

From Novice to Expert:
**Assessment of the levels of expertise of South African
Chartered Accountants and Auditors in an academic and
professional programme using the Dreyfus's Five-Stage
Model of Skill Acquisition**

Submitted by: Sumaya West

Student Number: MNXSUM001

A minor dissertation submitted in partial fulfillment of the requirements for the award
of the degree of Master of Philosophy in Higher Education Studies.

(EDN6057W)

Faculty of Humanities
University of Cape Town

2016

COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signed by candidate

Signature: Signature Removed Date: 19 September 2016

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

Acknowledgements

First and foremost, I wish to thank the Almighty by His grace and mercy for the support, the strength and constant guidance during difficult times.

My deepest gratitude goes to my supervisor, Dr. Heather Jacklin and co-supervisor, Associate Professor Ilse Lubbe, who have guided my research, been particularly patient and been supportive throughout this process.

A special thank you goes to my colleagues and lecturers who have played an integral role in the completion of this project.

Last, but not least, my deepest appreciation goes to my family, particularly my husband Saliem, my son Basheer and my mother Nourie, for their unwavering support and encouragement. Thank you.

Table of contents

Abstract	4
Chapter 1 – Introduction	5
Context: the accounting profession in South Africa	5
Research problem.....	7
Research question	8
Rationale.....	8
Chapter 2 – Literature Review	10
Professional preparation and the role of the university	10
The distinction between <i>knowing</i> and <i>doing</i>	11
Chapter 3 – Theoretical Framework	22
Models of professional skills development.....	22
The Dreyfus’s five-stage model of skill acquisition (Dreyfus’s model)	23
Application of the Dreyfus’s model in other studies	24
Application of the Dreyfus’s model in this study	26
Chapter 4 – Research Design	34
Overview of the research design	34
Participant selection.....	34
Data production: development of the interview schedule	36
Data analysis.....	46
Example of data analysis	51
Ethical considerations.....	53
Validity of the research process.....	53
Chapter 5 – Data Analysis and Findings	55
Findings: final year university graduates	55
Findings: first year audit trainees.....	61
Findings: second year audit trainees.....	67
Findings: third year audit trainees	75
Findings: audit managers.....	82
Findings: analysis across all ten participants.....	88
Chapter 6 – Conclusion	92
References	95

Abstract

Knowledge in professional and business related courses are grounded in real-world business contexts, which influence the theoretical aspects of an academic programme. Most students in South Africa lack prior business and auditing knowledge, which makes it difficult for them to transfer the theoretical business knowledge, skills and attributes acquired in an educational setting, to the workplace setting. The challenge for auditing educators is to facilitate the acquisition and transfer of theoretical auditing knowledge in preparation of and application for the workplace. Research studies suggest that there is a key dilemma within continuing professional education and development, which mainly relates to the tension between the academic knowledge, skills and attributes and the knowledge, skills and attributes required in professional auditing practice.

The purpose of this qualitative study was to assess and compare the development of professional competencies and related expertise of different individuals at different stages in their professional auditing careers.

The Dreyfus's five-stage model of skill acquisition (Dreyfus's model) offers a useful theoretical framework for understanding how individuals acquire knowledge and skills through formal instruction and experience. The five stages of the Dreyfus model are identified as novice, advanced beginner, competent, proficient and expert.

In this study, the adapted Dreyfus's model was used to assess the knowledge and skills needed of auditors at various stages in an academic and professional training programme in South Africa. Using ten semi-structured interviews, this study highlights the differences in the levels of expertise between experienced auditors and auditors at the novice stage of proficiency. Participants in this study included audit graduates, audit trainees and audit managers. The study found that there were distinct stages in skills development, generally in line with those suggested by the Dreyfus's model, and that there were major shifts in individuals' practice with the development of professional expertise. Central to the movement from one stage to the next is the way in which meaningful connections are made between what is already known (theory) and its application (practice).

In developing a framework for understanding what auditing knowledge, skills and experiences are required at various stages, this study informs further development plans for educational workplace settings that are specifically designed for individuals to progress from one developmental stage to another.

Chapter 1 – Introduction

Auditing academics find it challenging to facilitate the acquisition and transfer of theoretical auditing knowledge in preparation for the workplace. The tension between academic knowledge, skills and attributes and the knowledge, skills and attributes required in professional auditing practice continues to be present in ongoing professional development. This study aims to develop an explanatory account of the way in which the tension plays out at different stages of professional development within an auditing programme.

Context: the accounting profession in South Africa

The role of the auditor in the accounting profession

The auditor is engaged to provide an independent opinion on whether there is a fair reflection of a company's financial statements in all material aspects, in accordance with a financial reporting framework. The auditor is therefore engaged to provide users with an enhanced degree of confidence in the financial statements. To form the opinion, the auditor gathers appropriate and sufficient audit evidence (Independent Regulatory Board for Auditors, 2016). The auditor therefore has to acquire the appropriate knowledge and skills to make knowledge based judgements and form professional accounting and auditing opinions.

Competency based education and assessment in the accounting profession in South Africa

The South African Institute of Chartered Accountants (SAICA) is regarded as the pre-eminent professional accounting body in South Africa. SAICA is accredited by the Independent Regulatory Board for Auditors (IRBA) which enables registration as a registered auditor (RA) for those SAICA members with the appropriate auditing training. SAICA's qualifying process, which is followed by Chartered Accountants (South Africa) (CA's(SA)), "contributes to lifelong learning, so that the knowledge and skills of its members remain relevant in a changing environment" (Barac, 2012:18). The education and training of a CA(SA) is competency based. SAICA's competency framework (2014:8) focuses on "ensuring that the CA(SA) qualification has the necessary level of underlying knowledge and the practical skills and experience to apply knowledge effectively."

A competency based approach to a qualification specifies expectations in terms of outcomes, or what an individual can accomplish (competencies), rather than in terms of an individual's knowledge or capabilities (Boritz and Carnaghan, 2003; Wilson, 2011). The distinction between the definitions of *competencies* and *capabilities* is important for this study. According to Wilson (2011), *capabilities* comprise the attributes held by individuals, which will enable

them to perform their roles. Capabilities are the professional knowledge, skills, values, ethics and attitudes to demonstrate competence, commonly expressed as learning outcomes (Wilson, 2011). Boritz and Carnaghan, (2003), Auerbach (2005) and the SAICA competency framework (2014) suggest *competencies* are abilities to perform tasks to defined standards with reference to real working environments. To demonstrate competence, individuals have to draw on their capabilities to perform required tasks to acceptable standards. These are expressed as performance outcomes (Boritz and Carnaghan, 2003; Auerbach, 2005; SAICA competency framework, 2014).

Knowledge, skills and attributes in the accounting profession in South Africa

South African studies, similar to international accounting and executive coaches studies (Ahadiat and Martin, 2015; Palmer et al, 2004; Bennet and Rogers, 2011) described the levels of knowledge, skills and attributes of entry-level SAICA trainee accountants (Barac, 2009; Wessels, 2004, 2005, 2006, 2008). These are identified as general business knowledge, accounting knowledge (which includes auditing knowledge), communication skills, interpersonal skills, problem-solving skills, information technology, computer skills, trustworthiness, dependability and other personal attitudes and capabilities.

Similarly, SAICA's competency framework (2014) outlines the professional competencies such as business and entrepreneurial skills, technical accounting skills, pervasive competencies, ethics and principles of good corporate citizenship. A student studying towards the CA(SA) qualification needs to demonstrate the acquisition of these competencies at the entry point into the profession (i.e. after the completion of an academic programme, training programme, professional programme and all assessments). The following components are identified as per the SAICA competency framework (2014) and illustrated in Figure 1:

Academic programme: Acquired through accredited academic education programmes delivered by universities (an undergraduate three or four year Bachelor of Commerce degree followed by a postgraduate qualification known by SAICA as the Certificate in the Theory of Accountancy (CTA)).

Training programme: Practical experience acquired through a training contract of at least three years with a registered training office.

Professional programme: Professional education acquired through accredited professional programmes delivered by universities and other providers.

Assessments: Two assessments, *Initial Test of Competence (ITC)* and *Assessment of Professional Competence (APC)* ensures that all candidates have the professional competencies before entry to the profession as a registered CA(SA).

Figure 1: Progression to the entry point into the profession



To acquire these competencies, a CA(SA) must firstly “acquire the specific accounting knowledge and pervasive skills, develop an understanding of where and why the knowledge is to be applied, and have experience of executing tasks (practical application)” (SAICA competency framework 2014:16). This study does not specifically examine the acquisition of the competencies as outlined by the SAICA competency framework (2014). Instead, this study examines the development and acquisition of the underlying knowledge, skills and attributes required to meet the CA(SA) competencies.

The accounting and auditing competencies described in various studies (Ahadiat and Martin, 2015; Palmer et al, 2004; Barac, 2009; Wessels, 2004, 2005, 2006, 2008) and the definition of SAICA’s competency framework (2014) encapsulates many of these competencies required as a CA(SA) at the entry point into the profession.

For the purpose of this study, the professional auditing competencies are summarised and described as ‘knowledge, skills and attributes in auditing’.

Research problem

Since the accounting profession is grounded in an understanding of business practices, its teaching should be both theoretical as well as practical. Most students may lack prior business knowledge. It is therefore difficult for them to relate the theoretical business understanding to case studies and practices, and vice versa. This becomes a challenge in teaching courses like auditing, which is based on the premise that students have a broad understanding of business prior to auditing the business entity.

A further challenge in teaching auditing is that the content is very theoretical and is expressed as context independent principles. It is difficult for students to visualise performing an audit without business experience. We expect students to be able to take the theoretical auditing tools and apply it to a business scenario in assessments. It becomes more challenging when postgraduate students are expected to apply the theoretical tools to real world auditing scenarios when completing their training contracts at an auditing firm. In my own experience as an audit trainee, I understood the theoretical concepts of auditing whilst studying my degree, but it seemed the theoretical knowledge disappeared when I started my training programme. I was unable to link the theory and the skills required. SAICA accredited universities and training offices are aware of the skills gap, and have tried to close the gap by introducing simulated teamwork auditing projects and practical case studies. But can one measure whether students are able to apply the theory to the working world by merely introducing practical teaching interventions? This is the challenge in teaching a theoretical auditing course. As academics, we are concerned about *what and how much* knowledge and skills are transferred in the classroom to prepare our students for the accounting profession. However, we neglect to understand *how* knowledge and skills develop from one stage to another, and what skills and attributes are required to progress to the next level. This leads to my specific research question regarding the development of academic and professional knowledge, skills and attributes

Research question

In light of this research problem, this study responds to the following research question:

How are professional knowledge, auditing skills and expertise developed and how do these transfer for individuals at different stages of their professional auditing careers?

Rationale

My motivation for conducting this study is that I am the course convener of the final year undergraduate auditing course, and the head of the auditing section at a South African university. The research will afford me a better understanding of how academic and professional knowledge and skills are developed and transferred, and to assess the levels of expertise demonstrated and required at a particular point in the CA(SA) qualification process. In order to acquire expertise, auditors, like all other professionals, have to acquire the appropriate knowledge, skills and attributes. Through this study, I want to understand how auditors acquire and transfer the knowledge and skills required to make knowledge based judgements and form professional accounting and auditing opinions. I am particularly interested in the factors that influence students' and professional auditors' abilities to develop

auditing skills. This will inform my pedagogic practice, curriculum design (selection, sequencing and pacing), the assessment of learning and evaluation of the auditing course. This understanding will hopefully prepare my students for the skills required in the professional workplace. I hope that this research will also be of interest to others who prepare students for professions, in general, and for auditing in particular. Furthermore, the study can potentially inform professional bodies with regard to assessment in the auditing profession. Finally, the study will contribute to a better conceptual understanding of the development of professional competencies of students who move from academic to workplace contexts.

Chapter 2 – Literature Review

Employers may require professional accountants and auditors to be up-to-date with the changes in the business environment, accounting profession and related legislative developments. There is also a need for accounting professionals who are working in teams to have strong communication skills in order to communicate financial information to non-financial individuals (Association of Chartered Certified Accountants, 2016). This requires long-term and ongoing professional development and an understanding of how accountants and auditors develop from inexperienced to experienced professionals.

There is growing interest in postgraduate learning and continuing educational development for professional groups. Recent literature investigates the learning potential of the ways postgraduate professional development is structured, the underlying concepts in which knowledge and learning is grounded, and where and when professional learning takes place (Borko, 2004). Within this broader focus on professional development, this study is concerned with the challenges of professional development in the accounting profession, namely in auditing.

This chapter aims to review other researchers' views of professional development. The literature highlights the tensions and relationships between theoretical, practical, explicit and tacit knowledge in two different contexts in a professional environment. A theoretical framework is then developed, based on the Dreyfus's five-stage model of skill acquisition, which highlights the stages of professional development.

Professional preparation and the role of the university

The term *profession* refers to the social control of expertise where specialized knowledge is exercised (Goode, 1969; Merton, 1960; Eraut, 1994). Experts provide services, such as law and accounting, to clients who have inadequate knowledge to evaluate these services. Clients are therefore not protected against incompetence, carelessness and exploitation. According to Williams (2008:3), the understanding of the term *professions* has "focused on the occupational control of work, shifting the focus from status and power toward a focus on the work of the professional as knowledge-based occupations." Abbot (1988) agrees that groups may control knowledge and skills and professions evolved due to the interrelationships within groups.

According to Eraut (1994) the professions employ different modes of training and preparation, often in combination. Eraut describes the more powerful professions like law and accounting

“favouring a dual system” in which an academic degree is followed by a specialised period in professional practice. Examples would include internships (of up to five years), enrolment at a university leading to a recognized academic qualification and a qualifying exam set up by the qualifying association for the occupation. Qualifying examinations were introduced to simplify the entry to the occupations and to create national standards for the professions concerned. Eraut’s (1994) view may be summarised as follows: professions are based on specialized knowledge. The specialised knowledge may be created in two different contexts, first in an educational setting and then in a workplace setting where further professional development takes place.

Barnett (2000a) argues that pressure is placed on the universities to develop specialised knowledge required in the professions. He explains that the development of new knowledge, complex economic factors, information technology and population growth have a great impact on higher education curriculum and academics in the professions. This has resulted in an increased demand for ‘improved’ higher education and certification by the new professions, leading to professions turning increasingly to universities for certification for its members (Williams, 2008). Barnett (2000a) suggests that new knowledge structures need to be offered at the universities to assist students to make sense of the increased knowledge and other competencies required of them in the workplace.

The distinction between *knowing* and *doing*

In the literature, a distinction is frequently made between *knowing how* to do something (*theoretical knowledge*) and actually *doing* something (*practical application of theoretical knowledge*). In each context, university and workplace, there is a relationship between *knowing* and *doing*. This chapter identifies four views, in the literature, of the distinction between *knowing* and *doing*. The rest of the chapter is organised according to these four views:

1. The first view is that the *knowing (theoretical knowledge)* is that which is taught at the universities, and that *doing (practical application of theoretical knowledge)* only happens in the workplace.
2. The second view is that there may be different types of *knowing* and *doing* in each context, but, by definition, they are still *knowing* and *doing*.
3. The third view identifies the movement from an educational context to a workplace context and highlights the relationship between *knowing* and *doing* through professional learning and development across the two contexts.

4. The fourth view describes the relationship between *theoretical, practical, explicit and tacit knowledge* used in the learning process across the educational and workplace contexts.

The first view: a site based distribution

The first view is that there is a clear separation based on where *knowing* and *doing* takes place. A common view is that *knowing (theoretical knowledge)* is taught at the universities, and *doing (practical application of theoretical knowledge)* only happens in the workplace. In this view, any *doing* in the classroom, such as learning from a textbook, completing assessments or assignments, isn't real practical application of the theoretical knowledge. *Doing* is only considered to be real in the classroom if it emulates what happens in the workplace e.g. simulations of workplace practices. It follows that *knowing* is more dominant in the classroom, and *doing* is dominant in the workplace.

Knowing and doing in each context

The distinction between theoretical knowledge (*knowing*) and practical application of the theoretical knowledge (*doing*) is seen in the SAICA competency framework (2014), underpinned by the core ideas of American philosopher, John Dewey (1915). Dewey understands knowledge as developing through "experiment" by combining theory and practice. He argues that we learn theory during focused practical experimentation. Dewey's approach requires students to consider new knowledge (theoretical) in relation to current contexts (practical) and to prepare them for ethical decision making in leadership positions (SAICA, 2014). SAICA (2014) acknowledges that clear standards and levels of competencies should be practiced in the accounting profession. It infers that theoretical knowledge will have to be acquired first, mainly in an educational setting, before it can be fully understood in a practical context in the workplace. It further implies that there is a step-wise progression in acquiring practical knowledge – one first acquires theoretical knowledge, and then the theoretical knowledge is translated into practical knowledge.

Eraut (2009) analyses the contrasts between knowledge cultures and values in the professions, and how knowledge is acquired and used in an educational setting and the workplace. Eraut (2009) suggests that, to understand the knowledge required in the professions, the personal knowledge base of working professionals need to be ascertained first. The 'personal knowledge base' of individuals include propositional knowledge (theoretical knowledge) and practical know-how (practical knowledge). Propositional knowledge underpins or enables professional action (for example *knowing how* to swim or how to kick a ball). Whereas practical know-how is inherent in the action itself (for example, performing the act of swimming or kicking a ball) (Oakeshott, 1962). Similarly, auditing knowledge is made

up of propositional knowledge and practical know-how. Using Eraut's understanding of the components of the personal knowledge base, *knowing about* or *knowing about how to perform an audit procedure (knowing)* is mainly theoretical and taught in a university curriculum. Performing the audit procedure (practical know-how or *doing*) is mainly seen in professional practice.

Eraut (2009) suggests that there is a disadvantage in the separation of *theory knowledge* from *practical knowledge* (or *knowing* from *doing*) in the professions. According to Eraut (1994), the university component, based on theoretical knowledge, largely overlooks the problems of developing knowledge that should be used in the professional workplace. Eraut (1994) suggests the initial period during which the novice professionals develop proficiency in the professional role is during the first two or three years after qualifying. This is the period where professionals develop their own personalized patterns of practice. Eraut (1994) argues that there is a mismatch between the policies for initial competence through a qualifying examination, and that of ongoing professional development. He argues that university curriculum is overcrowded because it is an attempt by the professional associations to include all knowledge required for a lifetime in the profession, almost regardless of the student's ability to understand it.

The separation of theoretical knowledge and practical knowledge in accounting education is further explored by Wilson (2011) and Schon (1987). Wilson (2011) argues that there is a misalignment between the understanding of the required knowledge that accountants should have in an academic setting and the required knowledge and skills in a professional setting. Similarly, Schon (1987) believes that there can never be a curriculum which adequately deals with the complex world of practice. Students should be helped to acquire the necessary skills to become competent in the professional setting. SAICA (2014) also reflects the view that not all competencies required for the accounting profession can be fully taught at the universities, especially the competencies relating to pervasive skills. These additional competencies, such as responsible leadership, entrepreneurship, business strategy skills and ethical awareness should be taught and assessed at the universities, which will only be advanced by students in practice.

The second view: knowing and doing within contexts

The second view is that there may be different types of *knowing* and *doing* within each context. For example, in the classroom, students apply theoretical knowledge when answering an examination question. This is considered a *doing* in the classroom, even though it doesn't emulate workplace practices. There may even be a simulated exercise in the classroom, which emulates workplace practices, and is still considered a practical *doing*. Similarly, in the

workplace, professionals use theoretical knowledge to complete certain tasks. This is considered *doing* in the workplace using specialized knowledge. It is understood that *knowing* and *doing* is equally present in both contexts.

