

AUTHOR:

Mr Thabiso Jonah Motsoeneng¹Dr Henry James Nichols¹Dr Sekitla Daniel Makhasane¹

AFFILIATION:

¹University of the Free State,
South AfricaDOI: <http://dx.doi.org/10.18820/2519593X/pie.v39.i3.7>

e-ISSN 2519-593X

Perspectives in Education

2021 39(3): 79-93

PUBLISHED:

16 September 2021

RECEIVED:

25 January 2021

ACCEPTED:

16 March 2021

CHALLENGES FACED BY RURAL ACCOUNTING TEACHERS IN IMPLEMENTING WEB-BASED COLLABORATIVE LEARNING

ABSTRACT

The twenty-first century has witnessed a call for teachers to integrate information and communication technology (ICT) into teaching and learning. However, creating a classroom environment that engages in active learning has proved to be a hurdle to South African teachers, as more traditional teaching methods continue to be utilised in teaching. These challenges have derailed the current efforts by the Department of Basic Education to introduce ICT in the teaching and learning process in an effort to create a learner-centred environment. This paper seeks to open epistemic access by determining the challenges faced by rural accounting teachers in implementing web-based collaborative learning. The paper reports on the findings of a qualitative study that employed interviews to generate data with five Grade 10 accounting teachers in rural South Africa. The findings reveal that accounting teachers are faced with myriad challenges that serve as a stumbling block in their attempt to implement web-based collaborative learning. Contrary to the principles of Critical Accounting Research, the teaching methods and resources used position teachers in control and authority while the learners are disempowered, marginalised and oppressed. We consequently argue that accounting teachers require support and capacity building to implement web-based collaborative learning effectively.

Keywords: Accounting; active learning; collaborative learning; critical accounting theory.

1. INTRODUCTION

In the 21st century, there is a strong call for the integration of information and communication technology (ICT) into teaching and learning globally (Silin & Kwok, 2017). In line with this call, there are hundreds of web-based tools that are created to encourage collaboration and give autonomy to the learners (Marais, 2016). However, teachers in African countries such as South Africa and Nigeria seem to find it challenging to create a classroom environment that engages learners in active learning, practises collaborative learning, peer teaching and making use of a wide range of technological tools that support effective and quality learning



Published by the UFS
<http://journals.ufs.ac.za/index.php/pie>

© Creative Commons
With Attribution (CC-BY)



(Ezeanyanike, 2013). These challenges are seemingly not unique to African countries. In the United States of America, Turkey and Brazil, a didactic gap was discovered in the teaching of accounting due to a lack of clear, secure and effective methods for teaching the subject (Hales & Orpurt, 2013; Ozturk, 2015). This resulted in teachers experiencing pedagogical challenges in organising and ordering classroom activities and using web-based technological tools to enhance performance in their subject.

In response to the 21st century pedagogical and technological demands, South African teachers have been obligated to adjust to a model shift in education from a teacher-centred approach to a learner-centred approach. This paradigm shift emphasises active participation by learners that requires accounting teachers to rearrange their teaching approach in terms of the Curriculum and Assessment Policy Statement (CAPS) and produce learners who can use technology effectively by means of pictorial, figurative or linguistic skills through numerous means (Department of Basic Education [DBE], 2011). Since the implementation of CAPS, the DBE has made multiple attempts to encourage the use of a broader range of technological tools, including web-based collaborative learning.

Web-based collaborative learning is defined as an acquisition by learners of knowledge, skills and attitudes through group interaction, where group members work together using web-based learning tools that support the learning of accounting (Hadjerrouits, 2010; Kay, 2011). This takes place through enhancing, amplifying and guiding the cognitive process of learners to achieve a common learning goal (Laferriere, Murphy & Campos, 2005; Letshwene, 2014). Therefore, in response to the preceding problems, this paper discusses the challenges that are faced by rural accounting teachers in implementing web-based collaborative learning.

2. STATEMENT OF THE PROBLEM

Over the years, teachers in general and accounting teachers in particular, have been encouraged to adjust to a model shift in education from a teacher-centred approach to a learner-centred approach (Mbatha, 2016; Maddock & Maroun, 2018). This paradigm shift emphasised active participation of learners that required accounting teachers to create classroom environments that would allow learners to express their gained knowledge and apply the accounting principles they were taught (DBE, 2011). However, South African teachers are still using the traditional methods and tools of teaching accounting by having the teacher as the dominant figure who assumes an authoritative role of possessing all the knowledge that needs to be transmitted to the learners. Against this backdrop, the purpose of this paper is to explore the challenges that are faced by rural accounting teachers towards implementing web-based collaborative learning. With increased awareness about these challenges, in-service and pre-service programmes can be designed to empower accounting teachers with the knowledge and skills necessary for effective implementation of web-based collaborative learning. School management teams (SMTs) are also likely to be aware of areas where accounting teachers require support.

3. RESEARCH QUESTION

The study was guided by the following research question:

What challenges are faced by rural accounting teachers in implementing web-based collaborative learning?

4. LITERATURE REVIEW: INSIGHTS ABOUT CHALLENGES FACED BY ACCOUNTING TEACHERS

In seeking to understand the challenges faced by accounting teachers in the implementation of web-based collaborative learning, we position this paper within the context of larger debates about challenges encountered by teachers in using ICT and learner-centred pedagogical practices.

