SOUTH AFRICAN ACCOUNTING EDUCATION

Stocktake

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CHAPTER 3

Teaching and learning styles

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Accounting teachers at institutes of higher education are continually searching for ways to better prepare graduates to enter the accounting profession. University students should be taught deep approaches to learning through various modalities (face-to-face, blended or online learning) to raise the standard of teaching and learning accounting. This chapter discusses accounting students' learning styles, accounting teachers' (or lecturers') teaching styles, and whether the teaching and learning styles used in accounting classrooms should be corresponding to ensure effective and efficient learning of the new generation of students. An inductive analysis of literature in the field indicates that:

- in the accounting classroom, students' learning styles change as they progress in their studies;
- each student uses a combination of four styles (activist, reflector, theorist and pragmatist); however, some learning styles are more dominant than others in each individual;
- the lecturers' style of teaching is based on their philosophical orientation;
- most of the learning styles are in line with at least two of the teaching strategies;
- a combination of student-centred and lecturer-centred and/or problem-based approaches facilitate students' success and the achievement of outcomes in the accounting classroom, irrespective of the mode (face-to-face, blended or online); and
- lecturers should create an opportunity for the success of each student, whether through matching or mismatching of teaching and learning styles.

1. INTRODUCTION

Accounting is an essential field of study and any improvement in the tertiary instruction of students in accounting should produce better-prepared graduates' entering the profession. The Pathways report reveals improved students' learning styles as a factor that can enhance the quality of any foundational accounting course (Engel, 2014). The American Accounting Association (AAA) and the American Institute of Certified Public Accountants (AICPA) created the Pathways Commission on Accounting Higher Education. It studies both the current and future organisation of higher education and training for the accounting profession. It also develops recommendations for educational paths to engage and retain the community of students, lecturers, practitioners and other expert leaders (Behn, Rayburn, Ezzell, Stith, Murphy & Strawser, 2012). In the past, research into accounting education was mainly fixated on either the teaching or the outcomes of learning and has often neglected the correct approach to learning. This oversight means that lecturers often do not understand how students conceive learning, how they perceive the learning process and the students' chosen study method to complete a learning task.

Accounting lecturers should develop and implement improvements to their teaching methods to inspire students to develop creative, flexible and adaptive study methods that can only be adequately established when students adopt a deep approach to learning (Abraham, 2006). It has been established that there are three approaches to learning: deep, surface and strategic. Surface learning is motivated by the fear of failure, or because the student is only interested in meeting the minimum requirements. Students who engage in surface learning reproduce the work learned by rote learning and their knowledge is limited to the syllabus only. Deep learning is more intrinsically motivating, and students who apply deep learning read extensively about the topic, and they make connections with previous knowledge.

In contrast, achievement (getting the highest mark) motivates strategic learning and students who engage in strategic learning are usually 'model students' (Biggs, 1987:11). However, it is difficult to place a student in a particular category. Depending on the subject and context, a student can shift between these different modalities of learning (Entwistle, 2000).

Each accounting student has a different learning style, and lecturers do not always incorporate their teaching strategies to match their students' learning styles, making it imperative to investigate present ways of teaching accounting related modules,

and introduce enhancements so that accounting students adopt a deep approach to learning that will develop the critical thinking skills that accounting students need (Visser, McChlery & Vreken, 2006). Even though previous research does not prove that students learn best if they are taught according to a method believed appropriate for their learning styles, lecturers, as well as students, must be aware of their learning styles and try to complement them.

Students today, who belong to Generation Y and Generation Z, are different from those who entered university three to five years ago (Generations X and Y), and the learning process should accommodate the generational changes. Students who belong to Generation Z, born around 1996, expect institutes of higher education to provide them with work experience and not knowledge, as they spend virtually all their waking hours connected to a computer, tablet or smartphone that they can use to source information (Bursch, 2014). The generational changes occur in the cognitive form in which their learning is developed; students are confronted with many factors that interfere with how they absorb, learn and store knowledge. Students are exposed to a high level of technology, and information evolves at an absurd speed; therefore, if the traditional method of teaching is used in today's classroom it may no longer address the academic needs of the students.