Shay (2013) offers further insight into the relationship between *knowing* and *doing*. Shay's work around curriculum differentiation in higher education is particularly useful in defining theoretical and practical knowledge for the purpose of this study. Firstly, Shay (2013) distinguishes between the different types of knowledge embedded in educational curriculum in a South African context. There is a theoretical curriculum and a practical (professional) curriculum. Theoretical knowledge (knowledge 'about' something) is re-contextualised into educational knowledge. To illustrate this, Shay (2013) draws on MATH102, a first year calculus course in an engineering degree. She explains that theoretical concepts may be applied to solve simple calculus problems. Shay (2013:574), notes that 'application' isn't application to the world of practice, for example, industry. It refers to the world of theory. This is a theoretical curriculum where theoretical knowledge is dominant. This implies that there is both *knowing* and *doing* in an educational setting. Here, Shay's (2013) view is in contrast to that of Eraut (2009), Wilson (2011) and Schon's (1987) who suggest that *knowing* is dominant in an educational setting and *doing* only occurs in a workplace setting.

Shay (2013) further describes practical knowledge as knowledge acquired from workplace practices. The distinguishing feature of a practical (professional) curriculum is that practical knowledge is *de*-contextualised and there is the *re*-contextualisation of context-embedded practices into a set of theoretical principles and procedures in curriculum. In other words, such knowledge is extracted from the work context and translated into curriculum. This is seen in the auditing profession where auditing practices embedded in the workplace are re-contextualised into a set of theories, principles and procedures. The theoretical concepts are codified into auditing standards and taught in auditing curriculum in higher education. The professional bodies will control the outcomes required at an undergraduate level, which is believed to be transferred into the profession as practical knowledge. Shay's (2013) view is that *knowing* and *doing* is equally present in both contexts.

Eraut (2009), Wilson (2011), Schon (1987) and Shay (2013) agree there *is* a difference between *knowing how to* do something (theoretical knowledge) and being able to apply the knowledge to perform a task (practical knowledge). However, Shay's (2013) work has a strong influence in the understanding of relationship between *knowing* and *doing* in this study. Her work suggests that there cannot simply be a 'theory' context and a separate 'application' context in the professions. Instead, it seems that theoretical knowledge may be transferred

into practical knowledge in two separate contexts. Simply, *knowing* and *doing* can both occur in two contexts – in an educational as well as a workplace setting.

Tensions between the two contexts

While both contexts entail both *knowing* and *doing*, there still remains tensions between the two contexts. At completion of a higher education, a newly certified professional may not be fully qualified for independent practice and may struggle to relate theoretical knowledge and practical knowledge and skills when making the transition from an academic setting to a professional practice. This highlights the tensions between the two contexts of education and the professional workplace.

Tensions arise partly because of the forms of assessments. Eraut's (1994) view is there may be a tension between the educational setting and the professional setting as the initial training for professionals is being increasingly based in higher education. Professional academics¹ find it difficult as the type of assessments in higher education may be in conflict with the assessments in the professions. In particular, the knowledge base is likely to be expressed as general principles, rather than practically applied in particular contexts.

The difficulty in identifying professional skills required for professional development may create a further tension between educational and professional practice (Dall'Alba and Sandberg, 2006). The term *professional skill* is broadly referred to by Dall'Alba and Sandberg (2006) as the skills which professionals engage and use in professional practice. Dall'Alba and Sandberg argue that universities are under increasing pressure to promote professional skills, while at the same time, there is no clarity regarding what such skills entail.

Furthermore, individuals may have differences in the “embodied understanding of the practice itself” (Dall'Alba and Sandberg, 2006:389). Professionals' ways of understanding practice form and organize the way in which they acquire and transmit knowledge and skills. An example relates to the different understanding of the practice of teaching: when knowledge is understood as knowledge transfer, teachers tend to focus on developing skills of presentation and content delivery. On the other hand, if teaching is understood as facilitating learning, teaching will focus on developing learning skills (Dall'Alba and Sandberg, 2006).

Also, individuals' social, cultural and economic backgrounds may have an impact on the understanding of the practice as a whole (Dall'Alba and Sandberg, 2006). Different

¹ In the case of the auditing profession, the 'professional academic' would be a qualified auditor or chartered accountant teaching on an academic accounting programme.

backgrounds may influence understandings of the practice, which in turn influence which skills that are emphasized for development.

The differences in individuals' understanding of the definitions of capabilities and competencies may lead to tension between an educational and workplace setting (Boritz and Carnaghan, 2003; Wilson, 2011). Universities require students to comprehend general principles and describe processes, while in professional contexts they are requested to apply these principles to demonstrate competencies. Boritz and Carnaghan (2003) suggests that if the competency is defined differently in an educational context as compared to a professional context, there may be a misalignment and an inadequate transfer of academic knowledge to professional knowledge.

Furthermore, Wilson (2011) argues that it may not be in the interest of the public, especially after all the corporate scandals, for the theoretically focused examinations to be the central focus in a university in preparing future accounting practitioners to practice. This leads to a fixation on pass rates, teaching to the examinations and rote learning by students. This is inconsistent with the often argued need for competencies such as critical thinking, problem solving skills and other pervasive skills required in the profession (Wilson, 2011). This creates further tension between academic outcomes and professional outcomes. Jean Lave (1993) refers to theories about professional skill and its development, where 'professional practice' is generally seen as a 'container'. This implies that practice and theoretical curriculum content are regarded as independent entities. Hence, it is possible to 'extract' or decontextualize content from practice and to study the two, content and practice, independently (Shay, 2013). In recent decades, research has questioned this container view of practice (Greenwood and Hinings, 1996; Putnam and Borko, 2000). Professionals "learn by doing", and key professional skills are embedded in particular practical situations. This approach contrasts with a more traditional view that principles and skills can be acquired outside of the context of practice, and then transferred into that context.

The third view: stages of knowing

The third view looks at the movement from an educational context to a workplace context. It highlights the relationship between *knowing about* and *doing* through professional learning and development from an educational setting to a workplace setting. Professional learning is understood to happen in stages and is experiential as meaningful connections are made to what is already known (theory) and experienced (practice) (Oxford, 2016).

From one context to another: professional learning and skill acquisition

One of the more commonly used models for learning is found in Howell's (1982) conscious competence model (Howell's model). Howell's model describes a sequence of learning in identifying the stages of professional development in each of the two learning contexts (educational and workplace contexts). The four stages are described below:

- Unconscious incompetence – individuals may be unaware of or unconcerned about the skill,
- Progression to conscious incompetence – individuals become aware that the skill is lacking and gains an understanding of improving the skill,
- Progression to conscious competence – individuals demonstrate the knowledge needed to perform reliably,
- Advances to unconscious competence – individuals perform the skill as second nature or intuition.

Will Taylor (2007) offers a fifth stage called *reflective competency*. In this final stage, the learner becomes aware of what he or she did not know at the first stage i.e. the learner becomes conscious of competencies and incompetencies, creating further enlightenment and enables the learner to become a 'reflective practitioner' (Johns 2009). The addition of the fifth stage then makes Howell's model more cyclical. At this stage, through reflection, practitioners develop intuitive processes.

In her study of auditing learning approaches of prospective CA's(SA), Barac (2012) found that candidates who devoted less time to studying auditing for the 'Initial Test of Competence' (ITC) assessment followed a surface level approach to learning. On the other hand, those candidates who devoted more time to studying auditing were more inclined to follow a strategic or deeper level approach to learning. The limitation of Barac's (2012) study is that it only looked at the relationship between time and the approach to learning. Other related contextual factors, "such as personality, motivation, intellectual ability, level of cognitive development, previous work or academic experience, academic skills, non-academic activities, learning habits and preferences" (Baeten et al, cited by Barac, 2012:31) were ignored in her study. The importance of these contextual factors, including epistemological beliefs about knowledge or ways of knowing (Lucas, 2001), is supported by the view that a learner must have a particular mindset that values the learning objectives and the learning process (Pink, 2009). Pink (2009) claims that, if one is motivated, has tenacity, enjoys learning and devotes time and energy, it follows that one would want to understand and acquire the skills, methods, theories etc. of the identified discipline. If accounting practitioners are not motivated and do not value the learning process, then it may negatively affect the acquisition of professional skills and affect workplace performance. Similarly, if one does not value the theoretical skills and knowledge required for

preparation for the workplace, then one may feel demotivated to invest time and energy into the learning process. Individuals may experience difficulty with the transfer of theoretical knowledge (principles) into applied practical knowledge, which affects workplace performance and levels of mastery (Pink, 2009). Further literature on workplace learning emphasise individual commitment, feedback and support as important factors in facilitating professional learning (Eraut 2007 cited by Smeby and Heggen, 2012). Smeby and Heggen's (2012) study found that both education and workplace learning are important spaces for the acquisition and development of theoretical knowledge and practical knowledge and skills.

The fourth view: tacit and explicit knowledge

This view explores the tacit and explicit dimension of professional learning. In this view, there are four ways in which knowledge types (*knowing*) can be combined and converted. This view describes the relationship between theoretical, practical, explicit and tacit knowledge recruited in learning across the educational and workplace contexts.

The tacit and explicit dimension

According to Dreyfus and Dreyfus (2004), it is commonly but incorrectly assumed that individuals acquire new knowledge and skills by learning explicit facts and rules for determining action and that these rules are easily transferable. However, Dreyfus and Dreyfus (2004) argue that these forms of explicit knowledge are not as relevant as they are assumed to be, the knowledge required is determined by the context. Knowledge and skills are sequenced through experiential learning over time. This implies that knowledge changes from explicit knowledge to tacit knowledge as professionals' progress through their careers. Consequently, tacit knowledge may be more evident than explicit knowledge in the workplace. In Dreyfus's view, there is a relationship between tacit and explicit knowledge through all the stages of professional development and across both educational and professional contexts. In the auditing profession, for example, the explicit auditing knowledge is mainly acquired in the educational context. When professionals move to the workplace, explicit knowledge may be recruited more frequently earlier in their careers. However, with the passage of time and through experiential learning, explicit knowledge changes to tacit knowledge as professionals gain more experience and are able to make more intuitive decisions.

The tacit-explicit dimension of knowledge is one of the most widely discussed topics in the field of knowledge management. Knowledge management (KM), as described by Koenig (2014) is the process of developing and effectively using organizational knowledge in the workplace. It refers to a multi-disciplinary approach to achieving organizational objectives by making the best use of knowledge. The field of knowledge management is still relatively new,

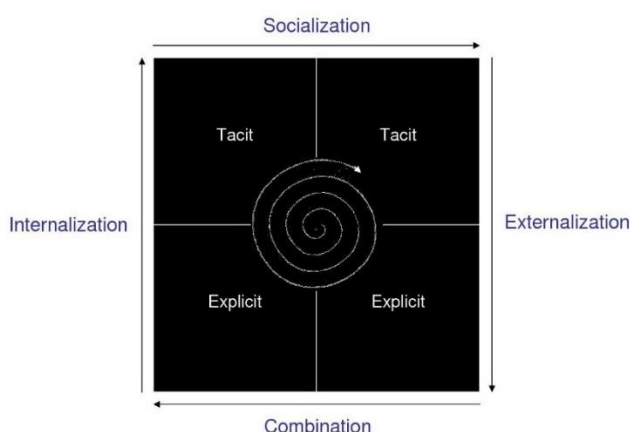
but refers to the earlier works on the topic of tacit and explicit knowledge by Michael Polanyi (1958, 1966). Polanyi's work refers to how individuals gain knowledge and share it. He argues that knowledge is highly personal and *all* knowledge is underpinned by social, cultural and other personal affiliation. Polanyi argues that all knowledge has a tacit element, but not all tacit knowledge can be transferred. In other words, "tacitness is something personal, an ability or skill to do something or to resolve a problem is based in one's own experiences" (Polanyi, 1958:87). Due to the personal nature of tacit knowledge, only some of the tacit knowledge may be transferred, but not all (Polanyi, 1958, 1966).

This distinction between tacit and explicit knowledge is significant to this study as it influences the way professionals learn and the relationship between the knowledge types.

Theoretical, practical, explicit and tacit knowledge in professional learning

Polanyi's work on *personal knowledge* has been extended to the new field of corporate or organizational knowledge. According to Nonaka and Takeuchi (1991), the Socialization, Externalisation, Combination and Internalization (SECI) model, refers to the creation and transfer of knowledge in an organisation. According to the SECI model, knowledge is continuously converted and created as individuals practice and learn. The process is seen as a continuous swirl of knowledge, as indicated by the spiral interaction between explicit knowledge and tacit knowledge in Figure 2. The SECI model is useful in this study as it describes the relationship between theoretical, practical, explicit and tacit knowledge used in the learning process across the educational and workplace contexts.

Figure 2: The SECI model



Externalization

Externalisation refers to the conversion of tacit knowledge to explicit knowledge (Nonaka and Takeuchi, 1991). This is deemed as a particularly difficult and but important conversion

mechanism. Tacit knowledge is codified into documents, manuals, etc. so it can spread more easily through an organization. Since some tacit knowledge can be almost impossible to codify, there is debate around whether all tacit knowledge can be converted to explicit knowledge. The use of metaphors are therefore used as an important externalization mechanism (Nonaka and Takeuchi, 1996). An example might be the recontextualisation of tacit knowledge when performing auditing tasks in a business context into curriculum at universities, usually codified into international auditing standards, auditing textbooks etc. However, as noted by Polanyi (1958), it may be difficult to codify some tacit knowledge and make explicit the pervasive skills (for example leadership, entrepreneurship, business strategy skills and ethical awareness) due to its highly personalized nature.

Combination

Combination refers to the transfer of explicit knowledge in one context into explicit knowledge in another (Nonaka and Takeuchi, 1991). This is the simplest form of the transfer of knowledge. Codified knowledge sources are combined to create new knowledge (Nonaka & Takeuchi 1996). The explicit transfer of knowledge is more often seen in curriculum at universities. In this stage of the model, theoretical auditing terminology is taught to students. Students are required to create new auditing theoretical knowledge deemed to be necessary for transfer into the workplace.

Internalization

Internalisation refers to the conversion of explicit knowledge to tacit knowledge (Nonaka and Takeuchi, 1991). As explicit sources are used and learned, the knowledge is internalized and modified using the individuals' existing tacit knowledge (Nonaka & Takeuchi 1996). Explicit knowledge is usually transferred into tacit knowledge through experiential learning. For example, as auditors progress through careers and gain more professional experience, the theoretical knowledge becomes *second nature*, which makes it harder to explain i.e. to make the knowledge explicit.

Socialization

Socialization refers to the transfer of tacit knowledge from one person to another (Nonaka and Takeuchi, 1991). Knowledge is passed on through various forms of practice, guidance, imitation, and observation (Nonaka & Takeuchi 1996). The tacit to tacit transfer is usually displayed at a level of expertise. At these levels, auditing experts, for example, may find it difficult to explicitly teach someone how to perform audit procedures. The tacit knowledge may be acquired through observation of the expert auditors, imitation, experience etc.

The SECI model assumes all tacit knowledge can be transferred and converted. Grant (2007) argues that this is a misinterpretation of Polanyi's work, as Polanyi suggests not *all* tacit knowledge can be transferred due to its personal nature. Another limitation of the SECI model, according to Grant (2007), is that the model applies mainly to how knowledge types are converted and combined in the workplace. The SECI model is a useful starting point for examining how knowledge is combined and converted in both an educational and workplace setting. In other words, it is assumed that explicit and tacit knowledge types are evident in both formal and informal settings, but to varying degrees, and that both can be transferred through professional development.

In the next chapter, I will focus on the literature that feeds into the development of the theoretical framework.

Chapter 3 – Theoretical Framework

Auditors in practice require long-term and ongoing professional development. This requires an understanding of the differences between the experienced auditor and the novice.

The theoretical framework takes as its starting point the Dreyfus's five-stage model of skill acquisition (Dreyfus's model) (Dreyfus and Dreyfus, 1980, 1986, 2004). A range of models, including the Dreyfus's model, suggest that professional skill development takes place in fixed sequences of stages. The Dreyfus's model offers a useful tool for understanding the learning needs and styles of learning at different stages of skill acquisition. The Dreyfus's model is also useful in understanding the link between the two contexts of *knowing* and *doing* and skills development across both contexts.

There have, however, been critiques of this model. The theoretical framework developed here will take these into account.

Models of professional skills development

Most models of skills development were devised within cognitive psychology. Over the past few decades, cognitive psychology has proposed a range of models to account for professional development that occurs in the educational and workplace settings. The dominant models (e.g. Ericsson and Smith, 1991; Hoffman 1992; Sternberg & Ben-Zeev, 2001) vary with regards to the number of stages that must be passed through and the nature of the stage. However, it is agreed that all have fixed sequences of stages representing higher levels of knowledge, skills, attributes and competencies. According to these competency models, professional skill development takes place in a step-wise cumulative manner.

There have been critiques of the knowledge and skills used during the development of skills (e.g. Dall'Alba, 2002, 2004, 2006; Sandberg & Pinnington 2006). These critiques have informed the development of the five-stage model of skill acquisition proposed by Hubert and Stuart Dreyfus (1980, 1986, 2004). This model has been used in studies in a range of professional contexts, such as nursing (Benner, 2004), management (Worthy, 1996), engineering (Vanderburg 2004), and the development of motor skills in sports (Moe, 2004).

In this chapter, I focus specifically on the Dreyfus's model, which I will adapt as a basis for the development of a theoretical framework for this study.

The Dreyfus's five-stage model of skill acquisition (Dreyfus's model)

The profession requires the auditor to continue professional skills development as a lifelong process. Hubert and Stuart Dreyfus (1980, 1986, 2004) developed a model of skill acquisition (from the study of chess players, pilots, army tank drivers and commanders) based on situated performance and experiential learning. The Dreyfus's model is used to (a) assess and encourage the development of skills, competencies and expertise, and (b) to provide a benchmark for an acceptable level for assessment of competence or capability. (Dreyfus and Dreyfus, 1980, 1986, 2004).

According to the Dreyfus's model, one must pass through five stages to achieve mastery in a particular skill, advancing from abstract principles needed in a novice stage to a more intuitive, less self-conscious state in an expert stage. The stages are described as *novice, advanced beginner, competent, proficient and expert*. The levels reflect the changes in two general aspects of skilled performance. One is a movement from placing reliance on abstract, theoretical principles, to the use of past experience. The other is a change in perception and understanding of a situation as not only isolated bits, but as a complete whole in which only certain parts are relevant. (Dreyfus and Dreyfus, 1980, 1986, 2004). In other words, "skill in its minimal form is produced by following abstract formal rules, but only experiences with concrete cases can account for high levels of performance" (Dreyfus and Dreyfus cited in Honken, 2013:1).

The model is developmental in that any changes in the performance in particular situations can be compared across time. However, the model does not focus on particular competencies or identify particular traits or talents of the person who generates the skilful performance. Consequently, it allows a professional to be at different levels of skill in different areas of practice based on the particular professional's background experience. Applying this to auditing, one might assume a first year auditor may be skilled at performing a fairly simple audit task at an expert level, but may be at a novice level when performing a more complex audit procedure. The assessment of various skills at various levels of expertise creates opportunities for experiential learning and knowledge creation.

The Dreyfus's model addresses experiential learning in the professions over a period of time. The model is situational rather than being a trait or talent model because the focus is on actual performance or outcomes in particular situations.

It may seem at first glance that the Dreyfus's model is an individualised model. However, while the model tracks individual professional development, the individual is always assessed in relation to a professional community of practice that is present in the form of competency

frameworks, professional standards, lecturers, practitioners, managers, partners etc. There is always a community of practice in which there is some authority that shapes individual professional skills development. In this study the community of practice is backgrounded but assumed to be present in individual skills development.

Application of the Dreyfus's model in other studies

The most comprehensive work using the Dreyfus's model to study professional work is provided by Patricia Benner (1984). Her studies takes into account the changes in skilled performance based on experience as well as education in nursing. These studies provide a basis for the development of clinical knowledge and career progression in clinical nursing.

