

The Role of Self-Determination Theory on Information Technology Skills of First-Year Trainee Accountants



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Abstract Rapid advancement in Information Technology (IT) has changed how accountants acquire, analyse and interpret data to inform organisational decision-making. The key trends in IT have meant that tasks traditionally performed by early-career accountants are now automated. The problem identified in this study is that new accounting graduates often struggle with IT challenges in the workplace. Despite these challenges, they still succeed in their training programs. This study examines the role of Self-determination Theory (SDT) on the IT skills of first-year trainee accountants. It identifies the knowledge gaps between accounting education and IT skills required to perform accounting duties in the workplace. The study adopted a qualitative research approach. Through face-to-face interviews, data were purposefully collected at a point of saturation from accounting firm managers and first-year trainee accountants. Data were analysed using the ATLAS.ti™ 9 software package and thematic data analysis. The findings of this study indicate that with self-determination, first-year trainee accountants can overcome IT challenges such as sophisticated software packages, technological stress and meeting employers' expectations. This study outlined the concepts that evolved around self-determination and how trainee accountants practice self-determination in order to overcome IT-related challenges. The study was limited to accounting firms in the Mafikeng area in the North West Province of South Africa. The findings of this study provide valuable insights for accounting education, accounting professional bodies, accounting firms, and other stakeholders with various IT challenges first-year trainee accountants face and how self-determination is practised to overcome these challenges.

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1 Introduction

Rapid technological developments across the globe have resulted in a significant increase in the use of information technology (IT) in accounting firms (Selamat & Idris, 2019). The high rate of IT adoption among accounting functions is due to the urge for improved productivity among accounting professionals (Gary & Poh-Sun, 2016). Accounting firms are now investing in auditing software and knowledge-sharing applications to enhance financial data gathering, organisation, processing, evaluation, and presentation (Gary & Poh-Sun, 2016; Han et al., 2023). According to Ghasemi et al. (2011), computerized accounting systems and IT have given the accounting profession a number of skills, including increased functionality, quicker processing, improved accuracy, and external reporting. The working settings of accountants nowadays are altering as a result of IT advancements (Kroon et al., 2021). Ghasemi et al. (2011) further points out that modern accounting software systems have automated the use of paper ledgers and accounting books, which has shortened the time required for accountants to execute their jobs and improved the overall accuracy and efficiency of accounting data. The development of IT tools has improved the accuracy and timeliness with which accountants can now compile and present financial reports (Imene & Imhanzenobe, 2020).

The accounting industry has urged accountants to develop their abilities by integrating IT features when carrying out their duties in their corporate operations, according to Kroon et al. (2021). In its competency framework for first-year trainee accountants, the South African Institute of Chartered Accountants (SAICA) has repeatedly emphasized the value of technical expertise and IT (Kunz & De Jager, 2019; Stumke, 2017). The most recent competency framework (SAICA, 2021) emphasizes the necessity of aligning professional values and attitudes with technical and technological abilities as well as enabling skills. Previous studies in accounting education have demonstrated that businesses place a higher value on IT abilities than what accounting graduates possess (Edeigba, 2022; Kwarteng & Mensah, 2022). According to Kwarteng and Mensah (2022), accounting graduates had developed two-thirds of the 18 skills employers considered essential to the accounting profession with IT skills, constituting the remaining one-third of the essential skills.

Most early-career trainee accountants struggle with IT use when they begin working at an accounting office because they lack the necessary IT skills and expertise (Kroon et al., 2021; Kunz & De Jager, 2019). This scenario is made worse by the fact that South African trainee accountants are expected to be accountable for their own competency and skill development (SAICA, 2020b). Therefore, it is the trainee accountants' responsibility to make every effort to get through whatever IT obstacles they face. The use of complex software programs, technological stress, living up to employer expectations, and family and psychological difficulties may all be part of these difficulties (Papagiannidis et al., 2020).

2 Problem Statement and Objectives of the Study

Despite the emphasis on developing IT skills in accounting education, new accounting graduates often struggle with IT challenges in the workplace. Stumke (2017) and Junger da Silva et al., 2021 concur that the various IT challenges encountered by trainee accountants are due to inadequate integration of IT programmes in accounting education institutions and limited collaboration between universities and accounting firms. This lack of training for aspiring accountants is a major worry, especially in South Africa, where embracing new technologies is essential for competitiveness and economic progress. Despite the fact that trainee accountants must gain a variety of skills in order to meet SAICA (2020b) criteria, they are nevertheless required to take responsibility and show that they possess (or are acquiring) the relevant abilities and skills. The issue found in this study is that recent accounting graduates frequently encounter IT difficulties at work. They nevertheless succeed in their training regimens despite these obstacles.