Given the change in learning preferences and behaviour in university classrooms, the diverse student body in today's accounting classroom, the extended set of modes of teaching and learning methods (face-to-face, blended learning, online learning and flipped learning) as well as the students' exposure to learning technologies and communication devices (Brown, 2003:49), it is imperative for lecturers to improve their understanding of the different learning styles of the various student groups (Chen, Jones & Moreland, 2014). Therefore, before a lecturer can choose how students should be taught or how they should learn, he or she should be aware that certain teaching and learning methods will be effective for some, and ineffective for others, due to the disparities in students' learning styles, their biological make up and their developmental levels (Dunn, 1990).

Through an inductive analysis of the relevant literature, this chapter discusses learning styles, teaching styles, strategies and methods, and how lecturers can plan their teaching and learning to match or accommodate a variety of learning styles in the accounting classroom at institutes of higher education. The following sections cover accounting students and their learning styles; accounting lecturers and their teaching styles; and what should be done to find the balance to have skilled and competent graduate students entering the accounting profession.

2. ACCOUNTING STUDENTS AND THEIR LEARNING STYLES

Before the learning styles of accounting students can be explored, it is necessary to understand what is meant by the concept of 'learning styles'.

2.1 LEARNING STYLES

'Learning styles' relate to the cognitive, affective and psychological ways in which students understand, interact with, and react to the learning environment (Cekiso, Arends & Mkabile, 2015). A learning style also encompasses the specific method a student uses to gather, organise and think about information; how he or she relates to others in a particular classroom environment, and how he or she reacts to specific experiences (Fleming, 2001; Grasha, 1990).

The lecturers should understand the prominent learning style diagnostic tools that have been used effectively to ascertain the learning styles in higher education to understand the distinct differences in learning styles:

- Experimental Learning Theory (ELT) and Kolb's Learning Style Inventory (LSI);
- Honey and Mumford's Learning Style Questionnaire (LSQ); and
- Felder's Index of Learning Styles.

The following sections describe the various learning styles, identification tools, and how each has been applied in accounting education research.

2.2 LEARNING THEORIES AND TOOLS TO IDENTIFY LEARNING STYLES

This section describes ELT and LSI in terms of personality type, dominant learning type, specific environmental demands of educational specialisation, career preference, tasks skills, teaching style preference, and adaptive skills (Kolb & Kolb, 2005:6).

2.2.1 *Experimental learning theory (ELT)*

ELT was conceptualised for the higher education landscape and based on the theories of prominent scholars (i.e. John Dewey, Kurt Lewin, Jean Piaget, William James, Carl Jung, Paulo Freire and Carl Rogers) who worked in the field of human learning and development (Kolb, 1984). ELT aimed to have a multilinear model of adult development as well as an all-inclusive model of the experiential learning process (Kolb & Kolb, 2005). This theory built on six objectives comparable to the work of the theorists mentioned above:

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1. *learning is a process*, best enhanced with constructive feedback, and it is not outcome-driven;
2. *learning is relearning*, best facilitated by the process that taps into the students' beliefs and ideas about the topic that they will be tested on, examined on, and then integrated again with new ideas;
3. *learning requires conflict resolution*: through acting and reflecting on conflict, differences and disagreements, learning occurs;
4. *learning is a holistic process of adaptation to the world*, comprising how students think, feel, behave, perceive and act when learning;
5. *learning results from the synergetic transaction between the student and the environment*, integrating new learning experiences into existing concepts, and adapting existing concepts to new learning experiences; and
6. *learning is knowledge creation*, and it occurs through constructivism and not transmission (Kolb & Kolb, 2005:2).

ELT describes learning as:

... the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience (Kolb, 1984).

However, experiential learning involves the construction of knowledge that contains a creative conflict amongst the four learning modes, that are responsive to contextual demands: Concrete Experience (CE), Abstract Conceptualization (AC), and two dialectically related approaches of transforming experience: Reflective Observation (RO) and Active Experimentation (AE). The improvement of CE heightens emotional involvedness; RO enhances perceptual complexity; AC increases symbolical complexity; AE enhances behavioural complexity. These four learning modes involve the processes of experiencing, reflecting, thinking, and acting that occurs when students are engaged in learning, and each student should experience all of the four learning modes. ELT postulates that learning is central to human development; how learning occurs shapes a students' personal development; and personality type, educational specialisation, career preference, profession and job portfolio (Kolb, 1984), as well as cultural influence (Yamazaki, 2002), shape learning styles. Students' past learning experiences and the demands of their present environment influence their preferred learning modes.