In the mid-1980's Benner (1982, 1984, 2004) conducted three studies in nursing, drawing on the Dreyfus's model to understand the learning needs and styles of learning at different levels of skill acquisition. Benner's studies (1982, 1984, 2004) aimed to investigate if there were differences in the novice's and expert's descriptions of the same clinical incident. Benner (1982, 1984, 2004) and her team conducted individual, small group interviews and observed over 270 nursing students and clinical nurses from diverse disciplines and practices. According to Benner (2004), the studies found that nurses displayed characteristic traits identified in relation to different levels in the Dreyfus's model: novice, advanced beginner, competent, proficient and expert. At each level, characteristics, developmental stages and learning needs of the clinicians were noted. As the clinician's expertise grew, there were connections between the skill of involvement in nursing and the development of moral agency. The study suggests that participants were reflective not only of the technical skills they displayed in each clinical situation, but they were also descriptive of how they *felt* when performing certain tasks. This is similar to the *feeling* domain as described in Bloom's model (1956). Benner (2004) describes how feelings of 'anxiety' were experienced at all levels of skill acquisition. She found that at the novice and advanced beginner stages, anxiety was more general as individuals did not have much work experience and felt nervous when performing almost all tasks. However, with more experience at the competent, proficient and expert stages, anxiety levels decreased and were tailored to only new tasks. This *feeling* domain is particularly important as it could play a role in understanding the learning needs and styles of learning at different levels of skill acquisition.

As Benner (2004) emphasized in her studies of nursing, the development from novice to expert occurs in the workplace. Benner's findings show expertise in nursing develops as a result of experience and practice over a period of time. In other words, the findings show experiential

learning is required for continued professional development. She accepts that newly qualified graduates are not fully qualified professionals.

Application of the Dreyfus's model in this study

The rest of the chapter is organised as follows:

1. The outline of the Dreyfus's model, which is taken as a basis for my own theoretical framework.
2. The benefits of the Dreyfus's model.
3. Using work of other scholars to adapt the Dreyfus's model.
4. Using the limitations and critiques to adapt the Dreyfus's model.
5. Development of theoretical framework for data collection.
6. Theoretical framework used in this study.

Outline of the Dreyfus's model

Dreyfus and Dreyfus (2004) outlines the stages/levels of skills development as follows:

Level 1: Novice

According to Dreyfus and Dreyfus (2004), individuals progress through each stage of expertise and must draw on experience of solving problems in the context to reach higher levels of expertise. In this stage, beginners have no experience with the situation in which they are expected to perform tasks. Each time individuals acquire a new skill or encounter a new task or event, they start at the **novice** stage where they need to learn the facts and the rules for determining action. The difficulty the novice faces is the inability to use discretionary judgement. Since they have no experience with the situation they face, they must use context free rules to guide the performance of the task. These rules, however, cannot tell a novice which tasks are most relevant in a real situation. This means the novice may not have perspective on which elements of the situation to focus on or when an exception to the rule is required. In an academic accounting programme, for example, academics help by reducing big problems or scenarios into smaller pieces that can be solved without knowledge of the entire situation. This is evident in the way auditing is taught at the universities, where concepts are taught first and then later applied to practical scenarios. In the professional environment, this step is less formal and the novice thinks through the task analytically to try and solve the problem. Since a novice generally does not take responsibility for the outcome of a situation, they have a detached commitment to the outcome.

Level 2: Advanced beginner

According to Dreyfus and Dreyfus (2004), the advanced beginner is someone who has practiced applying the facts and rules to a few real life situations. This enables them to start associating the facts and the rules with similar situations that can be relied on in future. An

instructor or mentor can provide guidelines for recognizing aspects of a situation. **Novice** and **advanced beginners** can take in little of the situation as the experience is new to them. They have to concentrate on remembering and applying the facts and rules. The major implication for both academic education as well as the first year of professional education is that the advanced beginner requires support and guidance in the professional setting. They need help in setting priorities, since they cannot operate within general guidelines and rules. They are only beginning to perceive patterns in recurring practical experiences, and the advanced beginner will need guidance by a competent professional as they cannot yet sort out what is most important in a situation.

This may be evident from a first year trainee in an auditing firm, where certain auditing procedures may be performed as a novice, then later as an advanced beginner which could be performed later with competence.

Level 3: Competent

Competency, usually seen in individuals who have been in the workplace for two to three years, develops when they begin to see their actions in response to goals or plans. If the competent individual has a plan or a goal, this establishes a perspective of the situation. Competent individuals still refer to rules and use analytical processes. At this level, since the problems encountered are more complex and do not follow a textbook script, each individual relies on past experiences to decide which elements of the situation are important to focus on to solve the problem. Even though individuals have not reached the stage of proficiency, the competent individual may experience a feeling of mastery and the ability to adequately cope with a given task or situation. The competent level is supported and re-enforced by most employers. Most employees may view the competent level as ideal and may not progress to the next two levels (Dreyfus and Dreyfus, 2004).

Level 4: Proficient

With continued practice and experience, the competent performer may move to the **proficient** level. Proficient individuals start to draw on emotional experiences from successes and failures to help determine which elements of the situation are important to focus on. The proficient performer perceives situations as wholes, rather than focusing on certain elements only (Dreyfus and Dreyfus, 2004).

The proficient performer knows what needs to be done, continues to rely on rules and analytical decision-making processes, but experience plays an increasingly important role when making decisions. Decision-making is less laboured as the proficient performer has a

perspective of which of the aspects of a situation are important to focus on. Individuals display a deeper understanding of the situation.

Proficient performers learn best through experiential learning. Providing proficient performers with context free principles and rules may leave them frustrated. They may even use experience to contradict the principles and rules.

Level 5: Expert

At the final stage of expertise, individuals no longer rely on analytical principles, rules or guidelines to connect their understanding of the situation to an action. The **expert**, through his or her past experience and involvement, has an intuitive grasp of the situation and can zoom in on particular problems without wasting time by considering other possible solutions. The expert is more interested in understanding the whole situation; making decisions on how to proceed and is completely committed to the outcome of the situation (Dreyfus and Dreyfus, 2004). It may be very difficult for the expert to articulate the descriptions of expert performance and knowledge. It means an expert develops intuition, which is based on tacit knowledge. Tacit knowledge may therefore be difficult for the expert to describe to others.

The five stages/levels are represented in Table 1 below.

Table 1: Summary of stages/levels of expertise in the Dreyfus’s model

Elements	1. Novice	2. Advanced beginner	3. Competent	4. Proficient	5. Expert
Components	Context Free	Context free and situational	Context free and situational	Context free and situational	Context free and situational
Perspective	None	None	Chosen	Experienced	Experienced
Commitment	Detached	Detached	Detached understanding and deciding. Involved outcome	Involved understanding, detached deciding.	Involved
Decision	Analytic	Analytic	Analytic	Analytic	Intuitive

According to Dreyfus and Dreyfus (1984, 2004): **Components:** This refers to the elements of the situation the learner is able to perceive. These can be context free of pertaining to the general aspects of the skill or situation, or which only relates to the specific situation the learner is meeting. **Perspective:** The learner chooses which elements or situations of the problem to focus on. He or she is then taking a perspective. **Commitment:** This refers to how personally involved individuals is in the outcome of the learning situation, as well as understanding and deciding how to address the situation. **Decision:** the learner is making a decision on how to act in the situation he/she is in. This component deals with how individuals make decisions using an analytical process or intuition.

The model described above has both strengths and weaknesses. While I will attempt to take full advantage of the strengths, in this study, I will adapt the model to minimise the effects of its weaknesses, identified in critiques and limitations by other scholars.

Benefits of the Dreyfus's model

Three useful insights emerge from the Dreyfus's model.

Firstly, professional skill is not primarily context free, but is dependent on the related context (Dall'Alba and Sandberg, 2006). As individuals progress through the stages of skills acquisition, the skill displayed becomes more dependent on the situation. The Dreyfus's model demonstrates that context free knowledge and skills are not enough for progression to advanced levels.

Secondly, only those at the lower levels of skills - novices and advanced beginners - approach situations in a "detached manner." According to Dall'Alba and Sandberg (2006), professionals at the proficient and expert levels usually approach new situations and tasks using mainly intuition.

Thirdly, in this model, more advanced levels can only be achieved through experience in practical work situations. The advanced skills cannot be achieved by acquiring context-free knowledge and skills as assumed in previous models of skill acquisition. The strength of the Dreyfus's model lies in the case it makes for tacit knowledge and intuition as critical features of the processes to attain professional expertise in unstructured situations (Dall'Alba and Sandberg, 2006).

Using work of other scholars to adapt the Dreyfus's model

The work of three scholars who have contributed to the further development of the Dreyfus's model.

Firstly, Edwards (2012) has contributed to the development of the model with specific regard to the levels of expertise and the relationships between different practices.

Secondly, Hammond's cognitive continuum theory (1988) (Hammond's theory) deals with the role of memory in supporting intuitive and analytical approaches and the best ways in which these can be combined. This elaborates the Dreyfus's model in terms of intuitive and analytical approaches. Hammond defines analytical and intuitive thinking as poles on a continuum. The second part of Hammond's theory is a 'task continuum' to differentiate those features of a task which should determine the most appropriate mode of cognition (analytic or intuition) to be

used. In Hammond's theory, tasks are positioned on a task continuum, where either analytic or intuitive processes are used, depending on the features of the task (Hammond, 1988). These features may include complexity, content and form of the task. Hammond argues that people reason more effectively when the mode of cognition corresponds to the critical features of the task. For example, if a shorter time is required to complete a complex task, it will force people into a more rapid, intuitive mode of cognition. The factor of time influences how individuals acquire and respond to skills and tasks. In the professional environment, where productivity is emphasized through completing as many tasks in the time provided, a more intuitive mode of cognition may be required.

Thirdly, Eraut (1994) suggests the factor of time may influence the use of different knowledge in the workplace. The time it takes to complete a certain task will determine the type of knowledge required i.e. tacit knowledge or explicit knowledge. He claims it is not as easy to simply transfer theoretical knowledge from an educational setting to knowledge required in the workplace, due to other factors like time pressures, complexity of the tasks, level of expertise required, experience etc. His work may be useful in this study to understand how the factor of time influences the transfer of knowledge types.

Using the limitations and critiques to adapt the Dreyfus's model

Although the Dreyfus's model improved previous models of skill development, it "incorporates some significant limitations of such models" as Dall'Alba and Sandberg (2006:388) have argued.

What skill is being developed?

According to Dall'Alba and Sandberg (2006), the Dreyfus's model, along with the other models of skill acquisition, does not explain *what* is being developed. In other words, the Dreyfus's model does not clarify what constitutes a skill in nursing, engineering, piloting etc. A stage model of development assumes that we know what skilful performance entails in each area of skill. This implies that it may be difficult to define a particular skill, such as the auditing skills examined in this study. This may have an impact on assessing the skill requirements at different levels in the model. This limitation may be overcome by consulting experts regarding what they think an auditing skill entails in a given situation.

Benner (1982, 1984, 2004) followed this approach in deciding what skilful nursing involves. Expert nurses described and demonstrated a combination of the domains of knowledge, similar to Bloom's three domains of *think, feel, do*. In addition, the study revealed how *emotion*

was integrated into skilful professional judgement. The element of *emotion* could be used to understand how it affects acquisition of new skills at different stages.

Understanding of, and in, practice

A major critique of the Dreyfus's model (Dall'Alba and Sandberg, 2006:389) and other stage models is the *understanding of, and in, practice*, is largely overlooked. This literature argues that "*understanding of, and in, practice*, forms the basis for professional skill and its development. The notion of understanding here integrates *knowing, acting and being*. Understanding of practice, then, is enacted in and through practice." The critique is that the Dreyfus's model, and other models, do not make explicit the specific nature of the understanding being formed.

Stepwise progression

Dall'Alba's and Sandberg's (2006:394) further critique of the Dreyfus's and other models is the assumption "that progression occurs in a stepwise manner from one stage to another." The stage models imply that there may never be a digression in skills, only a progression. But what if external factors affect an individual's ability to demonstrate a skill which results in individuals digressing instead of progressing to the next level of expertise? This is explored further in this study.

Furthermore, Benner's (2004) study uses the Dreyfus's model to assess nurses at different levels of expertise in clinical contexts. Benner's study did not investigate skill acquisition over time. Instead, stepwise development has been assumed from cross-sectional studies, as opposed to longitudinal studies. It could be argued then that the stages models would produce more reliable results if the study was conducted over a period of time.

Self-evaluation dimension

Dall'Alba's and Sandberg's (2006) critique of the model is that there is a neglect of control of one's own behaviour, especially the self-evaluation dimension of professional work. For example, one may have forgotten some important theories, or theories that may be based on one's own incorrect understanding. Thus, the process of learning from experience has been idealized, ignoring the fact that human judgement is affected by many psychological factors.

Why only some individuals reach the proficient and expert stages

Another limitation in the stages model is the lack of explanation of why some individuals reach an expert stage while others do not. In order to progress through the stages, the features of expert skills should be easily describable. However, as one progresses to the more advanced levels, the description of the skills become more difficult. This is seen more in the proficient

and expert stages where individuals develop intuition that is based on tacit knowledge. Tacit knowledge is usually thought of as knowledge that is difficult to transfer to another person by means of writing it down or verbalizing. It implies that experts find difficulty in transferring tacit knowledge and other individuals may therefore not have access to expert knowledge and may never become experts.

Intuition at the Expert Stages

Gobet and Chassy (2010) have criticised the Dreyfus's theory of intuition. According to these authors, there is no evidence that suggests there are distinct stages in professional development. In addition, while the model argues that analytic thinking does not play any role with experts, who act only intuitively, they argue that experts do in fact carry out slow problem solving when required.

Development of theoretical framework for data collection

I developed the theoretical framework in two stages. The first stage was primarily drawn from the Dreyfus's model, adapted in light of the further adaptation and limitations identified by critics.

I then made further adaptations based on a pilot study and my personal auditing experience.

Stage one

As its starting point, the theoretical framework draws on the four elements of the Dreyfus's model: components, perspective, commitment and decisions. However, I adapted this model by also taking into account what I describe as *interactional awareness* and *time pressure*.

Interactional awareness

One of the major critiques of the Dreyfus's model is that it does not describe the skills required to complete a task. According to Dall'Alba and Sandberg (2006), the development and understanding of the skills required in practice is influenced by individuals' own experiences and perceptions of the skills needed. This implies that it is difficult to define the auditing skill at a particular level, and may have an impact on the assessment of the skill requirements at different levels in the model. In this study, I described it as having *interactional awareness*.

Time pressure

Another major limitation deals with whether time pressures had an influence on the approach to learning new skills (Eraut, 1994). It also deals with whether time pressure affected the four elements of the Dreyfus's model.

Stage two

On the basis of my personal auditing experience and the pilot process (described further in Chapter four), I felt it necessary to further develop the theoretical framework to assess if personal backgrounds (birthplace, location, language) and academic backgrounds (tertiary education, family and other influences, prior auditing experience) enable individuals to move through the stages of the Dreyfus's model.

The adapted framework is described below.

Theoretical framework used in this study

The theoretical framework was developed in two stages as described in the preceding section and summarised in Table 2.

Table 2: Theoretical framework

Stage one: Dreyfus's model and its limitations and critiques
Interactional Awareness (Dreyfus's critique)
Commitment (Dreyfus's element)
Components (Dreyfus's element)
Perspective (Dreyfus's element)
Decision (Dreyfus's element)
Time Pressure (Dreyfus's critique)
Stage two: drawn from personal auditing experience and pilot study
Personal Background <ul style="list-style-type: none">• Place of birth• Current location• Language
Academic Background <ul style="list-style-type: none">• Tertiary education• Family or other influences• Prior auditing experience

Conclusion

The theoretical framework outlined here informs the development of an analytic framework, the data production and analysis strategies that will be described in the next chapter.

Chapter 4 – Research Design

The aim of this study is to examine how auditors acquire and transfer knowledge, skills and attributes at various stages in an academic and professional training programme in South Africa. This chapter describes the overall research design for the study, including participant selection, data production and data analysis techniques. The advantages and limitations of the design, and ethical considerations, are discussed.

Chapter three offered a theoretical framework which was developed by way of adaptation of the Dreyfus's model of skills acquisition. This theoretical framework informed the selection of research participants, the design of the interview schedule and the approach to analysis.

Overview of the research design

As a first step, ten participants were selected across the larger international auditing firms in South Africa and one South African university. A rationale for the selection and a description of the ten participants is given below.

Secondly, I decided to use semi-structured interviews to elicit information from participants, which allowed them to describe experiences, insights and viewpoints pertaining to their auditing practices.

The third step was to develop interview questions based on the theoretical framework.

The fourth step involved analysing the data collected in relation to the four Dreyfus's elements of components, perspective, commitment and decisions as well as personal and academic background, personal dispositions and the effects of time pressure on practice.

Each of these four steps is described more fully below. I also discuss the validity of the research process and ethical considerations of the study.

Participant selection

The participants selected for this study were all South African auditing graduates, audit trainees and audit managers or partners with five to eight years of post-qualification experience. The group included both men and women with ages ranging from 22 to 35 years, and different ethnic and cultural backgrounds. Participants were, however, similar with regard to academic profiles.

Selection method

This study uses the *purposive sampling technique*, which points to the “deliberate choice of the informant due to the qualities the informant possesses” (Tongco, 2007:147). Purposive sampling is a non-random technique that relies on the judgement of the researcher when selecting participants. The researcher sets out what needs to be researched and sets out to find participants who are willing to share information by virtue of knowledge and experience (Bernard, 2002; Lewis and Sheppard, 2006). The goal of purposive sampling is to focus on particular characteristics of the selected subjects that are of interest. The type of purposive sampling technique used in this study is homogenous sampling, where the audit firms and participants were selected by identifying common characteristics and circumstances.

Participants were purposively selected on the basis of having the following characteristics:

- Each participant was considered to be a high achiever at a particular level. Participants selected included academically strong final year graduates, strong performing audit trainees and audit managers,
- All participants were fluent in English.

Apart from these pre-defined characteristics, other differentiating factors such as mother tongue, race, gender and cultural backgrounds were considered to be insignificant in the selection process.

Participants were selected from four of the larger international auditing firms in South Africa and one South African university. There are many other middle tier and smaller auditing firms in South Africa. I decided not to include these firms, as including them might introduce other factors affecting the data collected. For example, some audit trainees at the smaller firms may still be completing undergraduate and postgraduate degrees whilst completing their training contracts, while other trainees may not be exposed to the same decision making processes as followed by the larger international auditing firms.

Number of participants

Ten participants were selected for this study. The factors considered in determining this number of participants included the following:

- The number and length of the interview transcripts involved – detailed descriptions of each participant’s experiences, insights and viewpoints were required. It made sense to limit the number of participants,
- I decided that ten participants would generate sufficient data to compare participants across levels of skill acquisition,

- Participants were selected, in pairs, on the assumption that each pair may represent one of the five stages of the Dreyfus's model, totalling ten participants. Participants were selected in pairs to examine practices at each particular stage specified by the Dreyfus's model.

My selection included two graduates from a South African university, six audit trainees from two of the larger international auditing firms in South Africa, as well as two audit managers with five to eight years post qualification auditing experience i.e. the audit managers are qualified CA's(SA). I decided to select audit managers within the same age-range as there may be other factors that may influence knowledge base, such as experience with industry specific clients, the firm's influence on how to attain and retain clients etc. The names of participants², including the level in the organization, years of practical audit experience and institution of academic study or employment are set out in Table 3.

Table 3: Participants in the study

Participants	Level	Years of practical audit experience (at the time of interviews)	Institution
Danielle	Final year graduate	None	University
Kwashe	Final year graduate	None	University
Vernon	1 st year audit trainee	6 months	Audit firm 1
Brenda	1 st year audit trainee	6 months	Audit firm 2
Mandy	2 nd year audit trainee	1 year 6 months	Audit firm 1
Dean	2 nd year audit trainee	1 year 6 months	Audit firm 2
Sarah	3 rd year audit trainee	2 years and 6 months	Audit firm 1
Nina	3 rd year audit trainee	2 years and 6 months	Audit firm 2
Ivan	Associate Director	6 years post qualification audit experience	Audit firm 1
Mark	Senior Manager	6 years post qualification audit experience	Audit firm 2

Data production: development of the interview schedule

To elicit the relevant information directly from participants, I considered the use of participant observation, questionnaires and in-person interviews. Participant observation was considered to assess the knowledge and skills used in a particular situation. However, the audit firms did not allow me to observe an audit meeting where confidential client information would be

² Real names are not used in this study to protect participants' identities.

discussed. Secondly, interviews were considered to be more appropriate to elicit past experiences and personal opinions and attitudes.