One of the challenges that accounting teachers encounter is the ability to create a classroom environment where there is active learning. Ndebele and Maphosa (2013) define active learning as a planned series of actions or events to invite the participants to interact with one another and to process, apply and share experiences as part of the educational process. Sekwena (2014) argues that active learning is apparent when learners actively participate in the construction of knowledge instead of being passive recipients of knowledge transmitted by the teacher. This means that learners are afforded an opportunity to be involved in the process of teaching and learning by asking questions and searching for answers to a given problem. However, teachers continue to conduct lessons in accounting using only traditional teaching tools such as textbooks, notes and the chalkboard. At the same time, learners remain stuck in the passive role of being recipients of knowledge. This is occurring in a time when CAPS is advocating the use of fourth industrial revolution methods and approaches of teaching that seek to equip learners with critical thinking and problem-solving skills (DBE, 2011; Menon & Castrillon, 2019; Mkhize, 2019). The CAPS contains the annual teaching plan (ATP) that is designed to assist teachers in teaching topics for the year, such as financial statements, whereby planning using the ATP is essential. The ATP, previously known as the work schedule, is made available to teachers in the CAPS document and is broken up into topics as per the school term and weeks (Moodley, 2013; Du Plessis & Marais, 2015).

As the active learning approach is demanding, teachers with no teaching experience and those without a teaching background may find it confusing that active learning is practised within the context of a classroom environment (Jawitz, 2013). Teachers often want to be seen by their learners as very knowledgeable; thus, such a desire will generally result in teacher-centred methods within a classroom environment, with the learners being reduced to a passive audience of the teacher's teaching "show". Moreover, studies conducted in the United States of America, India and Canada indicate that teaching large classes affects the teaching and learning process due to teachers finding it difficult to locate individual performance (Shehu & Tafida, 2016; Nguyen, 2018). These challenges are not unique to these countries since South African schools also tend to experience the difficulties of large classes (Eison, 2010; Summerlee, 2010). Ideally, large classes in South Africa play a fundamental role in the implementation of active learning, as it renders the traditional teacher-centred approach to learning ineffective and limits the successful implementation of teamwork that is indicative of the active learning approach (Rajcoomar, 2013). Overcrowded classrooms tend to have an impact on classroom management, due to factors such as lack of physical space and limited opportunities to meet individual learner needs, thus resulting in diminished opportunities to create an active learning process (Muthusamy, 2015).

Saal (2017) has identified that most South African teachers tend to rely on traditional teaching tools such as textbooks, notes and the chalkboard for teaching accounting, although teaching using web-based tools has become an essential factor within the teaching and learning of accounting in South African schools. However, existing challenges have derailed

the current efforts to implement teaching using web-based tools. These include a lack of ICT tools to facilitate teaching and learning within a classroom context and a lack of skills to integrate accounting using technology to support teaching and learning. Limited time available for lesson preparation and pressure to prepare learners for their final year examinations, among other issues, have resulted in an insufficient use of ICT tools as teaching aids (Sousa, Richter & Nel, 2017). Almaiah, Al-Khasawneh and Althunibat (2020) argue that among other reasons, the continued use of the traditional teaching tools was influenced by the teachers experiencing a lack of professional support and development, inadequate access to hardware and software and a lack of time, competence, confidence and motivation. Although many schools in South Africa continue to rely on traditional teaching tools, in most cases, there is a total lack of resources such as textbooks and proper infrastructure, and the learners have to share one textbook amongst them (Mathevela, 2015; Mukhari, 2016). In addition to this, teachers are continuously under pressure to finish teaching the Grade 10 accounting curriculum in order to prepare the learners for tests and examinations. Owing to insufficient time, the teachers resort to not using web-based collaborative learning, as they believe that it would take too much of their teaching time and add to their workload. Thus, due to incompetence in ICT, which might result in the development of a negative attitude, there is no motivation for teachers to use web-based collaborative learning (Palaigeorgiou & Grammatikopoulou, 2016).

According to Usman (2016) the dependency on traditional teaching tools tends to be a constraint towards the development of education, as the use of such tools inhibits the planned development by the DBE and prevents the rational allocation of resources to priority objectives. Web-based collaborative learning provides a strategy that can be utilised to address severe academic challenges faced by teachers and learners in schools towards improving performance in the teaching and learning of Grade 10 accounting (Jaffer, Ng'ambi & Czerniewicz, 2007).

Despite the challenges pertaining to the adoption of learner-centred teaching approaches, the DBE has continually encouraged the participation of diverse groups of learners and the production of the skills required for a rapidly changing society. It has done this through social transformation, ensuring that the educational imbalances of the past are redressed and that equal educational opportunities are provided for all sections of the population (DBE, 2011). It is in this educational context that new opportunities for teaching accounting using web-based collaborative learning have arisen, as the CAPS document suggests that it aims to produce learners that can use technology effectively and critically through using visual, symbolic and linguistic skills (DBE, 2011). Adequate resources such as proper infrastructure and technological tools are deemed a prerequisite for the effective implementation of CAPS, as a school that has inadequate resources will be likely to use a teaching approach that tends to be more teacher-centred (O'Connor, 1997; Tlhapane & Simelane, 2010; Molapo, 2016). The inadequacy of resources not only tends to hinder the effective teaching and learning of accounting, but also derails a critical mode of implementing the principles of CAPS (Manqele, 2012).