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2.2.2 *Kolb's learning styles inventory (LSI)*

In 1976 Kolb developed the first LSI to assess individual learning styles. Version 3.1 is the latest LSI used to ascertain ELT and learning styles. The development of LSI had two aims: to assist as an educational instrument that would improve the individual's understanding of the learning process – from experience and his or her unique approach to learning to provide a research instrument to observe ELT and the characteristics of different learning styles (Kolb & Kolb, 2005:8).

According to Kolb & Kolb (2005), 22 studies using ELT and LSI have been undertaken on the teaching and learning of accounting – seven studies between 1971 and 1984 and fifteen studies between 1985 and 1999. Many of the studies intended to appraise the learning styles of the accounting students and to establish whether there is a change in learning styles of students as they progress in their studies (McCarthy, 2010:134). In the majority of the studies, the results of face-to-face interviews indicate that accounting students are pragmatic, intuitive and visually orientated (convergers/pragmatists).

2.2.3 *Honey and Mumford's learning style questionnaire (LSQ)*

Honey and Mumford (1992) conceived and developed the LSQ using Kolb's four learning styles as a guideline. However, with their LSQ, they wanted to evaluate the strengths of the four learning styles that they named activist, reflector, theorist and pragmatist. These correspond with Kolb's learning styles: AE, RO, AC and AE (Visser et al., 2006:101). The activist acts without thinking about the consequences of his or her action; the reflector chooses to contemplate before taking action; the theorist modifies his or her experiences and formulates these into logical and complex theories; and the pragmatist explores new ideas, theories and techniques and then evaluates the practicality thereof.

Each student uses a combination of the four styles; however, some learning styles are more dominant than others in each individual. Figure 3.1 illustrates the comparisons between the two learning styles models (Visser et al., 2006:101).

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FIGURE 3.1 The learning models of Kolb and Honey and Mumford
Adapted from Visser et al. 2006:101

2.2.4 Felder's index of learning styles

After much criticism of LSI and LSQ, Felder and Silverman (1988) developed a model of learning styles with four polarised, opposite dimensions of learning styles: active/reflective, sensing/intuitive, visual/verbal, and sequential/global. An 'active' style is characteristic of students who grasp information by actively engaging in tasks while 'reflective' students first think about the information before engaging in tasks. The 'sensing' student does not relate to abstract and theoretical information but prefers to solve concrete and practical problems using well-known procedures and facts, whereas the 'intuitive' student prefers to find relationships and solve problems through innovation and by discovering how to do things by him- or herself. 'Visual' students prefer a visual presentation of the work, whereas students with a verbal learning style learn best via the spoken and written word. In contrast, 'sequential' students prefer to receive information in linear, logical steps, and the global student can grasp a lot of information and think holistically.

Visser et al. (2006) compare university students in South Africa with those in Scotland, using Felder's index of learning styles and the LSQ. They adapted the questionnaire for lecturers to ascertain the preferred learning style of accounting students and lecturers so that they could enhance their teaching and learning

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experience. The results indicated that the students in both countries had balanced learning styles – meaning that none of the learning styles dominated, whereas the lecturers’ dominant teaching styles were active or reflective.

Table 3.1 provides a synopsis of the LSI: AC, RO, CE and AE, Honey and Mumford’s learning style, and Felder’s index of learning styles with a match of certain factors such as personality type, dominant learning abilities, task skills, mode of teaching preference, adaptive skills, career preference and educational specialisation.

TABLE 3.1 Synopsis of Kolb’s learning style inventory, Honey and Mumford’s learning style questionnaire and Felder’s index of learning styles