Conducting in-depth qualitative interviews proved to be the most appropriate data collection method, as it allows for analysis of information pertaining to participants' personal experiences, insights and viewpoints. As summarised by Gall, Gall and Borg, 2003, there are three formats for interview design: (a) informal conversational design (unstructured), (b) standardized open-ended interviews (structured) and (c) general interview guide approach (semi-structured). The format I used in this study is the general interview guide approach.

General interview guide approach (semi-structured interviews)

A general interview guide approach is more structured than the informal conversational approach, but more flexible than structured interviews (Gall, Gall and Borg, 2003). The advantage of using this approach is that the same general areas of information are collected from each participant, but still allows the researcher to digress from a set format to allow for freedom and adaptability in the questions and answers. This approach provides a means to get participants to describe personal experiences, insights and viewpoints.

In preparation for the interview process, a pilot test was implemented. I initially considered conducting participant observations at an audit client meeting, and then to follow up with individual interviews to elicit further responses. Due to auditor-client confidentiality clauses, I was not permitted to conduct participant observations at the audit client meeting. Instead, the pilot test was conducted with audit trainees and an audit manager. I interviewed two individuals at the same time during the pilot test. I later decided to instead conduct one-on-one interviews during the actual interviews, as interviewing two individuals at the same time during the pilot test did not draw out each individual's personal experiences and viewpoints. The pilot test was necessary to highlight the flaws, limitations and other weaknesses in the interview design, and allowed me to revise the interview questions accordingly.

Development of the interview schedule

The aim of the interviews was to elicit accounts of auditing practice which would be analysed in relation to expertise, in terms of the five stages of the Dreyfus's model: novice, advanced beginner, competent, proficient and expert.

After developing the theoretical framework, I produced a schedule of interview questions. These questions were conducted in three parts:

Part 1: Questions relating to personal and academic backgrounds

Part one involved asking participants to describe *personal backgrounds, academic backgrounds and personal dispositions*. Analysis of these responses would inform an account of ways in which past experiences may influence decisions to pursue a career in auditing, their future commitment to staying in the auditing profession, and whether there were enabling mechanisms that allowed them to move through the stages of skills development. These questions were not drawn from the Dreyfus's model itself but rather from the process of adaptation of this model. Part one questions were asked to identify patterns which might suggest an association between personal and academic backgrounds, personal dispositions and skills development. It should be noted that these questions are only exploratory and that any pattern identified may be of relevance. These questions do not imply causality between backgrounds and skills development.

Part 2: Questions relating to the four elements of the Dreyfus's model and the 'interactional awareness' critique

The second part of the schedule elicits descriptions of particular *moments of practice*. Participants were asked how they would perform auditing tasks in terms of the elements of the Dreyfus's model: interactional awareness, components, perspective, commitment and decisions.

Part 3: Questions relating to the 'time pressure' critique of the Dreyfus's model

Part three of the interview dealt with whether *time pressures* had an influence on performance of a new skill (Eraut, 1994). Participants were asked to describe how they would complete the task under time pressure, and how they felt while doing so. These questions were asked to understand if time pressure affected the elements of the Dreyfus's model.

Summaries of pre-constructed questions

Tables 4, 5, 6 and 7 summarise the pre-constructed questions used in each interview. In each table, the coding of the question is described in Column 1, the reason for the question is given in Column 2 and the actual interview questions are given in Column 3.

Part 1 Questions

The questions in Tables 4 and 5 are based on my personal audit experience and the pilot study.

Questions one to three in Table 4 were designed to obtain some personal background information regarding participants, mainly focusing on place of birth, current location and home language. These questions were posed to create a relaxed interview environment, but more importantly to understand if there is a pattern suggesting an association between individuals' personal backgrounds and skills development. The question on where participants are from informs any personal adjustments in relocating to another city. There may be an association between their experience in the workplace and how knowledge and skills are acquired.

Table 4: Part 1 Interview questions – Personal Background

Internal Language of Description (ILOD) – THEORETICAL FRAMEWORK		External language of description (ELOD) – ANALYTIC FRAMEWORK
COLUMN 1	COLUMN 2	COLUMN 3
<u>Coding of Question</u>	<u>Reason for Question</u>	<u>Interview Questions</u>
Personal Background <ul style="list-style-type: none"> • Place of birth • Current location • Language 	To understand if there is an association between participants' personal backgrounds and skills development.	<ol style="list-style-type: none"> 1. I would like to get to know you a little better before we begin. Tell me about yourself (refer to specific questions below) 2. What is your home language? 3. Are you from Cape Town? <ol style="list-style-type: none"> a. If not from CT, when did you arrive? b. Was there an adjustment to working and studying in CT (if not from CT)? c. Why do you feel there was/was not an adjustment to studying/and or working in CT (If not from CT)?

Questions four to ten in Table 5 were included to identify any patterns that may suggest an association between past academic and work experiences, family influences and the participants' decision to pursue the accounting profession:

- Question four, five and six focused on whether there was an association between family or other factors and skills development. For example, if the participant's family has a strong commerce background, then the participant may be better positioned to develop his or her skills in auditing.
- Question seven, understanding which university the participants attended may imply that there is an association between university attended and the ability to acquire and transfer theoretical auditing knowledge to the workplace.
- Question eight focused on prior audit experience (vacation work), to understand if there was an association between positive or negative work experiences and the acquisition of knowledge and skills in the workplace.

- Question nine was posed to understand if there was an association between successes or failures in any one of the professional examinations and how participants value knowledge, which may influence professional development in the workplace.
- Question ten asked participants to describe any positive or negative auditing experiences, which may highlight any tensions between theoretical and practical auditing knowledge.

Table 5: Part 1 Interview questions – Academic and work experience

Internal Language of Description (ILOD) – THEORETICAL FRAMEWORK		External language of description (ELOD) – ANALYTIC FRAMEWORK
COLUMN 1	COLUMN 2	COLUMN 3
<u>Coding of Question</u>	<u>Reason for Question</u>	<u>Interview Questions</u>
<p>Academic Background</p> <ul style="list-style-type: none"> • Tertiary education • Family or other influences • Prior auditing experience 	<p>To understand if there is an association between participants' experience at university, successes or failures in examinations, family or other influences, prior auditing experience (vacation work) and skills development.</p>	<ol style="list-style-type: none"> 4. Did you meet any auditors/accountants before you decided to pursue this career? 5. So is your family in Cape Town as well? <ol style="list-style-type: none"> a. Are they auditors as well? b. Did they play a role in your decision to becoming an auditor? 6. So why did you then choose to become an auditor? 7. Where did you complete your tertiary education? 8. Did you do any vacation work whilst studying? <ol style="list-style-type: none"> a. Describe your experience? b. Do you think this made it easier to understand auditing in the classroom? c. What work did you cover in vacation work? 9. Where are you currently in terms of your professional exams? <ol style="list-style-type: none"> a. Was it your first attempt when you successfully completed the exam? b. Describe what you think influenced you to be successful in the exams (even if it was the second/third attempt). 10. Describe your experience in auditing thus far? I want you to think of your experience as a student, then as an audit trainee. <p><u>Student</u></p> <ol style="list-style-type: none"> a. E.g. what was your experience whilst studying Auditing at university? b. Was this experience any different for any other courses? Why do you think is? What may have influenced that experience? <p><u>Training contract</u></p> <ol style="list-style-type: none"> c. What has been your experience whilst completing your training contract? d. Would you continue to pursue a career in auditing?

Part 2 Questions

Questions in Table 6 requested participants to describe the *moment of practice*. The questions in stage two uses the Dreyfus's model as its starting point and drawing on the limitations and critiques of the model. Participants were asked how they would perform auditing tasks in terms of the elements of the Dreyfus's model: *components, perspective, commitment and decisions* and the *interactional awareness* critique.

- Questions eleven to thirteen were asked to determine participants' initial and current theoretical understanding of the auditing profession and skills required in auditing. These questions focused on how they value the desired outcome in auditing as a career. If, for example, individuals are invested in auditing as a career and values the skills required to be a good auditor, they may be in a stronger position for professional development, as compared to an individual who is not as invested in the auditing profession.
- Questions fourteen to eighteen focused on eliciting information to address the elements of commitment, components, perspective and decisions per the Dreyfus's model. These questions were included specifically to assess the level of expertise of each participant.

Table 6: Part 2 Interview questions – from Dreyfus’s model and its critiques

Internal Language of Description (ILOD) – THEORETICAL FRAMEWORK		External language of description (ELOD) – ANALYTIC FRAMEWORK
COLUMN 1	COLUMN 2	COLUMN 3
<u>Coding of Question</u>	<u>Reason for Question</u>	<u>Interview Questions</u>
Interactional Awareness	To understand how participants’ theoretical understanding of ‘auditing skills’ influences learning abilities.	<p>11. Before you started university, did you have an idea of what it meant to be an auditor?</p> <p>a. If answer yes/no – then pursue with:</p> <p>b. Describe what you thought Auditing entailed?</p> <p>c. What influenced the idea of what Auditing is?</p> <p>12. When you started your training contract, or even before:</p> <p>a. What was your initial understanding of the purpose of auditing/your understanding of doing what you do?</p> <p>b. Has your understanding changed over time?</p> <p>c. Describe what you think a good auditor does, and their purpose for doing it?</p> <p>13. The next question focuses on skills in auditing, in general:</p> <p>a. What do you think are the skills you need in Auditing? If many, focus on most important ones.</p> <p>b. Where did you gain most of your skills?</p> <p>c. Think about a person, without names, you considered to be a skilled auditor. Now explain/describe why you would think person/persons are more skilled than other auditors.</p>

Table 6 (continued): Part 2 Interview questions – from Dreyfus’s model and its critiques

Commitment	To understand how personally involved the learner is to the outcome of the learning situation.	<p>14. Who takes responsibility for the outcome of a new task/job?</p> <ul style="list-style-type: none"> a. What did you gain from completing this task? b. Did you have a personal investment in completing the task? I.e. did it matter to you when completing the task? c. Do you think it was worth your time and effort when performing this task? Why/why not?
Components	To understand the elements of the task that the learner is able to perceive.	<p>15. Describe a time/an event when you had to perform an audit procedure, on your own, for the very first time?</p> <ul style="list-style-type: none"> a. How did you feel when performing this task? b. What did you have to do to complete the task? c. Describe the steps/procedures you had to perform to complete the task? d. So did you perform all those steps/procedures the first time you performed the task? e. Did you require assistance? f. How did you obtain the assistance? Through textbooks, asking the manager, colleague etc.? g. Describe when you had to perform the same task, but in two very different situations.
Perspective	To understand which of the elements the learner chooses to focus on based on past experience.	<p>16. Describe what happened after you performed the same task in 16 above, a few more times?</p> <ul style="list-style-type: none"> a. What do you think was good/bad when you performed the task for the first time? b. So what did you change when you performed the task a few more times?
Decision	To understand whether the learner uses an analytical or intuitive approach to making decisions. How would that change if under time pressure?	<p>17. Task-Specific decision question:</p> <ul style="list-style-type: none"> a. Describe your approach when having to make decisions regarding an audit task? b. Describe the task c. How would you decide <u>how to perform</u> the task? E.g. Experience on the job? Observing others? d. Explain how you eventually got to the final decision? e. What type of knowledge do you draw on when making decisions? f. Does this approach change when you are under time pressure? Explain. <p>18. Future-specific decision question:</p> <ul style="list-style-type: none"> a. Have you decided to remain in auditing? b. What influenced your decision?

Part 3 Questions

Using the work of Eraut (2004), participants were asked in questions nineteen and twenty to describe the approach, thought process and feelings when completing an audit task under severe time pressures (Table 7). This may highlight a different approach or form of knowledge used when faced with time pressures. Asking to describe a different task under time pressure in question twenty may highlight similar or different cognitive skills used in very different situations.

Table 7: Part 3 Interview questions – Time Pressure

Internal Language of Description (ILOD) – THEORETICAL FRAMEWORK		External language of description (ELOD) – ANALYTIC FRAMEWORK
COLUMN 1	COLUMN 2	COLUMN 3
<u>Coding of Question</u>	<u>Reason for Question</u>	<u>Interview Questions</u>
Time pressure	To understand if time pressures has an influence on the approach to learning a new skill (Eraut)	19. Can you describe a time where you had to complete a new task/audit procedure under severe time pressure? a. How did you feel? b. What did you do to complete the task? c. Would your approach have changed if you had more time to complete the task? d. Describe what you would have done if you had more time to complete the task? 20. Describe a different task under time pressure?

Conducting the interviews and transcribing the texts

Interviews were scheduled to take place at the audit firms' premises. Two separate days were set aside to interview participants at audit firm 1 and audit firm 2 respectively. At each of the two audit firms, one-on-one interviews were conducted in a private meeting room at scheduled meeting times. This created a relaxed, friendly yet private environment in which participants could respond freely. The two graduates were interviewed separately in the staff seminar room at the university. Each interview was scheduled for two hours to allow participants to describe personal experiences in greater detail. With participants' consent, each interview was recorded using only an audio recorder, as a video recorder may have created self-consciousness and inhibit participant responses. I relied on the audio recorder to capture the entire interview, which was then transcribed at a later stage.

Due to the relaxed and informal environment, I was able to develop a rapport with each participant to extract in-depth personal experiences and to follow up with probing questions

where responses were unclear. The questions were structured, but it allowed me to adapt each question to explore a more personal approach to each participant.

All ten interviews were transcribed. I transcribed the first four interviews. This proved to be a time-consuming exercise and I decided to use the services of a professional transcriber to complete the other interviews. To check the accuracy of each transcription, I listened to each audio recording again and compared it to the transcribed interview. No discrepancies were found.

Data analysis

The three-part structure of the interview schedules generated three broad themes for analysis. These were: (a) how individuals' background and personal disposition influences practice, (b) the changes in practice as individuals progress from novice to expert level through the Dreyfus's model and (c) the changes in practice when individuals are faced with time pressures. The focus of the analysis and the approach to the analysis for each section is described below.

Part 1 Analysis: Personal experiences and disposition

The Dreyfus's model describes what the moment of practice is and how it changes over time, but it does not deal with what **enables** individuals to change in practice. Individuals bring certain advantages or disadvantages to the practice based on backgrounds and personal dispositions. The following definition of personal disposition serves as a guide for this study: "Qualities characterize a person as an individual - the controlling perceptual (mental, emotional, spiritual) qualities determine the person's natural or usual ways of thinking and acting. Furthermore, attitudes, beliefs, values, habitual inclination, commitments and professional ethics are included as personal dispositions" (Usher, Usher and Usher, 2003:4). These are personal qualities individuals bring with them regardless of the levels of expertise required in a specific practice.

In this study the initial stage of analysis generates a description of the enabling mechanism for individuals to move from one level of expertise to another. This dimension of learning sits outside the moments of practice as described by the Dreyfus's model. Part one of the analysis describes how individuals' personal experiences and dispositions affect practice. Each participant's personal dispositions were coded as *past identification*, *future identification* and *confidence*, as described below.

Past Identification

Past experiences either had a positive or negative influence on the participants auditing practice. Here, the past experiences are described as *past identification*, which includes family or other influences, prior auditing experience and priority of career choice. These identifications were categorised as being either positive or negative with regard to acquisition of skills.

Future Identification

Perceptual qualities (mental, emotional and spiritual) and personal dispositions such as values, attitudes, emotional involvement and professional ethics, all have an influence on whether or not an individual is committed to staying in the auditing profession. An individual is described as having a *negative future identification* to auditing if perceptual qualities and personal dispositions did not indicate that they had the abilities or were committed to staying in the auditing profession; the individual is described as having a *positive future identification* if they are emotionally involved and committed to the auditing profession. I found that both *negative* and *positive future identifications* influenced individuals' current practice.

Confidence

The analysis examined whether participants' confidence levels had an impact on their performance, independently of the stage of skill acquisition. Individuals are described as being either *less confident* or *self-confident* in their abilities to perform auditing tasks.

Table 8 outlines an example of part 1 of the analysis, using *past identification*, *future identification* and *confidence* as the coding for the analytic framework.

Table 8: Part 1 Analysis - Personal Disposition (Coding example)

Elements (Each element influences how the participant acquires knowledge and skills)	Participant 1	Participant 2
	Coded response to interview questions	Coded response to interview questions
Personal dispositions <ul style="list-style-type: none"> • Perceptual qualities (mental, emotional, spiritual) • Attitudes, beliefs, values, habitual inclination, commitments, professional ethics etc. • Family or other influences • Prior auditing experience • Priority of career choice 	<ul style="list-style-type: none"> • Positive past identification • Positive future identification • Self-confident 	<ul style="list-style-type: none"> • Positive past identification • Negative future identification • Less confident

Part 2 Analysis: the Dreyfus’s model

The elements of *interactional awareness* was incorporated into the theoretical framework in response to critiques of the Dreyfus’s model. The elements of *components*, *perspective*, *commitment* and *decisions* were drawn directly from the Dreyfus’s model. These elements were analysed in part two of the analysis.

Interactional awareness

Awareness is defined as knowledge or perception of a situation or facts, events, objects, thoughts, emotions or sensory patterns (Oxford, 2016). In this study, participants were asked to describe what they thought the auditing skills were to complete tasks. Their responses demonstrated different levels of interactional awareness of the various skills required in a professional auditing environment. These skills demonstrated an awareness of the interaction in relation to the social complex: participants described auditing skills required as an individual, skills in relation to the audit team, and skills in relation to the client. Participants who described and mainly focused only on individual auditing skills (such as technical skills, analytical skills, time management skills, problem solving skills, working under pressure etc.) were described as having *individual professional awareness*. Those who described not only individual skills, but skills in relation to the audit team and the clients (such as professional communication skills, management skills, business skills, client relation skills etc.) were described as having *professional relational awareness*.

Components

Components refer to the elements of the task and situation the participants described in their responses (Dreyfus and Dreyfus, 2004). These were categorized as *context free* or *situational*. *Context free* responses described rules or guidelines pertaining to the general aspects of the skill or situation. *Situational* responses described only the specific situation in which the participant found themselves.

Perspective

Participants described how they chose which elements or situations of the problem were important enough to focus on (Dreyfus and Dreyfus, 2004). They were then taking a *perspective*. Those participants who were unable to describe what was important to focus on, were categorised as having *no perspective*. Other participants, who were able to describe which elements of the situation to focus on, were described as either having *no perspective*, *chosen*, *limited* or *experienced perspective*.

Commitment

Commitment refers to how personally involved individuals are in the outcome of the learning situation, as well as to their understanding and way of deciding how to address the situation (Dreyfus and Dreyfus, 2004). Individuals who have no personal involvement in the outcome of the audit task were described as having *detached* commitment. Those who were emotionally involved in the tasks and had a genuine commitment to the outcome of the tasks, but were still unsure as to whether the outcome will be achieved based on a *chosen perspective*, were described as having a *detached understanding and deciding, but involved in the outcome*. Those able to draw from their positive and negative emotional experiences of successes and failures to help determine perspectives, (Dreyfus and Dreyfus, 2004) were regarded as having an *involved understanding*. Those who were able to spontaneously see the goals and the most important aspects of the situation, but still had to make a decision, were describes as *detached deciding*.

Decision

The interviews elicited accounts of how individuals make decisions on how to act in the situation he or she is in. This component deals with how individuals make decisions, using either an *analytical* process or *intuition* (Dreyfus and Dreyfus, 2004). When individuals use an *analytical* approach, they follow step-by-step thought processes, rules or general guidelines to making decisions on how to complete certain tasks. When participants use *intuition* in

making decisions when completing tasks, it is described as almost automatic, second-natured decisions without deliberate step-by-step guidelines or rules.

