

# **Creating access to powerful knowledge in accounting education:**

**A case study of pedagogies used in an accountancy diploma**

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## **Abstract**

Students enter universities to obtain a qualification that they believe will enhance their chances of employment and thereby a better future. But the World Economic Forum states that the world of work is changing so fast that 75% of companies are not prepared for the pace at which their industries are changing. The field of accounting, and accounting education in particular, is facing significant challenges as accountants change from being ‘number crunchers’ to engaging business partners. There is also a decrease in the demand for accountants, at the same time as increasing complaints that accounting graduates are unprepared for their work.

These contextual challenges raise the question of ‘What can higher education institutions do to prepare students for a future of rapid change and uncertainty, specifically within the field of accounting?’ This study argues that epistemological access to powerful knowledge is essential for creating lifelong learners that can adapt to change. The study draws on Legitimation Code Theory (LCT) to visualise the powerful knowledge that students require access to in two third-year modules within a Diploma of Accounting. This is followed by an analysis of the pedagogies used in the two modules and how access to powerful knowledge is enabled (or hindered) through the pedagogical practices. Data include lecturer observations, course documents and interviews.

The study found that there are significant differences between the knowledge structures of the modules, despite them being part of the same discipline. Furthermore, through the analysis I was able to identify key patterns in the pedagogies that enable access to powerful knowledge as well as pedagogical approaches that may constrain access to powerful knowledge. The findings of this study can help accounting lecturers as well as lecturers in similar disciplines to consider how their pedagogical practices enable epistemological access to the target powerful knowledge of their discipline.

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## Acronyms

|        |                                                    |
|--------|----------------------------------------------------|
| AAT    | Association for Accounting Technicians             |
| ACCA   | Association of Chartered Certified Accountants     |
| AIC    | Auditing and Internal Control                      |
| AICPA  | American Institute of Certified Public Accountants |
| AT(SA) | Accounting Technicians (South Africa)              |
| CA(SA) | Chartered Accountant (South Africa)                |
| CBE    | College of Business and Economics                  |
| CFM    | Cost and Management Accounting                     |
| CGMA   | Chartered Global Management Accountant             |
| CIMA   | Chartered Institute of Management Accountants      |
| CPD    | Continuing Professional Development                |
| CTA    | Postgraduate Diploma in Accounting science         |
| CVP    | Cost-Volume-Profit                                 |
| GAAP   | Generally Accepted Accounting Principles           |
| IAESB  | International Accounting Education Standards Board |
| IES    | International Educational Standards                |
| IFAC   | International Federation of Accountants            |
| IIA    | Institute of Internal Auditors                     |
| IFRS   | International Financial Reporting Standards        |
| IPD    | Initial Professional Development                   |
| IRBA   | Independent Regulatory Board for Auditors          |
| ISA    | International Standards on Auditing                |
| LCT    | Legitimation Code Theory                           |
| LMS    | Learning Management System                         |

|       |                                                  |
|-------|--------------------------------------------------|
| SAICA | South African Institute of Chartered Accountants |
| SD    | Semantic density                                 |
| SFL   | Systemic Functional Linguistics                  |
| SG    | Semantic gravity                                 |
| UK    | United Kingdom                                   |
| USA   | United States of America                         |
| VW    | Volkswagen                                       |

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# CHAPTER 1: INTRODUCTION

## 1.1 Introduction

This is a study, by a lecturer, seeking to gain a better understanding of the kind of teaching practices that will enable students to become accountancy professionals. Like many other lecturers, I had no educational or relevant teacher training when I became a lecturer (Luckett, 2011; Quinn & Vorster, 2019). My idea of a lecturer was constructed from my own observations of my father as an academic, the stories he told me of his job, and my own experience as a student many years ago. I never thought that being a lecturer could be so rewarding yet challenging and exhausting at the same time. Before I became a lecturer, I worked for about 12 years as a management accountant, mainly in the mining industry. However, I became a lecturer because I wanted to be in a position to help young people reach their potential. My goal was, and still is, to assist and guide students on a journey of learning and discovery that will enhance their chances of success in an increasingly uncertain world. The change from the mining industry to academia was, and still is, a steep learning curve. I remember standing in front of about 200 second year students in September 2013, my first month as a lecturer, asking myself *‘What am I doing? Am I teaching in a way that will help the students to understand and learn the content?’*

On that day, now 11 years ago, I realised that I did not know how to teach or how to set ‘good’ assessments. I realised that teaching is no easy task, as teaching does not necessarily lead to learning. This realisation took me to a place where I had more questions than answers. I asked questions like: *‘What is the best way to teach the content? How should the content be assessed? Why are the students struggling? Who are the students in the class? What can lecturers do differently to help students? Can one really say that the students do not have the ability to succeed? What are the prospects for the students once they have completed the diploma?’*

These questions, and the desire to find solutions and answers, marked the beginning of my journey to discover how to be a better lecturer. A first step was to attend various workshops offered by my University’s Centre for Academic Development. These workshops were often generic, and I found it hard to relate the content to my context. It was further interesting to note that the general view of many academics was that the problem lies within the students, who are labelled as underprepared and lazy (Smit, 2012). This discourse ignores the under-preparedness

of higher education for meeting the needs of the changing student body (Smit, 2012), the student as a social being, as well as the role that universities and lecturers have in student learning and success. I started to realise that perhaps I needed to look at my pedagogic practice and how I, as a lecturer, could guide students to become knowledgeable and competent professionals that can adapt as the world of work changes around them and as their own needs, plans, and goals change, too.