Learning style	Diverger/ Reflector/ Verbal	Assimilator/ Theorist/ Global/ Sequential	Converger/ Pragmatist/ Intuitive/ Visual	Accommodator/ Activist/ Sensing
Personality type	• introvert (feeling)	• introvert (intuition)	• extravert (thinking)	• extravert (sensing)
Dominant learning abilities	<ul style="list-style-type: none"> • use concrete experience and reflective observation • comment on concrete experience from different points of view 	<ul style="list-style-type: none"> • prefer abstract concepts and reflective observation • understand a wide range of information and put it into concise, logical form 	<ul style="list-style-type: none"> • prefer abstract concepts and active experience • find practical uses for ideas and theories 	<ul style="list-style-type: none"> • use concrete experience and active experience • act on their gut feeling rather than logical analysis
Task skills	<ul style="list-style-type: none"> • generate ideas through brainstorming • interest in people 	<ul style="list-style-type: none"> • generate ideas and abstract concepts • believe theory should be logically sound • focus on people 	<ul style="list-style-type: none"> • resolve problems and make decisions • find solutions to problems • prefer to engage with technical tasks rather than with societal issues and relational issues 	<ul style="list-style-type: none"> • implement plans • get themselves involved in fresh and challenging experiences • rely to a large extent on other people for information

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Learning style	Diverger/ Reflector/ Verbal	Assimilator/ Theorist/ Global/ Sequential	Converger/ Pragmatist/ Intuitive/ Visual	Accommodator/ Activist/ Sensing
Mode of teaching preference	<ul style="list-style-type: none"> • work together in groups • listen to the viewpoints of others with an open mind 	<ul style="list-style-type: none"> • readings • lectures • explore analytical models • use critical reflection 	<ul style="list-style-type: none"> • experiment with new ideas • use simulations • enjoy laboratory assignments • use practical applications 	<ul style="list-style-type: none"> • learn through hands-on experiences • prefer to work with others to get assignments done, to set goals, to do fieldwork, and to test out different approaches to complete a project
Adaptive skills competencies	Valuing skills relating to: <ul style="list-style-type: none"> • relationships • helping others • making sense 	Thinking skills involving: <ul style="list-style-type: none"> • information collection • information scrutiny • theory building 	Decision-making skills that include: <ul style="list-style-type: none"> • quantitative analysis • use of technology • goal setting 	Acting skills including: <ul style="list-style-type: none"> • leadership • initiative • action
Career preference and educational specialisation	<ul style="list-style-type: none"> • Arts • English • History • Psychology 	<ul style="list-style-type: none"> • Physical Sciences • Mathematics 	<ul style="list-style-type: none"> • Engineering • Medicine • Accounting 	<ul style="list-style-type: none"> • Marketing and Sales • Communication • Nursing

Adapted from Felder and Silverman (1988); Honey and Mumford (1992); Kolb and Kolb (2005)

3. ACCOUNTING LECTURERS AND THEIR TEACHING METHODOLOGIES

3.1 TEACHING METHODOLOGY

A teaching methodology is a mixture of different teaching strategies and methods that a lecturer/teacher integrates into his/her teaching. A lecturer's teaching style

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is fundamentally based on his or her teaching philosophy (Babajide, Samuel & Ayorinde, 2015:286). Some lecturers prefer to lecture; others engage students in a journey of self-discovery, a measure of emphasis on theory and others on applications, some highlight memory replication and others understanding (Felder, 1993).

3.2 TEACHING PHILOSOPHY

A lecturer's philosophy entails his or her beliefs, values and approaches to teaching and learning (Goodyear & Allchin, 1998:103) that include his or her teaching behaviours, teaching methods, how he or she structures the contents of the syllabus and how he or she assesses the students (Schönwetter, Sokal, Friesen & Taylor, 2010:84). Lecturers themselves come from different backgrounds influencing their educational beliefs (educational philosophy). Their opinions about how to best teach, what should be learned, and why students learn, prepare the stage to facilitate learning.

When lecturers recognise their philosophy of teaching and show their individual beliefs to conceptualise the teaching and learning endeavours (Zinn, 1991), they can:

- Identify their teaching style and select teaching strategies that they are most comfortable with;
- Identify the students' learning styles;
- Reflect on their classroom practices;
- Obtain better results;
- Provide intricate and real-life problems for students to solve;
- Use examples to stimulate synthesis and analysis;
- Encourage questioning and engaging in discussions;
- Adapt teaching strategies to meet students' learning styles;
- Engage students in activities that encourage creativity;
- Challenge students' beliefs to allow them to learn and acquire knowledge (Gilakjani, 2012:56);
- Select curricula;
- Develop lesson plans;
- Plan student engagement activities; and
- Assess learning outcomes (Gilakjani, 2012:52).