Table 9 outlines an example of part 2 of the analysis, using *individual professional awareness*, *professional relational awareness*, *context free*, *situational*, *no perspective*, *chosen perspective*, *limited perspective* or *experienced perspective*, *detached* or *involved commitment*, *analytic* or *intuitive* decision as the coding for the analytic framework.

Table 9: Part 2 Analysis – Dreyfus’s model (Coding example)

Elements (Each element influences how the participant acquires knowledge and skills)	Participant 1	Participant 2
	Coded response to interview questions	Coded response to interview questions
<ul style="list-style-type: none"> • Interactional awareness 	<ul style="list-style-type: none"> • Expansive individual professional awareness • Limited professional relational awareness 	<ul style="list-style-type: none"> • Expansive individual professional awareness • Expansive professional relational awareness
<ul style="list-style-type: none"> • Components 	<ul style="list-style-type: none"> • Context free 	<ul style="list-style-type: none"> • Context free and situational
<ul style="list-style-type: none"> • Perspective 	<ul style="list-style-type: none"> • No perspective 	<ul style="list-style-type: none"> • Chosen perspective
<ul style="list-style-type: none"> • Commitment 	<ul style="list-style-type: none"> • Detached 	<ul style="list-style-type: none"> • Detached understanding and deciding. Involved outcome.
<ul style="list-style-type: none"> • Decision 	<ul style="list-style-type: none"> • Analytic 	<ul style="list-style-type: none"> • Intuitive

Part 3 Analysis: Time pressure

The interviews elicited accounts of the feelings participants had when faced with having to perform new tasks, for example with regard to anxiety or stress (Table 10). These responses were categorised in terms of whether they were global and general, (*general anxiety*) or feelings of uneasiness limited to new tasks or situations (*tailored anxiety*) (Benner, 2004).

Furthermore, they were asked to describe how they would complete the task if faced with time pressure. These questions were asked in order to determine whether time pressure affected the elements of the Dreyfus’s model in participants’ use of skills, use of rules or guidelines (components), choosing elements to focus on (perspective), levels of emotional involvement (commitment) and decision-making process (analytic or intuitive).

Table 10: Part 3 Analysis – Time Pressure (Coding example)

Elements (Each element influences how the participant acquires knowledge and skills)	Participant 1	Participant 2
	Coded response to interview questions	Coded response to interview questions
<ul style="list-style-type: none"> • Time Pressure 	<ul style="list-style-type: none"> • General anxiety 	<ul style="list-style-type: none"> • General anxiety

Example of data analysis

Table 11 provides an example of the relationship between the internal language of description (theoretical framework), the external language of description (analytic framework), the participant response, the coded response to the interview question, and the level of expertise as per the Dreyfus’s model. This example focuses on whether the participant is able to choose a *perspective* by identifying the elements of the situation to focus on. This is an extract from a longer interview. The other elements, including *perspective*, of Stage 2 analysis in terms of the Dreyfus’s model (not included in this example), places the participant at an advanced beginner level.

Table 11: Example of Data Analysis

Internal Language of Description (ILOD) THEORETICAL FRAMEWORK		External language of description (ELOD) ANALYTIC FRAMEWORK		STAGE 2 DATA ANALYSIS: Dreyfus's model	
Coding of question	Reason for question	Interview questions	Participant response	Coded response to interview question	Level of expertise as per Dreyfus's model
Perspective	To understand which of the elements the learner chooses to focus on based on past experience.	<ul style="list-style-type: none"> Describe what happened after you performed the same task, a few more times? What do you think was good or bad when you performed the task for the first time? So what did you change when you performed the task a few more times? 	<p><i>"Even though I did a strategy memorandum three times before, I will always still ask the manager for help. I don't like to take things into my own hands. I will still ask other managers even if, under time pressure, I am a manager too".</i></p>	No perspective	Advanced beginner

Ethical considerations

To address some of the ethical conflicts that may arise, I employed measures to protect participants and the information obtained during and after the interview process.

Firstly, I obtained ethical consent from the university to conduct this research study.

Before conducting the pilot test and the subsequent one-on-one interviews, participants were asked permission to participate in the interviews. All participants were requested to complete and sign a consent form that stated that participants' anonymity and confidentiality will be maintained. Furthermore, I requested the professional transcriber to complete a consent form that stipulated that all transcribed conversations were to remain confidential.

Access to digital audio recordings are restricted to the researcher only in a password-protected format. Consent forms and copies of transcribed interviews are stored in a locked cabinet with limited access.

Validity of the research process

Validity, according to Maxwell (2008:240), "refers to the extent that the results and conclusions of the study may be wrong or misinterpreted." In a qualitative research study, validity refers to the relationships between descriptions and those things that are described.

In this study, there were two broad validity threats: reactivity and researcher bias (Maxwell, 2008).

Reactivity

Reactivity refers to the "effect of the researcher on the setting and individuals being studied" (Maxwell, 2008:243). In this interview study, there was a risk that I might influence the participant responses by, for example, asking leading questions. I minimized this risk by having pre-formulated, semi-structured interview questions in line with the theoretical framework.

Researcher bias

"Bias refers to ways in which data collection or analysis are distorted by the researcher's theory, values or preconceptions" (Maxwell, 2008:243).

When I selected participants and the audit firms, it may have created researcher bias. I am a chartered accountant and therefore familiar with the auditing profession. As an auditing academic, I have a professional relationship with the students and the audit firms selected for

this study. I personally knew two of participants. However, this study reduces the level of researcher bias by using the clearly defined criteria of its theoretical framework as a basis when designing the interview questions and performing the data analysis.

There is also the risk that I may have misinterpreted the interview responses. In response to this threat, all interviews were transcribed, and I re-listened to all interview audio recordings and compared the responses to the transcriptions before analysing the data.

There was an instance where my preconception may have misinterpreted the data. My preconception was that the participant should have been placed at a competent or proficient level. There was a potential threat that the criteria was not clear enough. I rigorously examined this discrepant data to assess whether it was plausible in light of the other findings. I examined her transcript multiple times and re-examined the transcript a week later. On all occasions, I found that the participant should be placed at an advanced beginner level, in line with the elements of the theoretical framework.

Chapter 5 – Data Analysis and Findings

This chapter analyses and discusses the participants' responses. Interview responses were compared between the two participants with the same number of years' experience. The aim is to identify the themes in each pair's response in order to assess the levels of expertise as per the Dreyfus's model.

Based on initial findings, the analysis has been organised and presented in **three parts**.

Part 1 describes how individuals' backgrounds and personal dispositions influenced practice. Each participant's personal dispositions were analysed according to *past identification, future identification* and *confidence*.

Part 2 describes the changes in practice as individuals' progress from novice to expert levels, in terms of the Dreyfus's model. The elements of *interactional awareness, components, perspective, commitment, decision* are described in Part 2 of the analysis.

Part 3 describes the changes in practice when individuals are faced with time pressures (Eraut, 1994).

The data is analysed for each pair: final year graduates, first, second and third year audit trainees, and audit managers. Thereafter, the data is analysed across all five levels.

Findings: final year university graduates

Participant Profiles

At the time of the interviews, Kwashe and Danielle were in the process of completing postgraduate studies in accounting, of which auditing is one of four courses. Kwashe is from Zimbabwe and Danielle is from Soweto, and they both reside in Cape Town. Their first language is Setswana, but they both studied in English.

Part 1 Analysis - Personal Disposition

Although different, Kwashe and Danielle's individual backgrounds and personal dispositions place them both in a strong position to support professional auditing development. Both Kwashe and Danielle have *positive past identification*. However, Danielle has a *positive future identification*, whereas Kwashe has a *negative future identification* with the auditing profession.

Past and Future Identification

Strong family influences, the priority of the career choice and vacation work experiences indicate that Kwashe and Danielle have *positive past identification*. Kwashe explained that he completed A-levels in Zimbabwe, where most of the first year accounting curriculum at university was covered. Due to this, he found his first year academic experience was easier than did Danielle. Both Danielle and Kwashe had strong family influences in their decisions to pursue a career in accounting. Kwashe's father is an actuary and Danielle's uncle had a strong influence on her decision to be an accountant. As she put it, *"he is sort of like a role model, so I looked up to him."*

Both Kwashe and Danielle indicated that accounting was not their primary career choice. However while both decided on other fields as their first choice, they are still equally motivated to pursue a professional accounting and auditing career, which may enhance professional skill development. Kwashe studied actuarial science in his first year at university, but subsequently changed his degree in his second year to Business Science after completing vacation work at a financial services company. His motivation for the decision to change was that he *"didn't want to do calculations all day. I like interacting with people."* Danielle's first choice was Geology and her second choice was accounting. Her decision to change to accounting was motivated by the fact that her parents couldn't afford the university fees and, as she had obtained a bursary from an auditing firm, her decision to stay in the accounting profession was motivated by the fact that she had received a bursary. It therefore appears that she is more likely to excel in her studies to meet bursary requirements. She suggests that studying toward a CA(SA) qualification was a financial decision:

"I wanted to be an astronomer, and my mom was like, hmmm, it's not a good idea. You won't get paid...I'm a teacher but I wouldn't advise you to do teaching...You're an accountant with a nice fancy car."

Both responses suggest that vacation work experience helped them to understand the theoretical concepts better when they were taught at university. These responses are in contrast to Dreyfus's view that, as novices, individuals need to learn the facts first before applying the theory to situations that emulate workplace practices. Danielle and Kwashe indicated that the work experience helped them understand the theoretical concepts better when they were taught at university. Even though they both had vacation work experience, it seems that Danielle values the experience more than does Kwashe. She describes how the

vacation work experience taught her “*how to integrate a few things, I started getting where it’s going*”, whereas Kwashe replied:

“*I understood it better, but I feel that auditing is a course. You can learn, understand it, but it doesn’t get you the marks. You going to have to cram some stuff.*”

The data suggests that Kwashe has a ‘*negative future identification*’ with auditing. He noted that he struggles with the auditing course, finds it difficult to understand how all the auditing concepts fit together and struggles with tutorial questions and other assessments. Kwashe is weakly positioned because of his negative perception of auditing. Danielle, instead, enjoys and excels in the auditing course, and has plans to follow a career in corporate governance, another leg of auditing. Danielle’s personal disposition positions her more strongly to enable her to move to become an expert. She has a *positive future identification* with the auditing profession.

Confidence

Danielle’s responses suggested that she is more confident and in control of her emotions than is Kwashe. Kwashe describes himself as being uncertain with the auditing course which makes him feel *less confident* to succeed, whereas Danielle has a planned response when answering difficult auditing questions in an examination.

Part 2 Analysis – The Dreyfus’s model

Interactional Awareness

Kwashe and Danielle’s responses support Eraut’s (1994) view that there may be a separation of theoretical and practical knowledge at this level. Danielle’s response to the question of what the necessary skills are in auditing indicates that she has *expansive individual professional awareness*. She identifies that integrity, competence and attention to detail are important. However, Kwashe’s response suggested that he was not fully aware of the required auditing skills and he has *limited individual professional awareness*. His response reverts back to being able to master the skill of gaining marks in an exam. He values assessment over gaining theoretical and practical auditing knowledge. Kwashe’s response implies that not all individuals are able to easily acquire the theoretical knowledge required for preparation in the workplace. This may indicate that there may be a tension between the transfer of Kwashe’s theoretical knowledge into practical knowledge.

Components

The evidence suggests that Danielle's and Kwashe's knowledge is *context free* as they only know the facts and rules, but lack the understanding in context in which the information makes sense. As both Danielle and Kwashe are final year graduates, the instruction process is through lectures and tutorials, where the auditing lecturer provides the 'facts and rules for determining action' (Dreyfus and Dreyfus, 2004). Both Danielle and Kwashe have minimal experience with an auditing situation, even though they had performed vacation work before. They use context free rules to guide them through an auditing assessment, which is not grounded in the real world.

Perspective

The question posed to participants was: "*What do you think was good or bad when you performed the task for the first time?*" This question was posed to assess whether the participant was able to identify what was relevant in the situation. Danielle and Kwashe's responses suggested that they have '*no perspective*' as they do not know what to focus on when faced with a difficult auditing assessment question.

Commitment

The Dreyfus's model suggests that, at this level, individuals have a *detached commitment* to the outcome. Kwashe and Danielle showed no evidence of commitment to the outcome of the situation, except for wanting to pass the examinations.

Decision

It is clear that both participants use an analytic approach when making decisions on how to answer an assessment question. Kwashe's approach, where he simply tries to "*bank the most marks*", isn't as analytical as Danielle's approach as described below:

"If I'm thinking and talking about work planning, it's a quick analysis of what I'm expected to do and other factors like time pressure, factors like the fact that what happened in the past and what I did wrong in the past. I think that influences my decision and maybe which question or how to tackle the question. I think, yes, I will consider all of those."

Part 3 Analysis – Time Pressure

Time Pressure

Eraut (1994) suggests that, if there are time pressures to completing a task, it influences the use of different knowledge types. In response to the question of how time pressure affects Kwashe's actions, he responded that he felt "*stressed, uncomfortable and makes hurried decisions in the examinations.*" This indicates he has a *general feeling of anxiety*. However, Danielle did not express excessive feelings of anxiety. After calming down, she said, she focuses on how to plan her answer in the exam if faced with time pressures. She has *tailored anxiety* which is only experienced during certain stressful situations.

Conclusion

Both Kwashe and Danielle's responses refer to their limited audit experience. However, their responses are based mainly on their audit education, which, according to the Dreyfus model, is expected at the novice stage. Both final year graduates are considered as novices, as described by the Dreyfus's model. They each described using context free rules and guidelines provided by the lecturers. They have little or no experience nor situational perspective and have detached commitment to a situation except when aiming to pass the auditing examination. They display an analytic approach to learning, which is expected of a novice with limited workplace experience.

Summary: final year university graduates

Tables 12 - 14 summarise Kwashe and Danielle's responses to the interview questions.

Table 12: Part 1 Analysis - Personal Disposition

Elements	Kwashe	Danielle
Personal dispositions <ul style="list-style-type: none"> Perceptual qualities (mental, emotional, spiritual) Attitudes, beliefs, values, habitual inclination, commitments, professional ethics etc. Family or other influences Prior auditing experience Priority of career choice 	<ul style="list-style-type: none"> Positive past identification Negative future identification Less confident 	<ul style="list-style-type: none"> Positive past identification Positive future identification Self-confident

Table 13: Part 2 Analysis – Dreyfus’s model

Elements	Kwashe	Danielle
<ul style="list-style-type: none"> Interactional awareness 	<ul style="list-style-type: none"> Limited individual professional awareness 	<ul style="list-style-type: none"> Expansive individual professional awareness
<ul style="list-style-type: none"> Components 	<ul style="list-style-type: none"> Context free 	<ul style="list-style-type: none"> Context free
<ul style="list-style-type: none"> Perspective 	<ul style="list-style-type: none"> No perspective 	<ul style="list-style-type: none"> No perspective
<ul style="list-style-type: none"> Commitment 	<ul style="list-style-type: none"> Detached 	<ul style="list-style-type: none"> Detached
<ul style="list-style-type: none"> Decision 	<ul style="list-style-type: none"> Analytic 	<ul style="list-style-type: none"> Analytic

Table 14: Part 3 Analysis – Time Pressure

Elements	Kwashe	Danielle
<ul style="list-style-type: none"> Time Pressure 	<ul style="list-style-type: none"> General anxiety 	<ul style="list-style-type: none"> Tailored anxiety

Findings: first year audit trainees

Participant Profiles

Brenda and Vernon are first year trainees at their respective audit firms. At the time of the interviews, both participants had completed six months of their training contracts. Vernon is from Cape Town, his first language is Afrikaans and he studied in English. Brenda is from Johannesburg, but now resides in Cape Town. Her first languages are English and Zulu. Both Vernon and Brenda had recently completed the Initial Test of Competence (ITC) examination.

Part 1 Analysis - Personal Disposition

Both Vernon and Brenda's personal dispositions place them in a strong position to progress to the next level of expertise.

Past and Future Identification

Brenda has a *positive past identification* with the accounting profession. She has a strong academic family influence in that her mother is furthering her medical studies and her father is an academic. She was influenced by her high school teacher to pursue a career in accounting. The most noticeable aspect of her description of her experience in her chosen career is the fact that she has a passion for art. Brenda further describes that she enjoys the art of dance and that she is:

"...more artistic than I am numbers minded. It's quite intense with the content and the numbers and having to be analytic comes natural to lots of people, it's not very natural to me, so I take longer to think of it...I saw studying accounting and business as the best way of pursuing art."

Vernon, too, has a *positive past identification* with the accounting profession. Vernon has a strong family influence in his decision to becoming a CA(SA) as his late father was a businessman and his brother is a CA(SA). Vernon's responses were centred mainly on the death of his father and how that event was a turning point in how he viewed his life and work. His father worked very hard and he didn't want to work as long hours as his father had. Vernon indicated that he may not be willing to acquire the skills and knowledge required in auditing if it meant that he will have to sacrifice family time to work longer hours. On the other hand, he indicated that his father's influence helped him excel in his studies:

"Yes, my dad was a huge influence in my life, very proud man, and he didn't like to be a negative light, and I always had a voice in the back of my head, what my dad would

do if he saw me now. He said he would beat the hell out of me if I failed and that I was on my own and pay for own studies after.”

Vernon did not perform vacation work, but his response aligns with Eraut's (1994) view that there may be a separation of theoretical and practical knowledge at an early stage in an individual's professional practice:

“... vacation work should become compulsory, as I struggled with the auditing theory at university. Auditing you have to see it to understand it. Substantive procedures especially, and tests of control.”

Brenda's experience during vacation work gave her a different perspective of the career she wants to pursue. Her vacation work experience gave her a *positive future identification* with the auditing profession. Her experience on an audit of social grants made her realise she wants to help people. Her idea of the career she wants to follow may influence the knowledge and skills she needs to acquire to achieve those goals.

Confidence

Brenda's view is that her passion for art may have a negative impact on her learning abilities in the accounting profession. She describes how she had to repeat her final graduate year, and how her *“parents gave me the option to leave, but I didn't want to give up”*. When Brenda passed her ITC examination, she points out how she *“couldn't believe it.”* Her response suggests that she is less confident in her abilities to succeed in the accounting profession. She also noted that her passion for art may have hindered her learning abilities in the accounting field.

There was a sense that Vernon had less confidence as a first year trainee due to his perceived inability to express himself clearly in English. His first language is Afrikaans and he describes how speaking to a client in English makes him *“self-conscious”*. He further describes how being bullied at school and at university made him very shy to speak to people. This is one of the important skills in auditing. If Vernon struggles with these pervasive skills, it may affect his ability to adequately acquire the skills required at the next level of audit expertise. This may indicate that he may not pursue a career in auditing and may have a negative future identification.

Part 2 Analysis – The Dreyfus’s model

Interactional Awareness

Both Brenda and Vernon’s understanding of the required auditing skills is influenced by their experiences in the workplace. Both agreed that people skills as well as technical auditing skills are important at this level. No other significant skills were identified. This indicates that both have *limited individual professional awareness*.

Components

According to Dreyfus and Dreyfus (2004), the novice gains experience with real situations in the workplace by seeing several examples. The novice will begin to develop an understanding of the context by recognizing the features relevant to the context. At this level, the learner has practiced applying the facts and rules to a few real life situations. The learner can either associate the facts and rules with real life situations, or an instructor can point out the aspects to be recognized. Brenda and Vernon’s accounts confirm that, as newly qualified trainees, they still require mentoring and instructional guidelines, but they are still able to identify some aspects of a situation from past experience. This, in Dreyfus’s terms (2004), is seen to be *context free*, requiring facts and rules, but *situational*, as the learner experiences different contexts.