Therefore, the purpose of this research was to investigate the role of self-determination in the context of IT challenges faced by first-year trainee accountants in South Africa and to explore how it can improve their engagement and performance and motivate them in dealing with IT challenges. In addition, this study seeks to answer the question, “What role does self-determination play when first-year trainee accountants encounter IT challenges in the workplace?” Hence, the research objective is to determine the role of self-determination plays when first-year trainee accountants encounter IT challenges at the workplace.

3 Theoretical Framework

Self-determination Theory (SDT) is a well-established motivational theory that provides a framework for understanding individuals’ intrinsic motivation and the role of their social environment in supporting or undermining this motivation (Deci & Ryan, 2013; Duda & Appleton, 2016). The theory posits that individuals have three basic psychological needs: autonomy, competence, and relatedness, which are essential for intrinsic motivation and well-being (Ryan & Deci, 2017).

An individual’s sense of control over their actions and decisions is referred to as autonomy. A person’s perception of mastery and efficacy in their activities and the work at hand are referred to as their level of competence. According to Martela and Riekkki (2018), relatedness is a person’s sense of connection, belonging, and pleasant relationships with others.

Vergara-Morales and Del Valle (2021) contend that when people’s fundamental psychological needs are met, they are more likely to be intrinsically driven, which improves performance, perseverance, and overall wellbeing. However, when these requirements are not addressed, people may turn to extrinsic motivation, which can have negative effects on their performance and general well-being (Vo et al., 2022).

SDT can be used to explain how the satisfaction of autonomy, competence, and relatedness needs can enhance first-year trainee accountants' intrinsic motivation in dealing with IT challenges encountered in the workplace. The framework can also identify factors in the social environment that support or undermine the satisfaction of these needs, such as workplace culture, supervisor support, and colleague interactions. By understanding how SDT can be applied in the context of IT challenges, the theoretical framework can inform interventions and strategies that enhance trainee accountants' motivation and engagement in dealing with IT challenges, ultimately improving their job performance and career prospects.

4 Research Methodology

This study adopted a qualitative research approach to obtain information in order to achieve the research objectives. The qualitative research approach relies on understanding the problem by investigating the participants' perceptions, experiences, and views (Queirós et al., 2017). These approaches include interviews, observations, and open-ended questionnaires. In this study, a qualitative research approach enabled the researcher to understand the experiences of the trainee accountants as they were responsible for developing their IT skills. In addition, qualitative research was considered an appropriate method because it allowed the researcher to obtain rich perceptions from trainee accountants in their natural settings. Moreover, this assisted the researcher in answering the study's research question.

All SAICA training offices in the Mafikeng region were chosen for the study using a census or total sampling method. As of July 2021, there are four SAICA training offices in Mafikeng (SAICA, 2020a). According to Maree (2014), a research population needs to be practical and appropriate. All first-year trainee accountants and their respective managers from the four designated SAICA training offices were the study's target demographic in terms of participants. 13 first-year trainees (shown as T1-T13) and two managers (represented as M1-M2) took part in the study to reach a point of saturation. This study adopted individual interviews as a data collection technique. The researchers used face-to-face interviews to obtain an in-depth understanding of how self-determination helped them overcome the challenges. In addition, the researcher used an interview schedule, which guided the interview process.

An expert transcriber initially converted the audio files from the interviews' material into text. After that, the data were thematically analysed using the ATLAS.tiTM 9 tool with the help of an Independent Coder (IC). The researcher carefully reviewed the transcript data using thematic data analysis to spot recurring themes, subjects, concepts, and patterns of meaning. The software tools in ATLAS.tiTM 9 manage cognitive, thought-based, and manual processes associated with coding the data. The IC read the transcripts as part of the pre-coding process before continuing down the theoretical coding path.

5 Results and Discussion

The purpose of this research was to investigate the role of self-determination in the context of IT challenges faced by first-year trainee accountants in South Africa and to explore how it can improve their engagement and performance and motivate them in dealing with IT challenges. Figure 1 depicts the findings, which include eager to learn, enhanced work relationships, and motivation.