5. THEORETICAL FRAMEWORK

Critical Accounting Research (CAR) is a lens or theoretical framework positioning the researchers' stance to the participants in the aspects of this paper. CAR, as a theoretical framework, permits the alignment of accounting to recognise the transformation of teachers and learners through human action to ensure equal educational opportunities and social

transformation (Broadbent, 2002). This means that CAR, as a theoretical framework, seeks to liberate teachers from all forms of marginalisation through developing and providing sound learning conditions, addressing learning barriers and accommodating diversity. CAR is seen to be an appropriate theoretical framework guiding the study, as it encourages the influence of communication whereby an exchange of ideas is enthused by assurance to the common task of learning as well as confidence in individuals (McPhail, 2004).

CAR is established upon an anti-oppressive philosophy and it is a lens through which to adjust and recognise the original foundations of domination (Ledwith, 2007). It is enhanced by implementing values such as acceptance, willingness to listen and respect for alternative views (Merino, 1998). Laughlin (1999), as supported by Gaffikin (2006), argues that there are at least four critical characteristics of CAR. First, he identifies that CAR is always contextual; that is, it recognises that accounting has social, political and economic consequences and needs to be understood in this context. Secondly, it pursues commitment, which means that it allows the process of assessment and engagement to occur, leading to an improvement in the practice or profession of accounting. Thirdly, it is concerned with the functioning of accounting (profession and practice) and processes at both micro- (individuals and organisations) and macro- (societal, government and professional) levels. Moreover, CAR requires academic borrowings from other disciplines to provide the theoretical and methodological outlooks to address complex agendas.

The objectives of CAR assisted us in answering the research question; these objectives are discussed below:

i) Build an empowering environment

Learners ought to be permitted by their accounting teachers to share their knowledge and experiences with an encompassing and enlightening social consciousness while pursuing to surpass the limitations of their pre-existing understanding (Boyce, 2004; Ngwenya, 2019). Restricting learners from expressing their understanding and views on the teaching and learning of Grade 10 accounting reduces accounting as a subject to appear unapproachable, insignificant and isolated. Learners need to be authors of their learning experiences by designing an educational journey that allows them to tackle social diversity issues, inequality, and knowledge in an economy (Watermeyer, 2012; Darling-Hammond *et al.*, 2019). Hence, using web-based collaborative learning permitted learners to gain the knowledge and skills in accounting through an active environment that acknowledged their pre-existing knowledge and was flexible to adapt teaching to individual needs (Bengtsson, 2008; Wallin, Nokelainen & Mikkonen, 2018).

ii) Promoting effective and efficient pedagogical knowledge

Qhosola (2016) asserts that instructional knowledge within teaching and learning of Grade 10 accounting is improved by sharing and informing insights into the possibilities consistent with CAR. With the increased variety and number of technological tools over the past years, teachers need to take advantage of the situation through stimulating learners' thinking and interest in Grade 10 accounting. Thus, in using web-based tools to teach accounting, effective teaching was linked to the reform in social, economic and political spheres that support higher-order thinking skills such as creativity and critical thinking.

iii) Democracy as an underlying function

Henry *et al.* (2015) assert that the emphasis on the importance of common good and social justice is fundamental to learning so that learners do not view accounting and real-life events as separate but rather as one. The learners, as a result, will be able to engage in critical dialogues in a learning environment, which may lead to the sharing of local and indigenous knowledge (Hill *et al.*, 2020). Therefore, accounting teachers ought to use the teaching of accounting as an instrument of a democratic function that considers the principles of equity, hope, peace and social justice.

6. RESEARCH METHODOLOGY

This paper used qualitative research as an option for researching to focus and engage individuals or groups of people's views, feelings and patterns without control or manipulation (McDonald, 2012). According to Denzin and Lincoln (2011), qualitative research is an activity that seeks to position a researcher in a natural setting to attempt to make sense of or interpret the daily life of different individuals or groups of people. In this study, the research site served as a natural setting to make sense of the challenges faced by rural accounting teachers in implementing web-based collaborative learning. Qualitative research was used to answer questions about meaning, experiences and perspectives from the view of the teachers concerned in the effort to create new knowledge to improve lives (Hammarberg, Kirkman & Lacey, 2016). Furthermore, Creswell (2012) states that qualitative research begins with assumptions and the possible use of a theoretical framework that seeks to provide essential in-depth insights into the social or human problem. Therefore, the reason we made use of the qualitative research approach was that it created a space whereby the participants were able to share their rich and detailed information for the purpose and benefit of a sustainable transformation (Baum, MacDougall & Smith, 2006).

This paper used an exploratory case study that allowed a comprehensive review of an unclear or new phenomenon, while it retained the complete and meaningful characteristics of real-life events (Yin, 2009). Harrison *et al.* (2017) describe an exploratory case study as a study of the case, for example, a specific group or department, which provides insight into a particular issue to build a theory or redraw generalisations. Furthermore, an exploratory case study focuses on an in-depth understanding of an issue or theme through realising individual or group perceptions and how they perceive the world in which they live (McMillan & Schumacher, 2006). This was an ideal method for exploring the challenges faced by rural accounting teachers in implementing web-based collaborative learning.