Vernon and Brenda offer similar descriptions of their experiences of their first audit client. They both seemed to have no understanding of how to complete the task and described feelings of anxiety. For example, Brenda described her first audit experience as:

“I will be set up, but I was overwhelmed. But there were days when I thought I need more help. But in the first week I felt abandoned. I felt overwhelmed. But I’m grateful now, learnt technical and other things from the manager on how to do calculations on my own.”

Similarly, Vernon described how stressed he was at his first audit client, but he points out how his mentor assisted him.

Perspective

The Dreyfus’s model suggests that, at this level, learners are not expected to have perspective in particular professional situations. Brenda’s responses are line with that suggested by the Dreyfus’s model. However, Vernon’s response confirms that he has *limited perspective*, as he is able to perceive what needed to be changed, but still required some guidance from others.

Brenda could not respond to the question regarding whether she could identify what she did well or not so well in her first audit client experience. This could suggest that due to her limited auditing experience, she was unable to perceive which aspects of the audit task to focus on when it was repeated.

Vernon described with fluency how his approach changed when he had to perform a task a second time. He was able to reflect on what he needed to improve on and also how that would be able to assist the manager in her review of the audit work. He further noted that he still had to go back to the theoretical guidelines and to “ask others to help in my approach in the current year.”

Commitment

Individuals at this level have a *detached commitment* to the outcome, in terms of the Dreyfus’s model. Neither Brenda nor Vernon showed evidence of commitment to the outcome of the situation, as they both described how the senior audit trainees or managers check their work and take responsibility for the outcome of the audit tasks.

Decision

The responses of both Brenda and Vernon suggested that these newly qualified auditors still make decisions using an *analytical* approach (Dreyfus and Dreyfus, 2004). Brenda and Vernon have minimal audit experience and they still rely on guidance from others. Their approach to completing tasks is therefore analytical.

Vernon’s analytical approach is described below:

“I refer back to what was done previously. It gives me guidelines that I can follow when I know what was done previously. If it’s a new task for me and I don’t know what I am testing or what I am doing, I would speak to someone more senior.”

Similarly, Brenda describes how she refers to guidelines and then tries to formulate steps to achieve the end goal.

Part 3 Analysis – Time Pressure

Time Pressure

Vernon's account of how "*stressed, uncertain and incapable*" he felt when performing a task under time pressure is not surprising at this level. In Benner's (1984) study of newly graduated nurses, it was found that *general anxiety* was experienced because almost all tasks were new to the learner. Brenda's reply did not provide any description of her emotions when faced with a task to be completed under time pressure. Her reply indicated she had a detailed plan by "*taking the work home and worked Saturday and Sunday trying to understand it.*" When asked if her approach would have been different if there was no deadline, she admitted she would have "*waited for the proper assistance then wouldn't have battled with it so much.*"

Conclusion

Interviews with Brenda and Vernon, offered evidence of minimal practical audit experience (less than one year). Brenda and Vernon are considered to be advanced beginners in the workplace. They both described how they try to complete tasks on their own using analytical, step-by-step procedures. They have difficulty in troubleshooting and may refer back to rules, guidelines or instructional support. They are detached from the outcome of a situation as they are not responsible for the end result of the audit task.

Summary: first year audit trainees

Tables 15 – 17 summarise Brenda and Vernon's responses to the interview questions.

Table 15: Part 1 Analysis - Individual Background and Personal Disposition

Elements	Brenda	Vernon
Personal dispositions <ul style="list-style-type: none"> Perceptual qualities (mental, emotional, spiritual) Attitudes, beliefs, values, habitual inclination, commitments, professional ethics etc. Family or other influences Prior auditing experience Priority of career choice 	<ul style="list-style-type: none"> Positive past identification Positive future identification Less confident 	<ul style="list-style-type: none"> Positive past identification Negative future identification Less confident

Table 16: Part 2 Analysis – Dreyfus’s model

Elements	Brenda	Vernon
<ul style="list-style-type: none"> Interactional awareness 	<ul style="list-style-type: none"> Limited individual professional awareness 	<ul style="list-style-type: none"> Limited individual professional awareness
<ul style="list-style-type: none"> Components 	<ul style="list-style-type: none"> Context free and situational 	<ul style="list-style-type: none"> Context free situational
<ul style="list-style-type: none"> Perspective 	<ul style="list-style-type: none"> No perspective 	<ul style="list-style-type: none"> Limited perspective
<ul style="list-style-type: none"> Commitment 	<ul style="list-style-type: none"> Detached 	<ul style="list-style-type: none"> Detached
<ul style="list-style-type: none"> Decision 	<ul style="list-style-type: none"> Analytic 	<ul style="list-style-type: none"> Analytic

Table 17: Part 3 Analysis – Time Pressure

Elements	Brenda	Vernon
<ul style="list-style-type: none"> Time Pressure 	<ul style="list-style-type: none"> No emotion described 	<ul style="list-style-type: none"> General anxiety

Findings: second year audit trainees

Participant Profiles

At the time of the interviews, Dean and Mandy had completed one year and six months of their training contracts. Both participants are second year audit trainees at their respective audit firms. Dean and Mandy both passed the ITC examination. Their first language is English; they are both from Johannesburg and now reside in Cape Town.

Part 1 Analysis - Personal Disposition

Dean's individual background and personal disposition suggests that he is more strongly positioned than Mandy, which may enable him to effect change more easily in his professional development.

Past and Future Identification

Dean has a *positive past identification* with the auditing profession as his family and past vacation work experience had a strong influence on his career choice. Mandy's responses suggest that she has a *negative past identification* as she did not have a strong family influence, nor did she have useful vacation work experiences. They both seem confident in their auditing abilities, but Dean has a stronger *positive future identification* with the auditing profession.

Family and other influences played a role in Mandy's decision to pursue a career in accounting and auditing, but not to the same degree as was the case for Dean. Dean described a strong family influence in his decision to become a chartered accountant. His father and uncles are chartered accountants and own several smaller businesses in Cape Town. As he put it: "*we were always exposed to it...there was always an exposure to commerce...I always had a fascination with business.*" This confirms a *positive past identification* with the auditing profession.

Mandy, on the other hand, indicated her high school accounting teacher had an influence on her decision to pursue a career in the accounting profession, but her choice was "*by process of elimination*" as she did not want to follow the same career as chosen by her family. Her high school accounting teacher may have had an initial influence in her decision to do accounting, but it seems her family's current location is a factor in her decision to stay in the auditing profession. Her parents and siblings have emigrated to Australia and Canada to advance their careers in the hospitality and medical fields. Her response suggests she will join her family in Australia after she completes her training contract, but she doesn't "*see herself staying in*

auditing for the long term”, thereby showing a *negative future identification* with the auditing profession.

Mandy and Dean’s contrasting accounts of prior auditing experience (past identification though vacation work) suggests that exposure to different types of audit clients may have had an effect on their willingness to acquire knowledge and skills required to progress to the next level of expertise. Dean excitedly described how his vacation work experience and exposure to complex clients gave him the confidence to complete more difficult audit procedures on other clients. Mandy, instead, describes how she *“did nothing, did some stamping and was passed around between clients as they didn’t have much for [her] to do during [her] vacation work.”*

Confidence

Both Dean and Mandy appeared to be confident in their abilities, but there was a sense that Dean is placed in a stronger position to progress through the levels of expertise required in the auditing profession. Dean was able to clearly articulate how hard work, determination and the joy of learning during his academic studies helped him understand the *“big picture required in business.”* He is able to identify how his leadership abilities at school and in sport have helped him develop his auditing skills required in the workplace, making him more confident. In contrast, Mandy’s attitude seemed to be very negative and there was no evidence of self-reflection regarding her personal beliefs and values. Her negative disposition in the workplace is evidenced in her responses to the interview questions,

“Tasks seems to be sort of meaningless, the audit differences means nothing in the greater scheme of things...they don’t care what happens...I felt like this is immaterial and he [client] isn’t going to care anyway...I don’t have much interest in what happens...but as you go along, you sort of learn to pick your battles...I’m just like, aagh, you know, it is what it is.”

Part 2 Analysis – The Dreyfus’s model

Interactional awareness

One of the major critiques of the Dreyfus’s model is the view that the understanding of, and in, practice, is largely overlooked as the basis for professional skill and development. Dean and Mandy’s contrasting understanding of the auditing skills required in practice suggests that they may not progress to the next level of expertise at the same pace. Both Mandy and Dean’s personal backgrounds and dispositions may influence their perception of the auditing skills

required at their level. Dean's capacity to identify auditing skills contrasted strongly with that of Mandy. Dean displayed an *expansive professional relational awareness*, where he emphasized skills in relation to the audit team and the client. Dean prioritized people and communication skills at his level, and acknowledged that these skills become more important as individuals progress through professional auditing careers. Furthermore, Dean displayed an awareness of the importance of creating and maintaining client relations through professional communication. He acknowledged that being exposed to his father's business at a young age made him realize that client relations and having people skills are very important for a successful career in business. Mandy seemed to have *limited professional relational awareness* as she was uncertain of the auditing skills required as a second year audit trainee. Her response is interesting as she identifies problem solving, theoretical skills, people skills, communication skills and sees a good auditor as "*someone who cares about the outcome.*" She admits, however, that these skills are not important to her and she is not invested in the outcome of the audit tasks. She seems less interested in these required skills and this may affect her ability to progress to the next level of expertise.

Components

According to the Dreyfus's model, individuals at this level are still able to identify context free rules and principles, yet as they gain experience with more complex real life situations, they are able to develop a deeper understanding of the relevant situation or context. Both Mandy and Dean still referred to facts and rules in real life situations, but Dean was able to rely more on his past experiences than Mandy did to complete new auditing tasks.

Mandy's account of her experience when completing a new task indicates that she does not refer to many elements from her past experience, but relies more on her theoretical knowledge and seeking the assistance of her audit managers to assist with her decisions. This is in line with Dreyfus's description of advanced beginners, who may require an instructor or mentor to provide guidelines in recognizing aspects of a situation. For example, Mandy describes her experience with a new task,

"I recently had to do a tax calculation for the first time, then I had to brush up on my tax knowledge because I haven't used it in a while. When you take on a new task, you know the basics. If I had done it wrong, I am hoping my manager would check everything and pick it up."

Despite Dean's accounts of how "*uncomfortable and overwhelming*" it was to complete a new task, he repeatedly described how he used his knowledge and experience of past clients to

complete the task. This is in line with Dreyfus's description of competent individuals who still refer to facts or rules, but rely less on textbook scripts and rely more on past experiences to deal with complex problems. Dean talked about his reliance on his communication and IT skills and exposure to complex clients to complete tasks, but hardly consulted with his audit managers for assistance. This is evident in his response when asked to describe his approach to the same task, but in two different situations,

"I used the previous stock example. I was in Limpopo at a different client. They export fruit and vegetables. I followed the same underlying auditing theoretical principles. I have done a stock count before, so I was comfortable. It was a big team, but my sections were easier for me."

Perspective

For individuals with one to two years' of workplace experience, a distinguishing feature is being able to gain perspective. Individuals at this level learn, through instruction or experience, to devise a plan or choose a perspective. This allows individuals to then focus and respond only to those elements required to achieve the plan (Dreyfus and Dreyfus, 2004). Even though Mandy and Dean had the same number of years of audit experience, Dean is able to identify the elements that are important when devising a plan, but Mandy is not. Dean is described as having a *chosen perspective*, whereas Mandy has *no perspective* when deciding on a plan of action. When asked to describe what they thought was "good or bad" when performing the task for the first time, Mandy's response indicated that she was unable to choose a perspective as she was unable to identify the particular elements that were "good or bad" in her a previous audit task. This is in line with Dreyfus's description of an advanced beginner. Dean's response is in line with the Dreyfus's model at this level as he was able to choose the elements to focus on to complete the task,

"I needed to complete payables and stock on my own. Stock I did before, so I was comfortable. Payables was big, and new to me. They remapped it and it ended up being incredibly challenging...I was depressed. My excel is strong, but how am I going to do this in two weeks? Seriously difficult to audit because it was my first time, and I had an internal freak-out...I had to sit there and think about the approach. I eventually relaxed and I was good at excel so I decided to just figure this out...First day I was worried what I was going to do and how am I going to do it. I calmed down and deconstructed it all. This is what I got, this is my end result, this is how I must get to it. From there it was ok. I ended up being done early."

Commitment

According to Dreyfus and Dreyfus (2004), this level of expertise requires individuals to decide for themselves in each situation what plan or perspective to adopt without being sure it will turn out to be appropriate. As the results depend on individuals' choice or perspective, they feel responsible for their choices and become emotionally involved in the outcome of the situation. Dreyfus and Dreyfus (2004) describes individuals as being involved in the outcome, yet having a detached understanding and deciding of the possibilities to achieving the outcome.

Mandy's responses to most questions seemed to indicate that she is not emotionally involved in the outcome of the tasks and displays the features of an advanced beginner by having a *detached commitment* to the outcome. Dean's comments throughout the interview suggests that he has an overwhelming emotional investment in the work he performs. His descriptions vary from pride to disappointment in his actions, and his emotional commitment may indicate he is more likely to develop further in his auditing career. Similar views were investigated in Benner's (1984) study, who found that trainee nurses who stayed emotionally involved by accepting the joys of the job well done, as well as the remorse of the mistakes, were more likely to develop further in their nursing careers. On the other hand, Mandy may not progress further if she resists emotional involvement in her work. This is in line with Benner's (1984) claims that, in the case of nursing, 'resistance to involvement and risk leads to stagnation and ultimately, to boredom and regression'.

Decision

Mandy and Dean both use an *analytic approach* when completing audit tasks, but Mandy relies more on rules and guidelines whereas Dean relies more on his past experiences when making decisions. Mandy first checks what others have done in prior year audit working papers to complete the task, then she draws on prior experiences with similar clients. Dean still uses an analytic approach, but seems to be more logical when devising a plan for a particular situation. This is confirmed by his response to his decision-making approach,

"I do as much as I can. I go back to what do I have, figure out the end goal, what's the middle ground. I stop everything. What have we got, where are we now? And then just see from there, can I figure it out."

Part 3 Analysis – Time Pressure

Time Pressure

Benner (2004) notes anxiety and worry tend to be more general when individuals do not have exposure to a range of situations. However, with more workplace experience, individuals' anxiety levels are more attuned to the situation (Benner, 2004). Furthermore, anxiety levels may be heightened as time pressure (Eraut, 1994) may influence the use of different knowledge types in the workplace i.e. using either tacit knowledge or explicit knowledge. Dean and Mandy both describe heightened levels of anxiety when given tasks to be completed under time pressure. It appears Mandy's level of anxiety is affected more than Dean's, as she describes how she relies more on the use of explicit knowledge by "*asking for help.*" She displays a level of *general anxiety* when faced with time pressures. This is in line with the Dreyfus's model, where an individual with minimal real life experience may rely on an instructor's guidelines for recognizing aspects of the situation. This is evident in the case where there are time pressures. Dean describes similar feelings of anxiety, but his emotional descriptions appear to be limited to particular situations only, not a general feeling of anxiety as described by Mandy. Dean displays *tailored anxiety* levels when describing that he was "*depressed, but eventually relaxed*" when he had to complete the new task under time pressure.

Conclusion

According to the Dreyfus's model, individuals with one to two years of practical workplace experience are considered to be competent. However, there is evidence to support the fact that competence will develop unevenly for different audit clerks with the same number of years work experience. Here it is seen that Mandy may be described as an advanced beginner, while Dean may be described as a competent individual in accordance with the Dreyfus's model.

Mandy is developing an understanding of real life situations and requires instructional support and guidance when completing many of her audit tasks. Her descriptions suggest she relies more on facts and rules and tries to apply them to most situations. She is unable to identify the elements to focus on in a particular task, and she is unable to choose a perspective. The most noticeable aspect of Mandy's responses is her lack of emotional commitment to the outcome of the tasks. These observations indicate that Mandy is an advanced beginner in auditing.

In the case of Dean, he still refers to facts, rules and instructor support, but not to the same extent as does Mandy. It is evident that Dean relies more on his past experiences to inform his actions in response to his audit plans. Even though Dean felt despondent in response to actions of other audit clerks and managers, there was an overwhelming sense that he was emotionally invested in his work and the outcomes of all the audit tasks he had to complete. These observations favour Dean to be considered a competent audit trainee.

Summary: second year audit trainees

Tables 18 - 20 summarise Dean and Mandy's responses to the interview questions.

Table 18: Part 1 Analysis - Individual Background and Personal Disposition

Elements	Mandy	Dean
Personal dispositions <ul style="list-style-type: none"> Perceptual qualities (mental, emotional, spiritual) Attitudes, beliefs, values, habitual inclination, commitments, professional ethics etc. Family or other influences Prior auditing experience Priority of career choice 	<ul style="list-style-type: none"> Negative past identification Negative future identification Self-confident 	<ul style="list-style-type: none"> Positive past identification Positive future identification Self-confident

Table 19: Part 2 Analysis –Dreyfus’s model

Elements	Mandy	Dean
<ul style="list-style-type: none"> Interactional awareness 	<ul style="list-style-type: none"> Limited professional relational awareness 	<ul style="list-style-type: none"> Expansive professional relational awareness
<ul style="list-style-type: none"> Components 	<ul style="list-style-type: none"> Context free and situational 	<ul style="list-style-type: none"> Context free and situational
<ul style="list-style-type: none"> Perspective 	<ul style="list-style-type: none"> No perspective 	<ul style="list-style-type: none"> Chosen perspective
<ul style="list-style-type: none"> Commitment 	<ul style="list-style-type: none"> Detached 	<ul style="list-style-type: none"> Detached understanding and deciding. Involved outcome
<ul style="list-style-type: none"> Decision 	<ul style="list-style-type: none"> Analytic 	<ul style="list-style-type: none"> Analytic

Table 20: Part 3 Analysis – Time Pressure

Elements	Mandy	Dean
<ul style="list-style-type: none"> Time Pressure 	<ul style="list-style-type: none"> General anxiety 	<ul style="list-style-type: none"> Tailored anxiety

Findings: third year audit trainees

Participant profiles

Nina and Sarah had completed two and a half years of their training contracts at the time the study was conducted. Both are in their final year of their training contracts, are senior audit trainees at their respective audit firms, and are often given the responsibility of overseeing audit clients. Both completed ITC and APC examinations. Both are from Cape Town and their first language is English.

Part 1 Analysis - Personal Disposition

Past and Future Identification

Nina and Sarah shared similar individual backgrounds with regards to family influences to pursue a career in accounting. However, Sarah's individual background and personal disposition places her in a much stronger position than Nina to develop in her auditing career. Both have *positive past identification* with the auditing profession, yet Sarah is more confident at her level and is more likely to have a *positive future identification* with the auditing profession. Sarah's academic background places her in a better position to acquire the knowledge and skills required at her level. She has a law and accounting background, and she believes that her law background assists her in her approach to accounting and allows for "critical thinking".

Nina's responses, however, does not display the level of critical thinking expected at this level. It might be expected that Nina's family experience would place her in a stronger position to develop professionally as her father owned his own business. However, she says that this *influenced her "decision to go into a job where I'm not going to be my own boss, I like working for someone. It is a stress I don't think I can deal with"*. Nina's words suggest that she may have difficulty in advancing to the next levels of expertise, where independent decision-making is required. Sarah's mother also had a major influence in her decision to become an accountant: Nina wants "*to prove*" to her mother that she can be successful in the accounting profession. She describes how her mother's limited career choices as a coloured female during apartheid influenced her decision to do both law and accounting, career choices which was not available to individuals of colour during apartheid.

Sarah's response to her vacation work experience suggests that, for her, having some practical audit experience first may have been beneficial when learning the theory. She indicated that it was easier to learn theory at university after having done vacation work two

years earlier. In spite of this, she acknowledges that, for some sections, *“writing an exam with substantive audit procedures in theory, it didn’t feel like it was real. You just had to write it down and it was like word vomit on your exam. And you get to practice and you actually understand what it is why you need it.”* Her response seems to be in line with the stepwise progression per the Dreyfus’s model, where facts and rule are learnt first before it can be applied.