5.1 *Eagerness to Learn*

According to comments taken from study participants, self-determination is essential for inspiring first-year trainee accountants to handle IT issues they face at work. The motivation of the trainee accountants is motivated by a variety of variables, including the urge to accomplish their desired goals, fulfil job requirements, and improve their IT proficiency. First-year trainee accountants that are self-driven and keen to learn any challenging IT skills essential to perform their duties. SDT is based on the idea that despite obstacles, people have a persistent desire to learn (Deci & Ryan, 2012; Guay, 2022). The competency of trainee accountants can be improved with the help of accounting professional bodies and accounting businesses.

Participant T7 highlighted the importance of honesty and focus in achieving desired goals, suggesting that trainee accountants must be committed to achieving their objectives. This comment underscores the significance of autonomy and competence needs in SDT, emphasising individuals' sense of control and mastery over their actions and decisions (Ryan & Deci, 2000).

T7: Yes, I was really focused and dedicated, and being honest with yourself is the first step. You must accept responsibility, be truthful and sincere, and keep your attention on your intended outcomes.

The comment from T1 emphasised the consequences of not getting things done correctly, highlighting the external pressures that can drive determination. This comment underscores the role of external factors in SDT, which acknowledges that social context and external factors can influence individuals' motivation and engagement (Deci & Ryan, 2013).

T1: Yes, I was really determined because if I did not get something done, my manager would not give me another job, so I ensured that I got things done and did it correctly.

Participant T2 explained:

T2: I think I was determined because my career requires these IT skills in order to qualify as an accountant. So, I think it helped me not to give up until I achieved that goal.

According to the findings presented above, first-year trainees used the notion of self-determination to solve their IT problems. They were eager to acquire the necessary IT skills and excel at their jobs. Participant T3's comments emphasized the

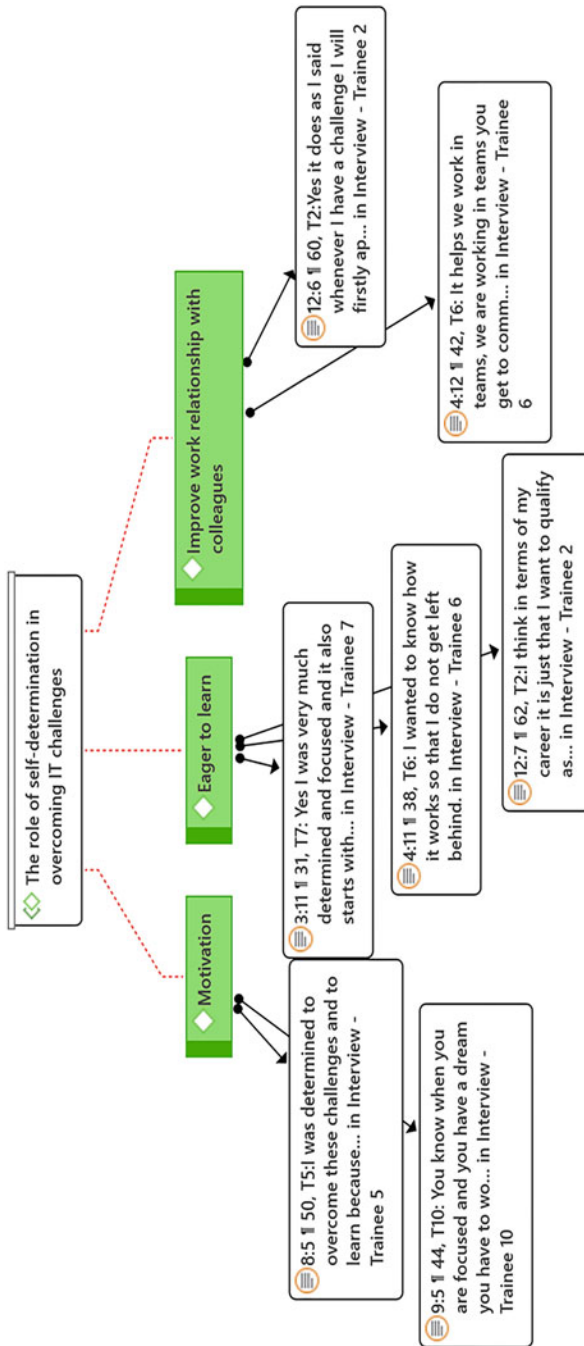


Fig. 1 Role of self-determination in first-year trainee accountants' IT challenges in the workplace

significance of competency in all that trainee accountants do, implying that they should make an effort to learn from their failures.

T3: The first thing you must say to yourself is to ensure you are competent in everything you do. So, for me, that is self-determination, knowing that I must be competent in whatever I do. And even if I am going to make mistakes, it must be something that I am going to be able to learn from.

