is therefore befitting to conclude that Vygotsky's assumptions in teaching and learning still find expression in the teaching of physical and tactile accounting students.

Informed by the above literature perspectives, the researchers of this paper further advance that when teaching physical and tactile accounting students, lecturers should request students to present what they have learned during the lesson presentation t their classmates. In so doing, the students will be putting into practice what they have learned during the lesson presentation.

5.3.7 Solitary Accounting Students

Contrary to Vygotsky's (1978) major assumptions on teaching and learning, solitary accounting students prefer to learn and work on their own. Chetty et al. (2019) reckon that solitary accounting students are reserved shy students. However, when made to feel comfortable, Somji (2018) argues that these students are likely to speak up during group discussions or group work sessions and during lesson presentations.

Husin (2017) proposes that to teach solitary accounting students, lecturers should ask students questions about their thoughts and feelings about the lesson content. It is further suggested by Simmonds (2014) that solitary accounting students can be given individual problem-solving activities. Lecturers should also emphasise learning objectives since the solitary students are usually interested in learning outcomes. To this end, accounting lecturers should

provide students with mechanisms on how to track and monitor their learning progress. It is furthermore submitted by the researcher of this study that accounting lecturers should provide students with the connection between prior knowledge, what they are expected to know and new concepts.

5.3.8 Naturalist Accounting Students

According to Skae et al. (2020) and naturalistic students learn through working with nature and experiencing it. In the expert views of Somji (2018), naturalistic students learn through identifying patterns in nature and the use of scientific logic to obtain understanding. In light of the above, the researchers of this study therefore suggest that lecturers should give students activities where they identify and classify content or concepts. It is further recommended by the researchers that lecturers should use case studies and other activities which have observational data. It is envisaged that such activities will promote the students' ability to identify patterns and use of scientific reasoning to understand accounting.

To this effect, the researchers of this study further suggest that lecturers should ask students to identify the link between the various concepts and ideas of the lesson. For instance, when teaching learners about Accounting equation of a sole trader, lecturers can ask students to identify and explain the relationship between assets, liabilities and owner's equity. When presenting a lesson on the Income Statement, students can be asked to demonstrate the link between income, expenses and profit. Identifying the relationship between depreciation and the usage of an asset can also be considered as a viable exercise for naturalistic accounting students.

Having given fair and due consideration to literature perspectives regarding the popularity of the assumptions that students can learn better when they are taught using their preferred approaches, there is not enough scientific evidence to support the claim that students can learn better if they are taught through their preferred learning style.

6. Findings and Discussion

As a point of departure, the study findings are presented in terms of the main themes and sub-themes that emerged from both literature review and focus group interviews. These are presented below in

Table 1. Main Themes and Sub-themes

Main Theme	Sub-themes
Learning styles and types of students	• Visual students • Aural students • Verbal students • Social students • Logical students • Physical and tactile students • Solitary students • Naturalistic students
Teaching approaches and lesson presentation	• Social constructivism • Student-centred • Active student engagement and participation • Creating numerous opportunities for students to learn
Benefits of Matching Teaching approaches with Learning Styles	• Improved learning, effective and meaningful learning experiences • Better understanding and remembering of content taught • Improved attainment of learning objectives • Acknowledgment of student diversity in the learning environment

Educational and pedagogical implications	• Lecturers need to understand the various learning styles and how to satisfy them • Lesson presentation must be informed by the learning styles of students • Student centred learning environments

7. Discussion, Conclusions and Recommendations

Regarding the first research question on the teaching approaches which are compatible with the first-year accounting student teachers' learning styles, the empirical evidence generated by this study corroborates literature verdicts in this regard. Thus, in response to this question, the study produced compelling evidence, in support of previous studies (Bosman & Schulze, 2018; Davids &Waghid, 2020; Killen, 2016; Maddock & Maroun, 2018; Mapuya, 2021) which suggest that student-centred teaching approaches are compatible with the learning styles of students. Corroborating evidence affirming the above is presented by participant D3 who argued that:

> *Sir, the lecturer needs to consider us, our needs and learning preferences when planning for the lecture and when presenting it, I think this will allow the lesson presentation approach in itself to be guided by us, our needs and preferences of learning.* (Participant D3)

Participant A4, also subscribed to the views of participant D3 above by saying:

> *Informing the planning and presentation of the lesson with our learning needs and views as students does not mean that the lecturer is weak or being controlled by us, the students, it simply means the lecturer wants to reach out to every student in class. Looking back, I have always enjoyed lessons in which the teaching approach was in favour of my learning preferences.* (Participant D4)