Confidence

Sarah’s perceptual qualities and personal dispositions would suggest that she can be placed at a higher level of expertise than Nina. Sarah proudly describes how she feels valued when audit managers consider her professional opinion, *“There are a lot of things we get to discuss where he would consider my opinion in law. It means a lot to me, because he isn’t just blowing smoke, he actually considers my opinion.”* She describes how having attended a disadvantaged school, yet always having been the top student, put pressure on her to pursue a career that would give her independence, and enable her to be *“comfortable”* and be successful. Sarah has more confidence, drive and willingness to acquire knowledge and skills in auditing that does Nina, who doesn’t have self-confidence and still requires more mentoring and *“protection”* in the workplace. Nina often described situations where she did not get along with audit managers, and required other colleagues to assist with her disagreements, for example,

“They taught me more than everyone else...they took me in like a baby sister. I don’t know why, until today I still don’t understand why...we had a difficult manager too, who was a bully, especially when it came to the girls...and if she ever does smash me, my third year would stand up and smash her back... it made the biggest difference to me, the fact someone had your back”.

Part 2 Analysis – Dreyfus’s model

Interactional awareness

Nina’s perceived lack of leadership abilities, along with her limited understanding of the skills required in auditing at her level, suggest that she is primarily focused on her own individual skills: she has *limited professional relational awareness, but expansive individual professional awareness*. When Nina was asked to rank the more important auditing skills, she perceived *“technical accounting skills to be more important than people skills.”* She further described the abilities to problem-solve, to have time management and to be able to work under pressure as key skills in auditing.

Nina's description of individual skills suggest she is less likely to be able to manage an audit team as effectively as Sarah, who identifies people management as the most important auditing skill. Sarah is more concerned with skills relating to client relations and project management. It is usually accepted that the audit trainees with more audit experience will be given more project and people management responsibilities, which Sarah identified as the more important skills in auditing at her level, followed by communication and analytical skills. Sarah displays *expansive professional relational awareness*.

Thus, even though Sarah and Nina have completed the same number of years of audit training, they may be at different levels of expertise in terms of managerial abilities.

Components

As with competent individuals, proficient individuals at this stage are still able to rely on context free rules, principles and guidelines, but experience plays an increasingly important role when making decisions (Dreyfus and Dreyfus, 2004). Sarah's law and accounting background, as well as her experience with more complex clients, allows her to rely less on context-free rules. On the other hand, Nina still refers to rules and guidelines, and relies on managers and partners to assist her understanding of the components of different situations. This is reflected in her response, "*if I do the same task on one client, and I did the same task different to another, I would go to the manager and ask why it's different.*" Thus, Nina is more reliant on context free rules and instruction, which may place her at a lower level for the component element of the Dreyfus's model.

Perspective

According to the Dreyfus's model, proficient performers see situations more holistically. Proficient individuals start to draw on their positive and negative emotional experiences from successes and failures to help determine perspectives. At this stage, the proficient performer is able to spontaneously see goals and the most important elements of the situation, but must still decide what to do (Dreyfus and Dreyfus, 2004).

Nina consistently described how she asks for assistance when performing any task. She was not able to articulate what she perceived to be "good" or "bad" when performing the task previously. She struggles to identify the important elements of a situation without assistance,

“Even though I did a strategy memorandum three times before, I will always still ask the manager for help. I don’t like to take things into my own hands. I will still ask other managers even if, under time pressure too, if I am a manager too.”

Nina’s *limited perspective* is significantly different to that of Sarah. Sarah has a holistic perspective and is more able to spontaneously see goals and the most important elements of the situation:

*Sarah: “So one of my clients, we had to do a completeness check. Something random we decided to put into. Testing happens where one tests here, other tests there, and it gets lost along the way. So we decided to put in the working paper of this group trial balance, pointing out where items were tested. So I had to explain to the rest of the team what I needed done in the working paper. So, they couldn’t understand why we had to have it. They thought it was convenient. But no, it wasn’t convenient, it was a **completeness** check, this was a way to test it: at the end of the day everything was actually tested. So I sat down with him, and asked can you think of a reason why?”*

Researcher: “So, were there shocking answers?”

Sarah: “Yes, ‘because then we have to link to one place’ was an answer I got. No, it’s not about convenience, but if you understand why, things become easier to do. Like if you do a test and it fails. You will have to understand WHY”.

Commitment

Dreyfus and Dreyfus (2004) suggests that, with more experience, individuals becomes more and more emotionally involved in a task and have a better understanding of the situation, but they may still be detached in deciding on the outcome, as the final decisions are made by someone more senior. The research shows Nina and Sarah do not display the same levels of commitment to the outcome, which suggests that Nina may not be as emotionally invested when performing her tasks and is therefore more *detached* from the outcome of the tasks. Sarah showed evidence of being a proficient performer by having an *involved understanding, yet detached deciding*. This is confirmed by her answer to whether she is invested in the outcome of the described audit task,

“This client I had since first year, and everything from their side was wrong. For me it was exciting, and going back this year it was only this issue. And this year I feel like I added value and made an impact. They corrected all the control issues in the

past...this year I just wanted the audit to go smoothly, and if it didn't it was going to reflect badly on me. I am more invested now, before you wanted to be over. Now if it doesn't go well, then it's your job, you have to find a solution for it."

Decision

Nina and Sarah's analytic approach to decision-making is contrasted as follows – Nina relies on rules and guidelines when completing audit tasks. More importantly, she relies on her audit managers to confirm her approach when making decisions on some tasks. Sarah's approach is vastly different. Her detailed answer describes her approach,

"This is why at this level you need to have independent thought, cos when you identify a problem now and go to speak to your manager now, it's not for a lack coaching, cos when you tell them what the problem is, they going to ask what you think you should do...I work very closely with my managers, and I discuss problems with them before I do anything."

Part 3 Analysis – Time Pressure

Time Pressure

Nina was unable to explain her approach when faced with tasks to be done under time pressure, other than to say that she simply "asks for help" as she is unsure what to do. On the other hand, Sarah reverts to drawing on explicit knowledge when faced with doing tasks under time pressure. Even when overwhelmed, at times, she does not simply ask for the answers, but rather consults with other managers. She describes going back to her theoretical accounting knowledge when faced with a task, but admits she will use the same approach even when not faced with time pressures. Here she displays *tailored anxiety* levels, but is able to still have a planned response when faced with time pressures.

Conclusion

According to the Dreyfus's model, with more practice and experience, the competent performers may move to the proficient level. At the proficient level, individuals are merely guided by maxims and rules, but are able to apply these to current situations. They are able to see situations holistically and see what is important. They are emotionally involved and able to learn from successes and failures. They are able to make quicker and better decisions to achieve their goals.

Even though Nina and Sarah both have two and a half years of practical audit experience, there is evidence that Nina may be considered to be an advanced beginner, while Sarah may be considered to be a proficient performer.

Nina has developed an understanding of real-life situations through experience, yet still requires extensive support, guidance and affirmation when completing audit tasks. Nina seemingly has little perspective as she needs assistance when deciding on the elements to focus on. She doesn't seem to be as emotionally committed to the outcome of most situations, and her analytic approach to decision-making suggests she may be considered to be an advanced beginner, even though she has two and a half years practical audit experience.

While Sarah still refers to facts, rules, maxims and manager advice, she is more reliant on her past experience when deciding on which actions to take to achieve an outcome. She has a more holistic view of the situation. She has an involved understanding of the situation and is more emotionally invested in the outcome. While Sarah has an analytic approach to decision-making, she displays some evidence of intuitive understanding when describing simple audit tasks. This would suggest that Sarah has recently moved to the proficient performer level.

Summary: third year audit trainees

Tables 21 - 23 summarise Sarah and Nina's responses to the interview questions.

Table 21: Part 1 Analysis - Personal Disposition

Elements	Sarah	Nina
Personal dispositions <ul style="list-style-type: none"> • Perceptual qualities (mental, emotional, spiritual) • Attitudes, beliefs, values, habitual inclination, commitments, professional ethics etc. • Family or other influences • Prior auditing experience • Priority of career choice 	<ul style="list-style-type: none"> • Positive past identification • Positive future identification • Self-confident 	<ul style="list-style-type: none"> • Positive past identification • Negative future identification • Less confident

Table 22: Part 2 Analysis – Dreyfus’s model

Elements	Sarah	Nina
• Interactional awareness	• Expansive professional relational awareness	• Limited professional relational awareness
• Components	• Context free and situational	• Context free and situational
• Perspective	• Experienced	• No perspective
• Commitment	• Involved understanding, detached deciding	• Detached
• Decision	• Analytic	• Analytic

Table 23: Part 3 Analysis – Time Pressure

Elements	Sarah	Nina
• Time Pressure	• Tailored anxiety	• General anxiety

Findings: audit managers

Participant profiles

When this study was conducted, both Ivan, an associate director, and Mark, a senior audit manager, had approximately six years of post-qualification audit experience and are registered CA's(SA). They are both in managerial positions at their respective audit firms. Their core responsibilities include audit training and managing audit engagements. Ivan and Mark are both from Cape Town and their first language is English.

Part 1 Analysis - Personal Disposition

Mark has *positive past identification* and Ivan has *negative past identification* with the auditing profession. Both Ivan and Mark have *positive future identification*, but it seems that Ivan's confidence and personal dispositions will allow him to progress further in his professional career.

Past and Future Identification

Mark explains that his family was not academically strong and had no influence on his decision to pursue a career in accounting and auditing. He, in fact, was a first generation university student and was only influenced to study accounting as he attained good marks in school accounting. His *positive past identification* with the auditing profession came through his vast vacation work experience, where he visited eight audit firms during his academic career. Mark's response suggests his vast vacation work experience helped in his personal and professional development as "*the value [he] got out of it was more than anything else.*" He described himself as an introvert and believed that the vacation work experience "*threw [him] out of his comfort zone*" when he met more people, and became more confident and able to do public speaking. He however sees his vacation work experience as having been of little benefit when he eventually learned the theory at university. This is in line with the Dreyfus's model that suggests that an individual needs to learn the facts and rules first as a novice before applying the theory to real-world situations.

Ivan has a *negative past identification* with the auditing profession as he had neither family influence nor useful vacation work experience. His career choice was significantly influenced by his family, but only in that he chose something totally different from what his family was doing. His father, mother and uncles were all in the medical field, and they had urged him and his older brothers to pursue a career in medicine. His older brother was in information technology, and his other brother was a pilot. He could sense his father's disappointment, and

followed his advice, as a second choice, to study *“generic business. [He] didn’t want to let down [his] dad.”* Ivan explains his one vacation work experience was not useful as *“[he] worked quickly and then spent three days looking for a place to have a client lunch.”*

Ivan and Mark both have *positive future identification* as they both describe having been in the auditing profession for a long time. Surprisingly, they both admitted that being at the audit firms for so long meant that they were in a comfort zone, and it was almost the *“fear of the unknown”* that prevented them from leaving the firms.

Confidence

Ivan’s confidence and personal dispositions suggest that he may progress further in his professional career as compared to Mark. Ivan is attuned to his strengths and weaknesses as an associate director. He describes himself as *“confident, people orientated and yet sometimes arrogant.”* He identifies strongly with his firm’s audit brand and sees himself as being very loyal to his firm, his audit teams and his audit clients.

Similar to Ivan, Mark’s positive attitude, his described values and professional commitment suggest that he will progress in his professional career. However, he does not display the same levels of confidence as Ivan does. He is still confident in his own abilities to lead an audit team, yet seems less confident when dealing with audit clients,

“I think I’m still in a junior mind set where they [clients] are very high up and very important and I’m not. But in reality if I’m dealing with the financial manager of a client, they’re probably not that different to me actually. But most of them are usually older, I struggle a bit there.”

Part 2 Analysis – The Dreyfus’s model

Interactional awareness

Both Ivan and Mark have *expansive professional relational awareness*. Their similar responses suggest that they both have the extensive project management skills, people skills, communication skills, client relations and business skills that are required at that level of expertise.

Both Ivan and Mark identify people skills as the most important skill at that level. To be successful, they agree that audit managers need to be accessible to the audit trainees and to have good client relations. Ivan describes how difficult it is to transfer tacit knowledge into explicit knowledge from his level to that of first year trainees. He notes the difficulty in *“training*

someone to think. You can give them the opportunity to think and challenge them in their thinking. This is where we fall short. What we doing is training, and not coaching, which we are supposed to be doing.” This is in line with the Dreyfus’s model, which suggests that an expert develops intuition which is based on tacit knowledge and that it may be very difficult for the expert to articulate knowledge explicitly.

Ivan describes how his spiritual disposition benefit his workplace relationships. He notes,

“I am a spiritual Christian, and it’s not always about me, it’s about others...it’s about being spiritually engaged. This is what we bring into the workplace. We becoming less and less spiritual. Growing up in religion helps it. If you not spiritually engaged, and we idolize ourselves and become selfish, one thinks that you are perfect...if I am perfect, who are you [audit manager] to tell me...even if you are auditing for 20 years, because I am perfect. That’s the difficulty in teaching someone if they do not want to be taught, because they think they know it all.”

Interestingly, Ivan also identifies negative aspects of his title and status in the audit firm. He describes how being in a managerial position makes him seem less approachable and that it can lead to him being misunderstood. This makes it difficult for him to improve his people skills. Mark’s response contrasts with Ivan’s view in that he describes his relationships with his audit trainees as being friendly and relaxed.

Components

According to the Dreyfus’s model, individuals “no longer rely on principles, rules or guidelines to connect their understanding of the situation to an action.” Through their past experiences and involvement, they have an intuitive grasp of the situation and they rely less on rules and guidelines. Mark and Ivan seem to rely less on contextual rules and guidelines in any given situation. This is evidenced by Mark’s response when asked which elements of a situation he is able to perceive,

“I think my very first reaction would be to draw on experience. So is there a similar situation I’ve experienced where I can apply it to this situation and would that work. I think that’s probably a gut reaction.”

Perspective

The proficient performer is able to spontaneously see goals and the most important elements of the situation, but must still decide what to do. However, at the expert level, an individual is able to zoom in on particular problems, see what needs to be done and immediately see how

to achieve it. Experts have a holistic view of the situation, and performance is usually fluid and effortless (Dreyfus and Dreyfus, 2004). According to the Dreyfus's model, experts still draw on their positive and negative experiences from successes and failures to help determine perspectives. However, they do not consciously choose what to do. Ivan and Mark reflect an *'experienced perspective'* in their responses. Both Ivan and Mark are able to easily describe the elements they focused on when completing the same task the second time. This is seen when Ivan experienced an audit quality review failure. He described the negative financial consequences and how the experience humbled him as he was up for a promotion at the time. This negative experience from his failure impacted on how he performed in all other quality reviews. He was able to identify which elements to focus on and proudly indicated that he has *"never failed a quality review since then."*

Commitment

Mark and Ivan were found to be emotionally invested in the outcome and are responsible for the outcome of the situations. They are like Dreyfus's (2004) expert, who is totally immersed in understanding the situation and completely committed and emotionally involved in the outcome. This is evident by Marks' response,

Mark: "I am the one who has to answer for the outcome."

Researcher: "So the outcome obviously matters to you?"

Mark: "Very much so. ya, ya, and you almost have a sense of responsibility."

Decision

Mark and Ivan both describe intuitive decision-making processes when completing audit tasks. Ivan encapsulates his intuitive decisions as follows,

Ivan: "it's a bit automatic for me. The most logical sounding approach. Someone told me that [my] way isn't always the best or only way to do it. He didn't know how to apply that, so he couldn't do it that way. That is how I think, if I am doing something and mine is the most logical, I will use it. People don't always like it."

Researcher: "Sort of intuitive?"

Ivan: "Yes, it's like a logic test."

However, Ivan and Mark do not always rely on intuition when making decisions. They both described negative past experiences that forced them to be more analytical when performing

the same task a few more times. This is in contrast to the Dreyfus's model, which suggests that experts generally make intuitive decisions.

Part 3 Analysis – Time Pressure

Time Pressure

Benner (2004) notes that anxiety and worry tend to be more general when individuals do not have exposure to a range of situations. However, with more workplace experience, individuals' anxiety levels are more attuned to the situation (Benner, 2004). Ivan's response is similar to Mark's in that they both describe very low levels of anxiety when faced with new tasks. They both revert back to explicit theoretical knowledge, and describe feelings of excitement when completing tasks under time pressure. This is in contrast to all other participants in this study, who either experience general or some levels of anxiety when faced with time pressures.

Conclusion

According to the Dreyfus's model, individuals with years of experience have an intuitive grasp of the situation, performance is fluid and effortless, they are emotionally involved in the outcome of the task and they make intuitive decisions.

The data would suggest that both Ivan and Mark, after years of experience, have reached an expert level of practice. However, Ivan's confidence, personal dispositions and attuned professional relational awareness places him in a stronger position to develop in the auditing profession.

Summary: audit managers

Tables 24 – 26 summarise Mark and Ivan's responses to the interview questions.

Table 24: Part 1 Analysis - Personal Disposition

Elements	Mark	Ivan
Personal dispositions <ul style="list-style-type: none"> • Perceptual qualities (mental, emotional, spiritual) • Attitudes, beliefs, values, habitual inclination, commitments, professional ethics etc. • Family or other influences • Prior auditing experience • Priority of career choice 	<ul style="list-style-type: none"> • Positive past identification • Positive future identification • Self-confident 	<ul style="list-style-type: none"> • Negative past identification • Positive future identification • Self-confident

Table 25: Part 2 Analysis – Dreyfus’s model

Elements	Mark	Ivan
<ul style="list-style-type: none"> • Interactional awareness 	<ul style="list-style-type: none"> • Expansive professional relational awareness 	<ul style="list-style-type: none"> • Expansive professional relational awareness
<ul style="list-style-type: none"> • Components 	<ul style="list-style-type: none"> • Context free and situational 	<ul style="list-style-type: none"> • Context free and situational
<ul style="list-style-type: none"> • Perspective 	<ul style="list-style-type: none"> • Experienced 	<ul style="list-style-type: none"> • Experienced
<ul style="list-style-type: none"> • Commitment 	<ul style="list-style-type: none"> • Involved 	<ul style="list-style-type: none"> • Involved
<ul style="list-style-type: none"> • Decision 	<ul style="list-style-type: none"> • Analytic • Intuitive 	<ul style="list-style-type: none"> • Analytic • Intuitive

Table 26: Part 3 Analysis – Time Pressure

Elements	Mark	Ivan
<ul style="list-style-type: none"> • Time Pressure 	<ul style="list-style-type: none"> • Tailored anxiety 	<ul style="list-style-type: none"> • Tailored anxiety

Findings: analysis across all ten participants

In this section, I compare all ten participants' responses with regard to *past and future identification, confidence, interactional awareness, components, perspective, commitment, decision* and *time pressure*. The analysis of all five pairs allows for comparisons across all five stages of professional development. A summary is seen on page 89.

Past Identification

All participants, with the exception of Mandy and Ivan, had a *positive past identification* with the auditing profession. Each participant brought perceptual qualities, influences and audit experience to the practice. However, some participants are more strongly positioned than others from the beginning because of inherent personal dispositions. It cannot be predicted whether a *positive past identification* will carry an individual through all the levels of professional development, or whether a *negative past identification* prevents professional development to the expert level. However, it appears that both *positive* and *negative past identification* have an impact on the moment of auditing practice.

Future Identification and Confidence

Participants with *negative future identification* (Kwashe, Vernon, Mandy and Nina) were either novices or advanced beginners. Those participants with less confidence in their abilities had a *negative future identification* with the auditing profession. This is evident with Kwashe, Vernon and Nina.

Participants appeared to gain confidence as they move up in the profession, in terms of the levels described in the model. This suggests that exposure to more auditing situations through practical experience enhances self-confidence.