With an emphasis on people's feelings of mastery and efficacy in their actions and tasks, this comment highlights the importance of competence needs in SDT (Deci & Ryan, 2000). Competence is defined by Nikou and Economides (2017) as effective behaviour, developing one's own capacities, and a desire to become self-sufficient. The study believes that this is the reason why self-determination enables first-year trainee accountants to be eager to learn and competent in their roles. According to Infante-Moro et al. (2019), competencies are also connected to the capacity to employ a variety of instruments to carry out tasks. This means that first-year accounting trainees who are willing to study and adopt new IT skills that may improve their capabilities can further increase their competence.

5.2 *Improved Work Relationships*

According to the concept of relatedness, people need to feel a sense of belonging, connection, and positive interactions with others around them. This SDT component emphasizes the value of social interactions and encouraging situations in promoting motivation and completing objectives. Relatedness is a fundamental component of self-determination since it fosters interaction among first-year trainee accountants with other employees, enhancing their working relationships. Participants T6 and T5, for instance, emphasized the value of teamwork and open communication when addressing issues.

T6: Working in teams is beneficial since it allows for easy communication in the event of an issue. When I'm having trouble working with a teammate, I let other co-workers know what's going on, and they offer to help.

T5: Yes, I frequently consulted an internal auditor colleague of mine.

Both Manager M2 and Trainee Accountant T2 stressed the value of asking your co-workers for help when you're having a hard time. These remarks imply that fostering motivation and attaining goals depend on social support and positive working relationships. T2: Yes, it does; as I said, whenever I have a challenge, I first approach my colleagues.

The conclusion that can be made from the aforementioned data is that self-determination fosters relatedness. This suggests that in order to learn from their peers, first-year accounting trainees required to interact with them. According to Racero et al. (2020), relatedness is a good indicator of trainee accountants' desire to continue working despite IT difficulties. According to Arvanitis (2017), the pressure

imposed on aspiring accountants has caused them to develop relatedness in an effort to increase their expertise.

Participant M2 confirmed this:

M2: I believe it does, yes. As I previously stated, the framework is in place, and colleagues and mentors are available to assist. You will complete your work more slowly than others and fall behind if you remain passive and we forget about you for any reason. We won't be extending your contract.

The interpretation of Participant M2's comment is that the accounting firm has provided first-year trainee accountants with mentors who can assist them with their IT skills challenges. It then becomes the responsibility of the first-year trainees to communicate with them about any aspect they are struggling with. Participant T4 affirmed this view:

T4: If I understand correctly, self-determination refers to a person's resolve to obtain something or to finish a task. It's similar to promising oneself that you will take this action. Therefore, it will be simpler to work with your colleagues and gain more knowledge from them if you start by telling yourself that you can accomplish it.

These comments from first-year trainee accountants suggest that they found support and motivation through positive relationships with their colleagues. Working in teams provided opportunities for communication, problem-solving, and learning from each other. This aligns with SDT's emphasis on the importance of relatedness in enhancing motivation and promoting personal growth.

Additionally, the remarks made by the participants imply that the sense of relatedness produced by good workplace interactions was crucial in supporting their right to self-determination. Trainee accountants should maintain focus on their objectives and be persistent when overcoming difficulties by having encouraging co-workers and mentors. This emphasizes how the various SDT components interact with one another, as relatedness can support autonomy and competence and vice versa.

The significance of relatedness in SDT has also been addressed by earlier study. For instance, research (Deci & Ryan, 2000; Vansteenkiste et al., 2004) has demonstrated that a sense of connection and belonging can increase motivation and boost well-being. Positive social relationships have also been linked to improved levels of performance, engagement, and job satisfaction at work (Sypniewska et al., 2023; Tran et al., 2018).

Therefore, the findings from this study are consistent with previous research and highlight the importance of fostering positive work relationships and supportive environments in promoting motivation and achieving work-related goals. By fostering a sense of relatedness among first-year trainee accountants, organisations can facilitate the development of IT skills and enhance the overall success of their trainee programmes.

5.3 *Motivation*

The participant comments underscore the critical importance of motivation in helping first-year trainee accountants overcome their lack of IT abilities. These remarks highlight the significance of having specific objectives, a strong feeling of resolve, a narrow perspective, and self-motivation. Guay (2022) asserts that the SDT portrays motivation as a multifaceted notion, highlighting the shifting characteristics of human needs, motivational traits, and psychological well-being within a social context. Extrinsic and intrinsic motivation are both parts of self-determination. This suggests that motivation fosters a learning environment for first-year trainee accountants.