Purposive sampling was used in this paper to select particular characteristics and elements from the population that would be a representation of the target group (McMillan & Schumacher, 1997). Ideally, the purposive sampling permitted us to be able to increase the use of the information that was obtained from the sample; thus, we selected five teachers, as they comprised a specific group. We did not attempt to make generalisations, nor did this group represent the population at large. The inclusion criteria for the participants to participate in the study were as follows:

- They had to be teaching Grade 10 accounting.
- They needed to be currently employed as teachers at a South African secondary school.
- They had to have been teaching accounting for at least two years.
- They had to have technological tools in their teaching environment.

The participants met with us at a setting of their choice to take part in a recorded interview of approximately 60 minutes.

7. PRESENTATION AND DISCUSSION OF THE FINDINGS

In this section, we present and discuss the findings as they emerged from the data. For ethical purposes, we use pseudonyms to refer to the participants.

7.1 Failure to adopt learner-centred teaching approaches

The findings from the interviews with the participants indicated that teachers failed to use learner-centred teaching approaches. As observed by Ndebele and Maphosa (2013), teachers continue to struggle to engage learners in the process of teaching and learning actively. This failure was characterised by challenges to create an active learning environment and pressure to complete the Grade 10 accounting curriculum. Commenting on the failure to create a classroom environment that engaged in active learning, Poone said that:

It becomes a challenge to use the active learning and learner-centred approaches due to the annual teaching plan because all the topics are given a time frame and should be taught for only a number of weeks.

Additionally, Molefe commented as follows:

Sir, it's challenging to engage a learner-centred environment especially if you using the annual teaching plan, and again we are expected to treat learners equally. In a class, there are fast learners and slow learners with different learning abilities. Obviously, teachers have to work harder to enable slow learners to understand concepts and subject content.

Xhopo further commented as follows on the pressure to complete the Grade 10 accounting curriculum:

We end up not using all these other approaches; instead, we resort to our usual way of teaching that is creating a teacher-centred environment so that we push the annual teaching plan. We want to complete the curriculum even if the learners do not understand us; the topics would have been assessed and available in their classwork books.

In addition, Hlauza had this to say:

We as teachers are caught in between, we have to push the curriculum and at the same time make sure that all the learners understand while engaging this learner-centred approach.

As mentioned in Pereira and Sithole (2020), the participants viewed the use of learner-centred teaching approaches in accounting as an insurmountable challenge, given the demands of completing the annual teaching plan. Thus, in teaching topics of Grade 10 accounting, the teachers assumed a dominant role where they controlled and influenced the mediation of content knowledge in the classroom. Contrary to this practice, the DBE, through CAPS, emphasises that learners' exploration, participation and the development of skills in analysis, synthesis and evaluation is placed at the centre of teaching and learning (DBE, 2011). Engaging the teacher-centred approach puts the learners in a passive role whereby the learners listen, memorise and regurgitate the content taught without any understanding. This, therefore, hinders the DBE's efforts of creating an active learning approach that allows learners to express their gained knowledge and apply the accounting principles.

The participants' responses point out that teachers exercise control in terms of choosing the manner in which learning has to take place within the classroom, thus oppressing and marginalising any contribution the learners have (Malebese, 2016; Msimanga, 2017). The learners seldom participate in the planned series of actions by the teacher as they remain being passive recipients of knowledge. The CAR principles indicate that human beings ought to be free from dominance as it is a violation of freedom and it interferes with their capability to converse and relate with one another (Boyce, 2004). The narrations by the participants are contrary to this principle of CAR, as issues of control and authority are evident, thus placing the learners in a position of disempowerment, marginalisation and oppression.

7.2 Dependency on traditional teaching tools

Over the years, education in schools has been used as a medium to foster creativity and transformation with the effort of driving the learners from the known into the unknown (Jaffer *et al.*, 2007). Thus, teaching and learning through fourth industrial revolution tools such as ICT has brought about new and exciting possibilities within the classroom that seeks to contribute towards the learner's ability to solve problems in laying a solid foundation of knowledge. However, more demands have been placed on teachers, as more time is required to prepare for the lesson; as a result, adding more capacity to the existing workload (Manqele, 2012). Hence, in efforts to prepare the learners for tests and examinations the teachers continue to rely on traditional teaching tools to deliver the content of Grade 10 accounting. Concerning the dependency on traditional teaching tools, Poone commented as follows:

My progress as a teacher was gradual; I started in a way most teachers wouldn't want to start their careers in teaching whereby most of the learners were performing terrible. I started relying on the textbook, and the chalkboard, and I basically used teacher-centred methods to teach.

The response signifies that learners may have performed very badly in accounting due to methods that might have been implemented for the purpose of teaching and learning, resulting from inadequate training and support received as a novice teacher. Moreover, Poone indicates that as teachers in the Further Education and Training phase, there is a continued dependence upon traditional teaching tools in the classroom that generally results in the adoption of the teacher-centred approach (Muganga & Ssenkusu, 2019). According to Darling-Hammond *et al.* (2020), this demonstrates that teachers continue to pursue the role of being knowledgeable in their learners' eyes and to assume an authoritative role whereby the shape and form of learning are engineered from their perspective.