3.3 TEACHING STRATEGIES

Every lecturer has his or her preferences when it comes to their teaching strategies. The value of the teaching and learning process hinges on the quality of the lecturer in the classroom, meaning that the lecturer is accountable for determining and guaranteeing the success of the teaching (Ganyaupfu, 2013:29). Lecturers must use appropriate teaching styles to facilitate teaching and learning in higher education in the 21st century (Bhattacharyya, 2008:269) and undertake innovative delivery modes to accommodate the needs of progressively diverse student groups (Delaney, McManus & Ng, 2010). The following sections explain the dominant teaching styles and whether these are geared towards the learning styles of the new generation of students in the accounting classroom.

3.3.1 *Lecturer-centred teaching*

With this strategy, the lecturer believes that he or she is central to the teaching and learning process and that students passively acquire the facts, rules and procedures with no interconnection between content, courses and real-life phenomena. In the lecturer-centred classroom, the lecturer uses lectures and individual tasks that stress the memorisation of facts (Bonk & Smith, 1998:267). Students are seen as part of a homogeneous group whose activities focus on solving artificial problems from texts. Because there is very little cognitive action, students' creativity is not stimulated, and they do not engage with the work. Consequently, students are less motivated to succeed. This method of teaching allows students to achieve good marks and the lecturers who use this strategy are often driven to meet accountability standards and tend to be insensitive to the individual needs of the students. The lecturer's relationship with the students is anchored in the logical investigation of the content of the specific course. Lecturer-centredness does not allow any exploration, experimentation, creation, implementation and assessment, all of which are essential to students' success (Brown, 2003:50). This method accommodates the assimilating learning style and the sequential student, that does not fit the general profile of the accounting student at university, as shown in previous studies (Visser et al., 2006).

The 21st-century classroom that advocates a combination of in and out of classroom experiences and engagement challenges the lecturer-centred approach that supports the acquisition of knowledge by minorities and perpetuates the economic inequities of modern society (Blackwell, Futrell & Imig, 2003). Generation Z students who currently study accounting gear more towards active engagement.

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3.3.2 *Student-centred (or learner-centred) teaching*

In student-centred teaching, the lecturer considers students' individual learning needs, strategies and styles. Student-centred teaching is context-sensitive and places the student in the centre of the teaching and learning process. The lecturer scaffolds each student's individual needs and then develops curricula and learning tasks that are sensitive to the specific learning context (Brown, 2003:50). In the student-centred classroom, the lecturer focuses on the students' individual needs and characteristics to ensure that students think about and understand the content. The lecturers who implement this strategy match their teaching activities with students' needs. This method of teaching supports students' engagement with the work and differentiation between students. -Such a lecturer is thus flexible regarding how and when knowledge is acquired. Lecturers provide immediate feedback on formative assessment, students indicate high levels of satisfaction, and this method has a positive impact on the final assessment results (Bush & Walsh, 2011:51-53).

Student-centredness allows for experimentation, engagement, creativity, implementation and tailored assessment that leads to academic success (Brown, 2003:51). This strategy is very effective and best accommodates diverse learning styles, and teaching small groups of students using face-to-face, blended (Delaney et al., 2010) or online teaching methods – unlike the large groups of students in accounting classrooms at university today. Classroom activities can vary from online (e.g. videos and social media) to face-to-face interaction, and many students engaging in diverse activities have indicated that this approach is a positively innovate their learning experience (Delaney et al., 2010).

Student-centred teaching is geared towards the 21st-century classroom and context, especially in the online or blended learning environment, where lecturers have to teach and engage with students, irrespective of individual needs, strategies and styles.

3.3.3 *Problem-based teaching*

In applying this teaching style, the lecturer believes that students should be active, independent, and be problem-solvers and not only inactive recipients of information (Hansen, 2006:221).

In a problem-based teaching approach, students are presented with a complex problem that is the catalyst to motivate students to solve real-life problems (Duch, 2001:47). The AICPA Core Competency Framework promotes moving away from a technical content-driven approach to a skills-based syllabus. It lists problem solving as an acclaimed teaching strategy, including problem-based case studies and problem-based learning-guided design (AICPA, 1999). Likewise, the Competency Framework of the South African Institute of Chartered Accountants (SAICA) advocates the development of accounting students' problem-solving skills (SAICA, 2014).