Participant T11 mentioned that the motivation to complete the training contract and achieve specific goals served as a driving force to learn more and avoid wasting time on unimportant tasks. This comment suggests that having a clear end goal can provide motivation and direction for acquiring IT skills.

T11: I was driven to complete my training contract because I had a clear idea of what I wanted to accomplish in the end. That inspired me to learn more, never waste time on unimportant things, and learn everything I could.

Similarly, T5 was motivated to overcome IT challenges and learn extensively to ensure a smooth transition into future job opportunities after the training contract. This participant's motivation was derived from the desire to be well-prepared and competent in IT skills, which would enhance employability.

T5: I was motivated to study and overcome these IT problems because I knew that after my contract ended, I would need to be familiar with all of these IT abilities in order to get employment without difficulty.

The results of this study suggest that because first-year trainee accountants desire to be productive in their next job after completing their training contract at the accounting companies, they are driven to overcome their IT-related obstacles. T10 emphasized the value of having a determined attitude and a strong work ethic to handle the pressure of learning IT skills. According to this statement, resilience issues can be facilitated by a determined mindset and the commitment to achieving predetermined goals.

T10: When you are focused and have a dream, you must work towards it. So, I was able to sit down and know that I had to work hard, as whatever I set out to do, I wanted to achieve it. So that mindset enabled me to cope with the stress of ensuring I passed at the end of the day.

Participant T3 said that her son gives her motivation, thus she must continue to put in the effort to qualify as a chartered accountant in South Africa. She had to deal with any stress brought on by IT as a result. This suggests that Participant T3's commitment to her family drives her to be self-motivated to get rid of the stress caused by her work in IT. According to Krause et al.'s research from 2019, the SDT fosters a person's motivation to overcome obstacles.

M2 emphasized the impact of looking up to successful seniors and the drive to imitate their accomplishments. As trainee accountants work to match the proficiency

and expertise of seasoned professionals, the desire to achieve and perform at a similar level can be a strong motivator.

M2: They relate well, and their self-determination encourages them because they look at their seniors and see that they are doing great, and they understand some of the things they don't. So, they want to be like them; they want to do things like them, so they are motivated to work hard.

T9 emphasised the importance of self-motivation and inner drive-in pursuing goals. This comment suggests that individuals must be internally motivated to succeed and take personal responsibility for their own progress and development.

T9: Yes, for me, I think you need to have self-motivation. It has to come from you if you want something; it must first come from within.

The conclusions drawn from the comments of the participants are consistent with the tenets of SDT, which emphasize the significance of intrinsic motivation and self-determination in propelling people toward their objectives (Deci & Ryan, 2000). According to SDT, the remarks made by the participants support the theory that people are more likely to persevere in difficult activities when they feel a feeling of autonomy, competence, and relatedness. Guay (2022) contends that motivation can be used to recognize self-determination. According to Bachman and Stewart (2011), motivation is a key tactic for inspiring trainee accountants to succeed and empowers them to be self-determined in reaching their objectives.

Overall, the comments highlight the pivotal role of motivation, determination, a focused mindset, and self-motivation in overcoming IT skills challenges for trainee accountants. Furthermore, these motivational factors can serve as catalysts for continuous learning, growth, and success in acquiring and applying IT skills within their professional roles.

6 Limitations and Suggestions for Future Research

The study was limited to accounting firms in the Mafikeng area, in the North West Province of South Africa, with the primary participants being accounting firm managers and first-year trainee accountants. Another limitation is the use of a qualitative research approach only. A mixed-methods approach using qualitative and quantitative research strategies could be considered for future studies. In addition, the inclusion of second or third-year trainee accountants as well as accounting firms from other provinces in South Africa may enable the researcher to draw more generalised conclusions about trainee accountants in South Africa.

7 Conclusion

This study found that self-determination plays a crucial role in motivating first-year trainee accountants to deal with IT challenges encountered in the workplace. Trainee accountants' self-determination is driven by various factors, such as the need to achieve their desired goals, meet job requirements, and enhance their competence in IT skills. The trainee accountants were eager to learn any difficult IT skills necessary to carry out their duties. Positive work relationships and social support were essential for promoting motivation and achieving goals. The study suggests that accounting professional bodies and firms have a role to play in enhancing the competence of trainee accountants. This could lead to increased motivation, job satisfaction, and improved work performance among trainee accountants.

The findings of this study provide valuable insights for accounting education, accounting professional bodies, accounting firms, and other stakeholders into the various IT challenges first-year trainee accountants encounter and how self-determination is practised to overcome these challenges.

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