Molefe commented as follows on the challenges of using technology and its inaccessibility as it relates to dependency on traditional tools:

The teachers themselves are challenged by technology, so it becomes a challenge for them to integrate something they are totally not familiar with. And again, accessibility of technology in schools is a challenge because in the school I work, the tablets are there but they are kept in the strong room.

This response indicates that teachers in schools may have an interest in using and integrating ICT into their teaching and learning; yet, they lack digital skills and the competency to do so. Additionally, Molefe mentions that although schools may have the necessary ICT tools to use for the purpose of teaching and learning, due to the inaccessibility of tools, teachers choose to continue using tools that they may be used to.

Xhopo shared the following:

A major point of teachers not using ICT is the leadership. You know, when the leadership is not knowledgeable in integrating ICT in teaching and learning, they discourage the teachers in the school, which leads to them developing a negative attitude towards using technology in their classes.

The response attributes the inaccessibility and inadequate training of teachers in integrating technology in their teaching and learning to the leadership of schools (Ghavifekr *et. al*, 2016). Furthermore, Hlauza related the dependency of traditional tools to a lack of training and bad attitude from teachers; and had this to say:

Sir, the resources are available but there is a lack of training that is associated with a bad attitude from the teachers themselves. The lack of training for teachers to engage technology into the classroom has resulted in the school not to make use of the resources that was supplied by the Department of Basic Education and private companies like Vodacom. These resources are gathering dust because of that!

The response indicates that teachers are challenged by technology and that due to a lack of competency and skill, the teachers develop a negative attitude towards integrating ICT tools into their teaching and learning. The result of teachers developing a negative attitude towards using ICT tools in teaching and learning is that the learners will not be given an opportunity to access and learn accounting by means of fourth industrial revolution methods in an attempt to solve problems.

Melamu's comment regarding the dependency on traditional teaching tools was as follows:

The challenge that we come across is that you'd find that in schools, the management tends to withhold the gadgets that were supplied by the government from teachers and learners.

The narration indicates a misuse of power by the school's leadership to attempt to redress past imbalances, especially for previously disadvantaged learners, to provide both teachers and learners with the opportunity to apply methods that enable creativity and critical thinking skills.

According to Raman and Yamat (2014), the responses by the participants indicate that not enough support and training are provided for the teachers concerning the integration of ICT into teaching and learning. This results in teachers resorting to using traditional teaching tools that may be regarded obsolete in the long run, as fourth industrial revolution tools are being adopted into the classroom; thus, restricting the learners' ability to engage in critical thinking and problem-solving skills (Reaves, 2019; Oke & Fernandes, 2020). Moreover, the responses confirm the school management team's inability to promote the integration of ICT into teaching and learning in an effort to create a platform for innovation, versatility and creativity. Consequently, this serves as a constraint to the teaching of accounting through using tools that are effective and efficient in the fourth industrial revolution and influencing meaningful learning. Instead, this disallowed learners to gain enough skills to adapt accounting expertise that is not only meant for schools but real life (Mbatha, 2016).

The responses above indicate that the resources of integrating ICT tools into teaching and learning are available. However, the school's leadership opts not to use it. Instead, it depends on traditional teaching tools that tend to create an environment whereby teachers

apply a teacher-centred approach and learners assume a passive role of listening, writing and regurgitating the content taught. The issues of control and authority manifest through learners not being able to engage and interact in meaningful dialogues that seek to promote a much deeper understanding of accounting. In this case, the learners and teachers are not given the opportunity to use technological tools that may contribute to a deeper understating of accounting expertise that can be applied in real life.

According to Qhosola (2016), CAR seeks to build an empowering environment whereby accounting teachers and learners are permitted to use essential resources that are efficient and effective in the pursuit of acquiring enlightening accounting knowledge. Ideally, the school's management team ought to allow teachers to let learners to be the authors of their own learning experience in pursuing Grade 10 accounting problems (Watermeyer, 2012; Henry, Murtuza & Weiss, 2015).

8. CONCLUSION AND RECOMMENDATIONS

This study explored the challenges that rural accounting teachers face regarding implementing web-based collaborative learning. The findings paint an upsetting picture about the nature of the challenges facing accounting teachers in the 21st century. It is worrying that accounting teachers are still utilising teacher-centred teaching approaches and find it challenging to engage learners in the process of teaching and learning actively. It also emerged from the findings that there is apparent mismanagement and inadequate implementation of the annual teaching plan, which serves as a stumbling block towards creating and maintaining an active learning environment.

The findings indicate that accounting teachers have an interest in using technological tools to facilitate teaching and learning; yet, they lack the necessary competency and digital skills to do so. Furthermore, teachers are continuously under pressure to complete the accounting curriculum in order to prepare the learners for their assessment. However, due to insufficient time, the teachers resort to using traditional teaching tools, as they believe that using technological tools take up much of their teaching time and add to their existing workload. The factor that was identified to lead the accounting teachers to depend on traditional teaching tools was the inaccessibility of technological resources in schools. Inadequate access to technological tools causes the teachers to develop a negative attitude towards integrating ICT into an accounting class.