Students are not required to have adequate prior knowledge to be able to solve the problem (Milne & McConnell, 2001). The lecturer believes that through: (i) thinking critically, (ii) analysing the problem, (iii) searching for relevant information, (iv) evaluating the different options to solving the problem, (v) working cooperatively in groups, and (vi) communicating effectively, students will acquire the content knowledge and the intellectual and soft skills they need to cope in the world of work (Duch, 2001:47-51). Students tend to build an improved understanding of the key concepts in a more effective manner when they are engaged in problem-solving class activities and teaching (Ganyaupfu, 2013:33).

Problem-based teaching provides the accounting curriculum with problems that centre on concepts that their lecturers want them to know (Hansen, 2006:221) and with which they should actively engage (Procópio de Araujo & Slomski, 2013:22). Students are expected to engage with problems on three levels:

- Level 1: chapter or module-specific problems;
- Level 2: problems at the end of the chapter or module section; and
- Level 3: analysis, synthesis or evaluation of the problems.

Students receive feedback in a manner that is similar to the review of a senior auditor within an accounting firm (Hansen, 2006:223).

Lecturers can conduct problem-based teaching through various modalities (online, face-to-face or blended learning environments), simultaneously addressing multiple learning styles identified by Felder (1993) and Honey and Mumford (1992) and the converging learning style (Kolb & Kolb, 2005), which in 22 cases was dominant in accounting classrooms as revealed in prior studies.

4. MATCHING LECTURES' TEACHING STRATEGIES TO ACCOUNTING STUDENTS' LEARNING STYLES

It is assumed that the accounting lecturer prefers to teach in his or her preferred learning style (Clark & Latshaw, 2012:78). Research in several accounting studies indicates that a combination of student-centred and lecturer-centred and/or problem-based approaches best facilitate students' academic success and the achievement of the desired outcomes in the accounting classroom, irrespective of the mode (face-to-face, blended or online). In the study conducted by Visser et al. (2006:108), the majority of the lecturers at the two universities preferred a more visual approach as their preferred style of teaching (converger). Most of the others preferred a balanced visual and verbal approach (diverger/converger), in line with the dominant learning style in accounting classrooms identified by Kolb and Kolb (2005). Figure 3.2 matches the learning styles to the dominant teaching strategies in teaching accounting. As seen in Figure 3.2, most of the learning styles match at least two of the teaching strategies discussed in this chapter.

Even though studies indicate that teaching styles should match learning styles and motivate students' learning (Gilakjani, 2012), Kirschner (2017:166) affirms his stance that no research could validate the opinion that learning in one's preferred learning style leads to effective and efficient learning. It is recommended that students should not be taught in their preferred learning style and preferences, as not all courses and learning environments can adapt to individual preferences (Clark & Latshaw, 2012). Students should adapt and acquire more educational experience to cope with courses that do not match their learning styles well (Kinshuk & Graf, 2009:750).

An accounting lecturer cannot match each students' learning style, but essentially lecturers should be aware that students learn in different ways and use different study methods (Gilakjani, 2012:54), irrespective of the content of their course and the method of its delivery. Accounting lecturers should have sufficient knowledge of their subject, understand their students (e.g. know the characteristics of Generations Y and Z), adopt flexible teaching styles, and be open to the idea of change and technological advancement. They can achieve by changing their beliefs on the role of the student in the learning environment. A combination of student-centred and problem-based learning gear more towards teaching Generations Y and Z students by experimenting with new ideas and using technology.

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A lecturer could be very informed, resourceful, flexible, caring and enthusiastic in the classroom, whether in a face-to-face, online or in a blended environment, (Gilakjani, 2012) and can create opportunities for the success of each student, whether through matching or mismatching of teaching and learning styles (Visser et al., 2006:109).

FIGURE 3.2 Matching teaching and learning styles

5. AREAS FOR FURTHER RESEARCH

No research could be found, derived from the analysis of the literature written on learning styles, that answered the following questions:

- Does the generational change in university classrooms have any impact on the learning styles of accounting students?
- Does the learning style change when the modality changes (face-to-face, online or blended)?
- Does the recent research on propagating learning style myth supersede the previous research conducted on learning and teaching styles in the accounting education environment?

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