Further evidence in assertion of the above was also presented by participant E6 in another interview session by arguing that:

> *I would always prefer to be taught in manner which supports how I learn and my learning needs as a student. Learning will always be meaningful and relevant when whatever is taught, is being taught with careful consideration of our learning demands and styles as students. In saying this, I encourage the lecturer to prioritise the use of teaching approaches which prioritise us as students.* (Participant E6)

In advocating for the matching of teaching approaches with learning styles, participant A6 remarked:

> *Personally, I learn through talking, sharing and exchanging of ideas. So for me, it is important that I am given the opportunity to express my understanding of the subject content and hear other students' understanding as well. But it is always encouraging to hear the correct version from the lecturer.* (Participant A6)

Included in the students' envisaged student-centred teaching approaches emerged social constructivism which enables active student engagement and participation, thereby creating numerous opportunities for students to learn.

Concerning the second research question, this study found that matching an individual student's learning style to specific activities and teaching strategies improves learning and the attainment of academic outcomes by creating a supportive, motivating and inspiring learning environment. The study also discovered that to counteract weakness in a student's learning style, lecturers needed to use two or three teaching strategies in a single lesson to complement them with one another. Qualitative evidence in support of the above findings comes from the remarks of participant D2, who exclaimed that:

> *Sir, with me, my ability to learn, master and remember what I am taught in class depends on how the lecturer teaches me and presents the lesson. I can learn, master and remember subject content when it is presented to me using visuals and practical demonstrations because I get inspired and encouraged. The feeling of being valued by the lecturer challenges me to excel.* (Participant D2)

All the participants in this group nodded their heads in agreement with these sentiments which were also reinforced by participant C4 from another group, who explained:

> *The thing is, because I like learning through certain ways, it is very easy to grasp information when I am allowed to learn it in my own unique way and taught in a manner which supports and complements that unique way. In this way, I am convinced that no matter the level of difficulty of the subject content and learning activity, I will do better.* (Participant C4)

The above sentiments suggest that the matching of teaching approaches with learning styles has a great motivational effect on students and their resilience. Once the students realise and appreciate that the lecturer is doing everything possible to present lessons using approaches which complement their learning styles, they are bound to be very cooperative, eager to learn, resilient and hardworking. This leads to the adequate and successful realisation of academic outcomes, which ultimately manifests itself in commendable academic performance.

It is the researchers' view that to claim that matching teaching approaches with the learning styles of students will automatically result in improved academic performance is very misleading. This is because the academic performance of students in accounting depends on a host of dynamic interacting variables. Among others, these include the correct understanding and interpretation of the question, accurate calculations, application of knowledge, ability to pitch the response at the relevant cognitive level, language proficiency and the lecturer's content, pedagogical and student knowledge. Nevertheless, the academic value of matching teaching approaches with learning styles in accounting still remain largely undiminished.

This study presents a critical opportunity to redesign curriculum implementation approaches and a paradigm shift in the pedagogical beliefs and practices of accounting lecturers. In response to the first research question, the available literature findings present compelling evidence to conclude that teaching approaches that are student oriented in nature are compatible with the learning styles of a vast majority of students. The study found that student-centred teaching approaches compensate for the shortcomings of predominantly lecturer-centred approaches in creating a participatory learning environment which offers all students equal learning opportunities. Regarding the second research question, the study found that it is not the students' preferred learning styles that are important but how the lecturer's teaching approach creates learning opportunities that support the individual learning styles of students. Based on the study findings, it is recommended that lecturers should adopt a more student-centred approach in accounting lessons in which students are actively engaged in the lesson. Students should also be allowed to communicate with each other, share and exchange ideas.

8. Further Research

There is a need for further research to demonstrate and support the professed relationship between matching of teaching approaches with learning styles and academic performance. Given the current high-profile debate on the study phenomena, there is also a need to develop a more credible and reliable instrument to measure and express the effect of matching teaching approaches with learning styles on academic performance. In their work on principles for effective teaching, Ambrose et al (2010) conclude that a much broad framework which encourages and promotes reflective student learning as opposed to narrowing down their learning styles has been found to promote and improve the attainment of learning objectives. Among others, reflective student learning entails establishing a link between prior learning and new knowledge, learning by experiences, self-regulation and student autonomy, all of which are enshrined in the assumptions of social constructivist teaching approaches (Mapuya, 2018).

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