A critical recommendation for creating a classroom environment that engages in active learning, is that the teachers should have sound knowledge of various teaching methodologies. Such knowledge may be gained through networking with teachers that are knowledgeable about learner-centred pedagogies and in-service training. Learners construct knowledge through the medium of language. Thus, a teacher using active learning as a teaching strategy should enable learners to build knowledge through critically discussing, reading and writing. The use of dialogue, discussion and groupwork that is set using real-world contexts is crucial towards fostering whole class understanding. It is thus recommended that the classroom culture concerning the teacher's role should be changed by allowing the learners to be engaged in the process of learning, which includes brainstorming ideas with peers, moving around the classroom to gather resources and using web-based tools to access information. By creating a classroom environment that engages in active learning, the teacher will be able to spend most of his or her time assisting learners in developing their understanding and skills,

thus providing an opportunity for the learners to apply and demonstrate what they are learning and to be able to receive immediate feedback from peers and the facilitator.

A fundamental recommendation for using innovative technology is its availability and ease of access for the teacher to integrate web-based collaborative learning in a Grade 10 accounting lesson. The teachers thus need to have access to the web-based tools to prepare, implement and manage an active learning classroom through web-based collaborative learning. Therefore, the school management team needs to support teachers continuously by giving them access to technological tools and providing training and development regarding the implementation of web-based collaborative learning.

REFERENCES

- Almaiah, M.A., Al-Khasawneh, A. & Althunibat, A. 2020. Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic. *Education and Information Technologies*, 25: 5261–5280. <https://doi.org/10.1007/s10639-020-10219-y>
- Baum, F., MacDougall, C. & Smith, D. 2006. Participatory action research. *Journal for Epidemiol Community Health*, 60: 854–857. <https://doi.org/10.1136/jech.2004.028662>
- Bengtsson, J. 2008. *Learning in the 21st century: Research, innovation and policy*. Paris: Centre for Educational Research and Innovation.
- Boyce, G. 2004. Critical accounting education: Teaching and learning outside the circle. *Critical Perspectives on Accounting*, 15: 565–586. [https://doi.org/10.1016/S1045-2354\(03\)00047-9](https://doi.org/10.1016/S1045-2354(03)00047-9)
- Broadbent, J. 2002. Critical accounting research: A view from England. *Critical Perspectives on Accounting*, 13: 433–449. <https://doi.org/10.1006/cpac.2002.0543>
- Creswell, J. 2012. *Educational research planning, conducting, and evaluating quantitative and qualitative research*, fourth edition. Boston, MA: Pearson.
- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B. & Osher, D. 2020. Implications for educational practice of the science of learning and development. *Applied Developmental Science*, 24(2): 97–140. <https://doi.org/10.1080/10888691.2018.1537791>
- Denzin, N.K. & Lincoln, Y.S. 2011. *The Sage handbook on qualitative research*. Thousand Oaks, CA: Sage Publications.
- Department of Basic Education (DBE). 2011. *Curriculum and Assessment Policy Statement: Grades 10–12*. Pretoria: Government Printers.
- Du Plessis, E. & Marais, P. 2015. Reflections on the NCS to NCS (CAPS): Foundation phase teachers' experiences. *The Independent Journal of Teaching and Learning*, 10: 1–13.
- Eison, J. 2010. Using active learning instructional strategies to create excitement and enhance learning. Unpublished PhD thesis. Tampa, FL: University of South Florida.
- Ezeanyanike, P. 2013. Assessing benefits of collaborative learning environment for quality higher education in Nigeria. *Journal of Educational and Social Research*, 3(6): 85–94. <https://doi.org/10.5901/jesr.2013.v3n6p85>
- Gaffikin, M. 2006. *The critique of accounting theory. Faculty of Business – Accounting and Finance working papers*. University of Wollongong: UOW Library.

Ghavifekr, S., Kunjappan, T., Ramasamy, L. & Anthony, A. 2016. Teaching and learning with ICT Tools: Issues and challenges from teachers' perceptions. *Malaysian Online Journal of Educational Technology*, 4(2): 38–57.

Hadjerrouits, S. 2010. A conceptual framework for using and evaluating web-based learning resources in school education. *Journal of Information Technology Education*, 9: 53–79. <https://doi.org/10.28945/1106>

Hales, J. & Orpurt, S.F. 2013. A review of academic research on the reporting of cash flows from operations. *Accounting Horizons*, 27(3): 539–578. <https://doi.org/10.2308/acch-50498>

Hammarberg, K., Kirkman, M. & Lacey, S. 2016. Qualitative research methods: When to use them and how to judge them. *Human Reproduction*, 31(3): 498–501. <https://doi.org/10.1093/humrep/dev334>

Harrison, H., Birks, M., Franklin, R. & Mills, J. 2017. Case study research: Foundations and methodological orientations. *Forum: Qualitative Social Research*, 18(1): 1–17.