Interactional Awareness

The data suggests that, at the lower levels of novices and advanced beginners, participants have *limited individual professional awareness*, and no *professional relational awareness*. They are more concerned with their own technical skills. They have minimal practical audit experience, therefore they may be unaware of the people skills, client skills, management skills, communication skills and other business skills (*professional relational awareness*) required at the competent, proficient and expert levels. This is interesting as these pervasive skills are taught at the universities, yet seem to only be used later in the workplace.

Components

At the novice level, participants relied on context free rules and guidelines for determining action. For example, Kwashe and Danielle, who are both final year graduates, still rely on textbook rules and instruction to guide their studies and auditing examinations. On the other hand, all the participants who have experience with real situations in the workplace - Vernon, Mandy, Dean, Sarah, Nina, Mark and Ivan rely less on facts and rules, but more on situational experience when completing audit tasks.

Perspective

The Dreyfus's model suggests that individuals with experience learn to choose the elements to focus on to achieve their goals. Participants in this study who are at the novice and advanced beginner levels have *limited or no perspective*, as the model would lead us to expect. With more experience, individuals start to draw on positive and negative emotional experiences from successes and failures to help determine perspectives. Dean, Sarah, Mark and Ivan have developed the ability to have perspective through their experiences, as is reflected in their accounts of prior audit successes and failures.

Commitment

Commitment refers to how involved individuals are in the outcome of a situation, as well as to their capacity to understand and to decide how to address the situation (Dreyfus and Dreyfus, 2004): the novices and advanced beginners had little or no involvement in the outcome of the audit decisions. These decisions were usually made by their audit seniors. However, more senior auditors such as Dean, Sarah, Mark and Ivan, described being responsible for outcomes, and having feelings of disappointment and elation with regard to the outcomes of the situations.

Decision

The Dreyfus's model suggests that decision-making is analytical at all levels, except at the expert level, where decisions are made intuitively. The findings of this study are interesting in this regard, in that the *experts*, Mark and Ivan, did make decisions using intuition based on tacit knowledge and experience. However, they also still referred to analytical thought processes and theoretical textbook rules when faced with new complex audit tasks.

Time Pressure

Benner (2004) notes that anxiety and worry tend to be more general when individuals do not have exposure to a range of situations. However, with more workplace experience, individuals' anxiety levels are more attuned to the situation (Benner, 2004). In line with Benner's finding, the novices and advanced beginners in this study had general anxiety as they identified their limited exposure to many audit situations. At the higher levels, the anxiety of more senior participants was tailored to specific situations. At the expert level, Mark and Ivan describe very low levels of anxiety, except when there are very tight deadlines. However, due to their experience, they are able to troubleshoot very quickly until anxiety is replaced by joy and excitement in completing a new and challenging task.

Summary

The analysis found that there were distinct stages when auditing knowledge, skills and attributes were developed and transferred from an undergraduate Chartered Accounting (CA) academic programme to a professional CA(SA) training programme. The analysis also indicates that other factors such as personal dispositions, personal experiences, interactional awareness and confidence play important roles in facilitating the movement from one level of expertise to another within professional skills development.

Table 5: Summary of all participant responses

(*Legend: ID = Identification; PRA = Professional Relational Awareness; IPA = Individual Professional Awareness)

	1. Kwashe	2. Danielle	3. Brenda	4. Vernon	5. Mandy	6. Dean	7. Sarah	8. Nina	9. Mark	10. Ivan
Level	Graduate	Graduate	1 st year trainee	1 st year trainee	2 nd year trainee	2 nd year trainee	3 rd year trainee	3 rd year trainee	Senior Manager	Associate Director
Stage 1: Personal Disposition										
• Perceptual qualities	• Positive past ID	• Positive past ID	• Positive past ID	• Positive past ID	• Negative past ID	• Positive past ID	• Positive past ID	• Positive past ID	• Positive past ID	• Negative past ID
• Family and other influences	• Negative future ID	• Positive future ID	• Positive future ID	• Negative future ID	• Negative future ID	• Positive future ID	• Positive future ID	• Negative future ID	• Positive future ID	• Positive future ID
• Prior audit experience	• Less confident	• Self-confident	• Less confident	• Less confident	• Self-confident	• Self-confident	• Self-confident	• Less confident	• Self-confident	• Self-confident
• Priority of career choice										
Stage 2: Dreyfus Model										
• Interactional awareness	• Limited IPA	• Expansive IPA	• Limited IPA	• Limited IPA	• Limited PRA	• Expansive PRA	• Expansive PRA	• Limited PRA	• Expansive PRA	• Expansive PRA
• Components	• Context free	• Context free	• Contextual and situational	• Contextual and situational	• Contextual and situational	• Contextual and situational	• Contextual and situational	• Contextual and situational	• Contextual and situational	• Contextual and situational
• Perspective	• None	• None	• None	• Limited	• None	• Chosen	• Experience	• None	• Experience	• Experience
• Commitment	• Detached	• Detached	• Detached	• Detached	• Detached	• Detached understanding and deciding. Involved outcome	• Involved understanding, detached deciding	• Detached	• Involved	• Involved
• Decision	• Analytic	• Analytic	• Analytic	• Analytic	• Analytic	• Analytic	• Analytic	• Analytic	• Analytic	• Analytic
Stage 3: Time Pressure										
• Time Pressure	• General anxiety	• Tailored anxiety	• No emotion described	• General anxiety	• General anxiety	• Tailored anxiety	• Tailored anxiety	• General anxiety	• Tailored anxiety	• Tailored anxiety

Chapter 6 – Conclusion

This study stemmed from the challenge for academics to facilitate the acquisition and transfer of theoretical auditing knowledge in preparation of and application for the world of work. Research studies suggest that there is a dilemma within continuing professional education and development, which mainly relates to the tension between academic knowledge, skills and attributes and the applied knowledge, skills and attributes required in professional auditing practice. The study addressed the **research question**: How are professional knowledge, auditing skills and expertise developed and how do these transfer for individuals at different stages of their professional auditing careers? The **theoretical framework** developed in Chapter 3 provides a language of description to assess the levels of expertise in professional development.

The findings of the study are not intended to be empirically generalizable. Instead, the purpose is to develop a conceptualization and explanation of skills development as auditors move through the stages of their academic and professional education.

This study took the Dreyfus's model of skill acquisition as its starting point. However, this model was expanded to take into account the impact of personal dispositions, interactional awareness and time pressure on the movement from one level of expertise to another.

The study found that there were distinct stages in skills development, generally in line with those suggested by the Dreyfus's model, and that there were major shifts in individuals' practice with the development of professional expertise. Central to the movement from one stage to the next is the way in which meaningful connections are made between what is already known (theory) and its application (practice). These stages are structured into the movement from an educational setting to a workplace setting. It follows that professional learning and development is a journey over a period of time.

It is often suggested that separating 'theory' (at the university) and 'practice' (in the workplace) has a negative impact on professional development. This study demonstrates that even though theoretical concepts are mainly taught in a formal setting, this can be seen as building a platform for individuals to reach higher levels of expertise when they move into practice and continue professional development. However, a negative implication of this movement from the classroom to the workplace was that participants displayed high levels of anxiety and less confidence in the earlier stages of their careers as they found difficulty in linking the theory to practical scenarios in the workplace. This would suggest that there is value in compulsory practical components, such as vacation work, to help learners with these areas of stress. Most participants agreed that having positive vacation work experiences helped with confidence,

and provided a context to refer to later in their professional development. Interestingly, most participants suggested that it was easier to learn theoretical principles at university after having done vacation work.

Future research is therefore needed into re-introducing compulsory vacation work, and its impact on curriculum design, pedagogy, assessments and further professional development in the educational and workplace settings.

The study suggested that there is a clear relationship between explicit and tacit knowledge at each level of expertise: individuals at the proficient and expert levels draw more heavily on tacit knowledge based on intuition, which can only be attained through experiential learning over time. As suggested by the Dreyfus's model, this implies that explicit, decontextualized knowledge is best taught at the early stages of skills development, as evidenced by the novice and advanced beginners.

However, there were also some interesting observations that suggest that experts still refer to analytical thought processes and explicit theoretical textbook rules when faced with new complex audit tasks. This has implications for further research into pedagogic practices and curriculum design where it is acceptable to teach theory, to a certain extent, in an educational setting, followed by ongoing professional development in the workplace.

With regard to the impact of personal dispositions, interactional awareness and time pressure on the movement from one level of expertise to another, it was found that other factors, such as past and future identification with the profession and confidence, play an important role in skill development: both *positive and negative past identification* have an impact on the moment of auditing practice. However, it does not necessarily follow that having a negative past identification will prevent successful skill development. Ivan, placed at an expert level, is an example of a case where having a *negative past identification* did not prevent the development of a *positive future identification* with the auditing profession. This suggests that individuals can still reach high levels of expertise without having supportive prior experience. These findings have pedagogic implications: academics can provide students with positive affirmation that, despite the challenges of having large classes, language difficulties, lack of prior business experience, personal obstacles etc., still enable them to reach high levels of professional expertise.

The study also suggests that having prior vacation work experience leads to a positive future identification with the profession,

Finally, this study compares the levels of expertise of different individuals at different stages in their professional careers. I propose further research into the nature of professional development of one or more individuals over a longer period of time. A proposed longitudinal study may provide better insights into the Dreyfus's model in terms of individual growth and professional development.

References

- Abbott, A. 1988. *The system of professions. An essay on the division of expert labor*. Chicago, IL: University of Chicago Press.
- Ahadiat, N. and Martin, R.M. 2015. Attributes, preparations, and skills accounting professionals seek in college graduates for entry-level positions vs. promotion. *Journal of Business and Accounting*, 8(1): 179 – 187.
- Auerbach, J.E. 2005. Inviting a dialogue about core coaching competencies. Paper presented at the Coaching Research Symposium, San Jose, CA.
- Association of Chartered Certified Accountants (ACCA). 2015. Job hunting: skills and experience. [Online]. Available at: <http://careers.accaglobal.com/careers-advice/job-hunting/skills-and-experience/top-10-global-in-demand-skills.html>. [Accessed 18 September 2016].
- Barac, K. 2009. South African training officers' perceptions of the knowledge and skills requirements of entry-level trainee accountants. *Meditari Accountancy Research*, 17(2): 19 – 46.
- Barac, K. 2012. The relationship between devoted study time and auditing learning approaches followed by prospective chartered accountants in South Africa. *South African Journal of Accounting Research*, 26(1): 17–42.
- Barnett, R. 2000. University knowledge in an age of supercomplexity. *Higher Education*, 40: 409 – 422.
- Benner, P. 1982. From novice to expert. *American Journal of Nursing*, 82, 402-407.
- Benner, P. 1984. *From novice to expert: Excellence and power in clinical nursing practice*. Reading, MA: Addison-Wesley.
- Benner, P. 2004. Using the Dreyfus's model of skill acquisition to describe and interpret skill acquisition and clinical judgment in nursing practice and education. *Bulletin of Science, Technology and Society*, 24(3): 188 – 199.
- Bennett, J.L. and Rogers, K.D.B. 2011. Skill acquisition of executive coaches : a journey toward mastery. *Discussion Paper 2011-04*. Queens University of Charlotte.

- Bernard, H.R. 2002. *Research methods in anthropology: qualitative and quantitative methods*, 3rd ed, AltaMira Oress, Walnut Creek, CA.
- Bloom, B.S. (Ed.), Engelhart, M.D., Furst, E.J., Hill, W.H. and Krathwohl, D.R. 1956. *Taxonomy of educational objectives: The classification of educational goals. Handbook 1: Cognitive domain*. New York: David McKay.
- Boritz, J.E. and Carnaghan, C.A. 2003. Competency-based education and assessment for the accounting profession : a critical review. *Canadian Accounting Perspectives*, 2(1): 7 – 42.
- Borko, H. 2004. Professional development and teacher learning: mapping the terrain. *Educational Researcher*, 33 (8): 3 - 15.
- Dall'Alba, G. 2002. Understanding medical practice: different outcomes of a premedical program. *Advances in Health Sciences Education*, 7: 163 - 177.
- Dall'Alba, G. 2004. Understanding professional practice: investigations before and after an educational program. *Studies in Higher Education*, 29: 679 - 692.
- Dall'Alba, G. and Sandberg, J. 2006. Unveiling professional development: a critical review of stage models. *Review of Educational Research*, 76 (3): 383 – 412.
- Dewey, J. 1915. *The school and society*. Rev. ed, Chicago: University of Chicago Press.
- Dreyfus, H. and Dreyfus, S. 1980. *The five-stage model of the mental activities involved in directed skill acquisition*. Berkeley, CA: Operations Research Center, University of California.
- Dreyfus, H. and Dreyfus, S. 1986. *Mind over machine: The power of human intuition and expertise in the era of the computer*. New York, NY: Free Press.
- Dreyfus, H. and Dreyfus, S. 2004. The ethical implications of the five-stage skill-acquisition model. *Bulletin of Science, Technology & Society*, 24(3): 251 - 264.
- Edwards, A. 2012. The role of common knowledge in achieving collaboration across practices. *Learning, Culture and Social Interaction*, 1: 22 - 32.
- Eraut, M. 1994. *Developing Professional Knowledge and Competence*. London: The Falmer Press.

- Eraut, M. 2009. Transfer of knowledge between education and workplace settings. *Knowledge, Values and Educational Policy: A Critical Perspective*, 65: 1 – 17.
- Ericsson, K.A. and Smith, J. 1991. *Toward a general theory of expertise: prospects and limits*. New York: Cambridge University Press.
- Gall, M.D., Gall, J.P. and Borg, W.R. 2003. *Educational research: an introduction* (7th ed.). Boston, MA: A & B Publications.
- Goode, W.J. 1969. The theoretical limits of professionalisation, in ETZIONI, A. (Ed.) *The Semi-Professions and their Organisation*. New York: Free Press.
- Grant, K.A. 2007. Tacit knowledge revisited - we can still learn from Polanyi. *Journal of Knowledge Management*, 5(2): 173 - 180.
- Greenwood, R. and Hinings, C.R. 1996. Understanding radical organizational change: bringing together the old and new institutionalism. *Academy of Management Review*, 21: 1022 - 1054.
- Gobet, F. and Chassy, P. 2008. Towards an alternative to Benner's theory of expert intuition in nursing: a discussion paper. *International Journal of Nursing Studies*, 45: 129 - 139.
- Hammond, K.R. 1988. *Human judgement and decision making*, New York: Hemisphere.
- Hoffman, R.R. (Ed.). 1992. *The psychology of expertise: cognitive research and empirical AI*. New York: Springer-Verlag.
- Honken, N. 2013. Dreyfus five-stage model of adult skills acquisition applied to engineering lifelong. *American Society for Engineering Education*.
- Howell, W.C. 1982. *Information processing and decision making*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Independent Regulatory Board for Auditors (IRBA). 2016. [Online]. Available at: <http://www.irba.co.za/about-us/what-we-do>. [Accessed 18 September 2016].
- Johns, C. 2009. *Becoming a reflective practitioner*. 3rd ed. West Sussex: John Wiley and Sons.

- Koenig, M.E.D. 2014. *What is KM? Knowledge management explained*. [Online]. Available at: <http://www.kmworld.com/Articles/Editorial/What-Is-.../What-is-KM-Knowledge-Management-Explained-82405.aspx>. [Accessed 15 September 2016].
- Lave, J. 1993. The practice of learning. In S. Chaiklin & J. Lave (Eds.), *Understanding practice: perspectives on activity and context*: 3 - 32. Cambridge, UK: Cambridge University Press.
- Lewis, J.L. and Sheppard, S.R. 2006. Culture and communication: can landscape visualization improve forest management consultation with indigenous communities?, *Landscape and Urban Planning*, 77(3): 291 - 313.
- Lucas, U. 2001. Deep and surface approaches to learning within introductory accounting: a phenomenographic study. *Accounting Education an International Journal*, 10 (2): 161 - 184.
- Maxwell, J.A. 2008. Designing a qualitative study. *The Sage handbook of applied social research methods*: 214 – 253. London: Sage Publications.
- Merton, R.K. 1960. Some thoughts on the professions in American society. Providence: Brown University Papers No.37.
- Moe, V. 2004. How to understand skill acquisition in sport. *Bulletin of Science, Technology & Society*, 24(3): 213 - 224.
- Nonaka, I. and Takeuchi, H. 1991. The knowledge creating company. *Harvard Business Review* 69(6).
- Nonaka, I. and Takeuchi, H. 1996. *The knowledge creating company: how Japanese companies create the dynamics of innovation*. Oxford: Oxford University Press.
- Oakeshott, M. 1962. *Rationalism in politics: and other essays*. London: Methuen.
- Oxford advanced learner's dictionary*. 2016. 9th ed. Oxford: Oxford University Press
- Palmer, K.N., Ziegenfuss, D.E. and Pinsker, R.E. 2004. International knowledge, skills, and abilities of auditors/accountants. *Managerial Auditing Journal*, 19(7): 889 – 896.
- Pink, D.H. 2009. *Drive: The surprising truth about what motivates us*. New York, NY: Riverhead Books.
- Polanyi, M. 1958. *Personal knowledge: towards a post-critical philosophy*. Chicago: The University of Chicago Press.

- Polanyi, M. 1966. *The tacit dimension*. London: Routledge & Kegan Paul
- Putnam, R.T. and Borko, H. 2000. What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher*, 29(1): 4 - 15.
- Sandberg, J. and Pinnington, A. 2006. Competence in professional practice: An ontological framework. *Journal of Management Studies*, 46(7).
- Schon, D. 1987. *Educating the reflective practitioner: towards a new design for teaching and learning in the professions*. San Francisco: Jossey Boss.
- Shay, S. 2013. Conceptualizing curriculum differentiation in higher education: a sociology of knowledge point of view. *British Journal of Sociology of Education*, 34(4): 563 – 582.
- Smeby, J.C. and Heggen, K. 2012. Coherence and the development of professional knowledge and skills. *Journal of Education and Work*, 27(1): 71 - 91.
- South African Institute of Chartered Accountants (SAICA) 2014. *Competency Framework: Detailed Guidance for the Academic Programme*, issued by SAICA: Johannesburg.
- Sternberg, R.J. and Ben-Zeev, T. 2001. *Complex cognition: the psychology of human thought*. New York: Oxford University Press.
- Taylor, W. 2007. *Conscious competence learning model discussion* [Online]. Available at <http://www.businessballs.com/consciouscompetencelearningmodel.htm>. Accessed 15 September 2016.
- Tongco, M.D.C. 2007. Purposive sampling as a tool for informant selection. *Ethnobotany Research and Applications*, 5: 147 - 158.
- Usher, L., Usher, M. and Usher, D. 2003. Nurturing five dispositions of effective teachers. *2nd National Symposium on Educator Dispositions* held at Eastern Kentucky University, Richmond, Kentucky in 2003.
- Vanderburg, W. 2004. The human skill-acquisition model of Stuart Dreyfus: stemming the tide of confusing our humanity with machines. *Bulletin of Science, Technology & Society*, 24(3): 175 - 176.
- Wessels, P.J. 2004. Information technology and the education of professional accountants. *Meditari Accountancy Research*, 12(1): 219 - 234.

- Wessels, P.J. 2005. Critical information and communication technology (ICT) skills for professional accountants. *Meditari Accountancy Research*, 13(1): 87 - 103.
- Wessels, P.J. 2006. The South African business environment in which accountants function and the role of information technology in that environment. *Meditari Accountancy Research*, 14(2): 131 - 149.
- Wessels, P.J. 2008. The identification and discussion of strategies for implementing an IT skills framework in the education of professional accountants. *South African Journal of Accounting Research*, 22(1): 147 - 181.
- Williams, K. 2008. *Troubling the concept of the "academic profession" in the 21st Century higher education*. Dordrecht: Springer Science & Business Media B.V.
- Wilson, R.M.S. 2011. Alignment in accounting education and training. *Accounting Education: an international journal*, 20(1): 3 – 16.
- Worthy, C. 1996. Clinical ladders: can we afford them? *Nursing Management*, 27: 33 - 34.