Henry, T.F., Murtuza, A. & Weiss, R.E. 2015. Accounting as an instrument of social justice. *Open Journal of Social Sciences*, 3: 66-81. <https://doi.org/10.4236/jss.2015.31009>

Hill, R., Adem, C., Alangui, W.V., Molnar, Z., Aumeeruddy-Thomas, Y., Bridgewater, P., Tengo, M., Thaman, R., Yao, C.Y.A., Berkes, F., Carino, J., Cunha, M.C., Diaw, M.C., Diaz, S., Figueroa, V.E., Fisher, J., Hardison, P., Ichikawa, K., Kariuki, P., Karki, M., Lyver, P.O.B., Malmer, P., Masardule, O., Yeboah, A.A.O., Pacheco, D., Patardze, T., Perez, E., Roue, M.M., Roba, H., Rubis, J., Saito., & Xue, D. 2020. Working with Indigenous, local and scientific knowledge in. *Current Opinion in Environmental Sustainability*, 43: 8–20. <https://doi.org/10.1016/j.cosust.2019.12.006>

Jaffer, S., Ng'ambi, D. & Czerniewicz, C. 2007. *The role of ICTs in higher education in South Africa: One strategy for addressing teaching and learning challenges*. Cape Town: University of Cape Town.

Jawitz, J. 2013. *The challenge of teaching large classes in higher education in South Africa: A battle to be waged outside the classroom*, third edition. Cape Town: SUN Media Metro. <https://doi.org/10.18820/9780992180690/09>

Kay, R. 2011. Examining the effectiveness of web-based learning tools in middle and secondary school science classrooms. *Interdisciplinary Journal of e-Learning and Learning Objects*, 7: 359–374. <https://doi.org/10.28945/1534>

Laferriere, T., Murphy, E. & Campos, M. 2005. *Effective practices in online collaborative learning in campus-based courses*. Canada: Social Sciences and Humanities Research Council of Canada.

Laughlin, R. 1995. Empirical research in accounting: Alternative approaches and a case for “middle-range” thinking. *Accounting, Auditing & Accountability Journal*, 8: 63–87. <https://doi.org/10.1108/09513579510146707>

Ledwith, M. 2007. On being critical: Uniting theory and practice through emancipatory action research. *Educational Action Research*, 15: 597–611. <https://doi.org/10.1080/09650790701664021>

Letshwene, M. 2014. Improving Grade 10 accounting teachers' competencies in the Ekurhuleni District of the Gauteng province. Unpublished Master's dissertation. Pretoria: University of South Africa.

- Maddock, L. & Maroun, W. 2018. Exploring the present state of South African education: Challenges and recommendations. *South African Journal of Higher Education*, 32(2): 192–214. <https://doi.org/10.20853/32-2-1641>
- Malebese, L. 2016. A socially inclusive teaching strategy to respond to problems of literacy in a grade 4 class. Unpublished PhD thesis. Bloemfontein: University of the Free State.
- Manqele, C. 2012. An investigation of the role of learners and teachers resource materials in determining a school performance and quality education: A case study of Isiphosemvelo Secondary School. Unpublished Master's dissertation. Pretoria: University of South Africa.
- Marais, P. 2016. We can't believe what we see: Overcrowded classrooms through the eyes of student teachers. *South African Journal of Education*, 36(2): 1–10. <https://doi.org/10.15700/saje.v36n2a1201>
- Mathevula, M., 2015. The effects of information and communication technology (ICT) on teaching and management of curriculum-related activities: A case of secondary schools in the Groot Letaba Circuit, Mpani District in the Limpopo province. Unpublished Master's thesis. Turfloop: University of Limpopo.
- Mbatha, M. 2016. Teachers' experiences of implementing the Curriculum and Assessment Policy Statement (CAPS) in Grade 10 in selected schools at Ndwedwe in Durban. Unpublished Master's dissertation. Pretoria: University of South Africa.
- McDonald, C. 2012. Understanding participatory action research: A qualitative research methodology option. *Canadian Journal of Action Research*, 13: 34–50.
- McMillan, J.H. & Schumacher, S. 1997. *Research in education: A conceptual introduction*. New York, NY: Harper-Colins.
- McMillan, J. & Schumacher, S.S. 2006. *Research in education: Evidence-based inquiry*. Boston, MA: Pearson.
- McPhail, K. 2004. The dialectic of accounting education: From role identity to ego identity. *Critical Perspectives on Accounting*, 12: 471–499. <https://doi.org/10.1006/cpac.2000.0444>
- Menon, K. & Castrillion, G., 2019. Reimagining curricula for the Fourth Industrial Revolution. *The Independent Journal of Teaching and Learning*, 14(2): 6–19.
- Merino, B. 1998. Critical theory and accounting history: Challenges and opportunities. *Critical Perspectives on Accounting*, 9: 603–616. <https://doi.org/10.1006/cpac.1998.0266>
- Mkhize, B., 2019. Teaching strategies used by Geography teachers to teach sustainable development in Pinetown District. Unpublished Master's dissertation. Pinetown: University of Kwa-Zulu Natal.
- Molapo, M. 2016. How educators implement curriculum changes. Unpublished Master's dissertation. Pretoria: University of Pretoria.
- Moodley, G. 2013. Implementation of the curriculum and assessment plan: Challenges and implications for teaching and learning. Unpublished Master's dissertation. Pretoria: University of South Africa.
- Msimanga, M. 2017. Teach and assess: A strategy for effective teaching and learning in Economic and Management Sciences. Unpublished PhD dissertation. Bloemfontein: University of the Free State.

- Muganga, L. & Ssenkusu, P. 2019. Teacher-centered vs. student-centered: An examination of student teachers' perceptions about pedagogical practices at Uganda's Makerere University. *Cultural and Pedagogical Inquiry, Summer*, 11(20): 16–40. <https://doi.org/10.18733/cpi29481>
- Muthusamy, N. 2015. Teachers' experiences with overcrowded classroom in a mainstream school. Unpublished Master's dissertation. Durban: University of KwaZulu-Natal.
- Mukhari, S., 2016. Teachers' experience of information and communication technology use for teaching and learning in urban schools. Unpublished PhD thesis. Pretoria: University of South Africa.
- Ndebele, C. & Maphosa, C. 2013. Promoting active learning in large class university teaching: Prospects and challenges. *Journal for Social Sciences*, 35(3): 251–262. <https://doi.org/10.1080/09718923.2013.11893164>
- Nguyen, M. 2015. Large classes: Universal teaching and management strategies. *An International Peer-Review Open Access Journal*, 2(1): 76–83.
- Ngwenya, J., 2019. Accounting teachers' experiences of communal feedback in rural South Africa. *South African Journal of Education*, 39(2): 1–10. <https://doi.org/10.15700/saje.v39ns2a1502>
- O'Connor, C. 1997. Dispositions toward (collective) struggle and educational resilience in the inner city: A case analysis of six African-American high school students. *American Educational Research Journal*, 34(4): 593–629. <https://doi.org/10.3102/00028312034004593>
- Oke, A. & Fernandes, F.A.P. 2020. Innovations in teaching and learning: Exploring the perceptions of the education sector on the 4th industrial revolution (4IR). *Journal of Open Innovation: Technology, Market, and Complexity*, 6(31): 1–22. <https://doi.org/10.3390/joitmc6020031>
- Ozturk, C. 2015. Some issues related to cash flow statement in accounting education: The case of Turkey. *Accounting and Management Information Systems*, 14(2): 398–431.
- Palaigeorgiou, G. & Grammatikopoulou, A. 2016. Benefits, barriers and prerequisites for Web 2.0 learning activities in the classroom: The view of Greek pioneer teachers. *Interactive Technology and Smart Education*, 13(1): 2–18. <https://doi.org/10.1108/ITSE-09-2015-0028>
- Pereira, L. & Sithole, M., 2020. Learner-centred pedagogy in Accounting: Understanding its meaning from a Bernsteinian perspective. *African Educational Research Journal*, 8(1): 20–30.
- Qhosola, M. 2016. Creating sustainable learning environments for a Grade 10 accounting classroom: A critical accounting approach. Unpublished PhD thesis. Bloemfontein: University of the Free State.
- Rajcoomar, R. 2013. Strategies for promoting active learning in large Physics classrooms in Kerala, India. Master's dissertation. Pretoria: University of South Africa.
- Raman, K. & Yamat, H. 2014. Barriers teachers face in integrating ICT during English lessons: A case study. *The Malaysian Online Journal of Educational Technology*, 2(3): 11–19.
- Reaves, J. 2019. 21st-century skills and the fourth industrial revolution: a critical future role for online education. *International Journal on Innovations in Online Education*, 3(1): Online. <https://doi.org/10.1615/IntJInnovOnlineEdu.2019029705>
- Saal, E. 2017. Integrating computers into mathematics education in South African schools. Unpublished Master's dissertation. Pretoria: University of Pretoria.

- Sekwena, G. 2014. Active learning in a high school economics class: A framework for learner engagement. Unpublished Master's dissertation. Bloemfontein: University of the Free State.
- Shehu, H. & Tafida, A.G. 2016. Creative strategies for effective English language teaching in large classes. *Journal of Research in Humanities and Social Science*, 4(3): 72–79.
- Silin, Y. & Kwok, D. 2017. A study of students' attitudes towards using ICT in a social constructivist environment. *Australasian Journal of Educational Technology*, 33(5): 50–62. <https://doi.org/10.14742/ajet.2890>
- Sousa, L., Richter, B. & Nel, C. 2017. The effect of multimedia use on the teaching and learning of social sciences at a tertiary level: A case study. *Yesterday & Today*, 17: 1–22. <https://doi.org/10.17159/2223-0386/2017/n17a1>
- Summerlee, A.J.S. 2010. *Challenge of engagement inside and outside the classroom: The future for universities*. Guelph: Portland Press.
- Tlhapane, S.M. & Simelane, S. 2010. Technology-enhanced problem-based learning methodologies in geographical dispersed learners of Tshwane University of Technology. *Knowledge Management & E-Learning: An International Journal*, 2(1): 68–83. <https://doi.org/10.34105/j.kmel.2010.02.006>
- Usman, Y., 2016. Educational Resources: An Integral Component for Effective School Administration in Nigeria. *Research on Humanities and Social Sciences*, 6(13): 1–22.
- Wallin, A., Nokelainen, P. & Mikkonen, S., 2019. How experienced professionals develop their expertise in work-based higher education: a literature review. *Higher Education*: 359–378. <https://doi.org/10.1007/s10734-018-0279-5>
- Watermeyer, R. 2012. *Changing the construction procurement culture to improve project outcomes*. Johannesburg: Procurement Systems and Public-Private Partnerships.
- Yin, R. 2009. *Case study research: Design and methods*, fourth edition. Los Angeles, CA: Sage Publications.