Thus, this study is driven by personal and professional reasons. Personally, I wanted to gain a better understanding of what ‘good’ pedagogies are and how to be a ‘good’ lecturer. This goal leads to the professional reasons for the study: as I gain a better understanding of ‘good’ pedagogical practices, it is my hope that the students that I teach will be able to develop the knowledge and competencies that they require. Additionally, through this study, I hope that I will be able to assist colleagues and other lecturers who might have similar questions. There are probably too many questions to answer in one study. As such, this study is a starting point to gain a better understanding of the kinds of pedagogical practices that are required to enable students to become knowledgeable and competent professionals in the world.

In the following section I contextualise the study as I look at the impact of changing social, political, environmental, and economic conditions on the world of work. This is followed by a discussion of the context of South Africa and specifically higher education before I turn to the aim of the study, the research questions, and a brief outline of the chapters in this thesis.

## **1.2 The impact of the changing world on the field of accounting**

The world is changing rapidly and on multiple fronts – socially, environmentally, economically, and politically. Over the past 20 to 30 years, we have seen the development of technology that is impacting on how we live, communicate and work (Siemens, 2005). The rate of change is so fast that 75% of organisations are not prepared for the pace at which their industries are changing (Carvalho & Woefray, 2023). The impact of technology is seen in the business world, as companies use computerised systems and artificial intelligence (AI) to perform repetitive tasks. Kristalina Georgieva (2022, n.p.), Managing Director of the International Monetary Fund (IMF), recently stated that the world is moving from relative predictability “to a world with more fragility – greater uncertainty, higher economic volatility,

geopolitical confrontations, and more frequent and devastating natural disasters – a world in which any country can be thrown off course more easily and more often.” As such, the changes in the world have implications for the worlds of work that students will enter upon completion of their qualification(s).

Technological development is leading to an increased level of automation. This automation impacts various lower-skilled job levels as functions like capturing of documents and invoicing can now be done by machines or computer systems (CIMA, 2018). Automation also leads to new work methods like offshoring and outsourcing of the more mundane, entry-level jobs to shared service centres (Herbert et al., 2020). As such, the implications of the technological developments on the field of accounting are seen in two different areas. Firstly, it is changing the way in which accountants are working<sup>1</sup>. Secondly, there is a decreasing demand for some of the roles accountants play, as seen in the indication from the World Economic Forum that over the next few years some of the largest losses in jobs will include roles in accounting, book-keeping, and payroll services (WEF, 2023).

Given the rate of change in the world as well as in the discipline of accounting, it is arguably no longer sufficient to educate students only for a future that is currently known or anticipated. Rather, equipping students with the knowledge, skills, and attributes to adapt to an unknown future is becoming increasingly important. A key part of this process is that students need to develop a professional identity, in the case of this study, the professional identity of an accountant or accounting practitioner. Therefore, there is a need for the curriculum to move away from a narrow focus on content knowledge. Barnett and Coate (2004) argue that human development that is adequate for a changing and uncertain world ought to be part of the focus in higher education. While one cannot deny that students need to learn about accounting, at the same time, however, they need to be overtly guided (developed) to become accountants with professional values, attitudes, behaviours, and skills.

As this study is focused on an accountancy diploma offered by a comprehensive university, an understanding of the context of South Africa and the higher education landscape is important. Therefore, the focus of the next section is on the context of South Africa, before I turn to the research aims of this study.

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<sup>1</sup> These changes are discussed in more detail in Chapter 2, Section 2.5.

### 1.3 Context of South Africa

#### 1.3.1 *Who are the students?*

Since the end of apartheid in South Africa in 1994, access to higher education has widened, resulting in a more diverse student body. With diversity, I refer to the educational, social and linguistic background of the students (CHE, 2013). Diversity brings challenges, as there may be significant differences between the lived experiences of students and lecturers, impacting on students' and lecturers' expectations, the learning practices of students, and the pedagogical practices of lecturers. However, diversity provides more opportunities to learn and grow with people. Together with the opportunities and challenges afforded by diversity, past segregation still has an impact on education, even though Apartheid ended almost thirty years ago (Bozalek & Boughey, 2012). Access to higher education is still impacted by racial inequality and socio-economic status (Maila & Ross, 2018), meaning that the 'playing field' is not equal as students do not all have access to the same standard of basic education, financial support is inadequate, the language of instruction at university might be different to their home language, and some students have to manage their own learning for the first time (Lewin & Mawoyo, 2014; Machingambi & Wadesongo, 2012). These are just some of the issues that create barriers for students and may result in low success rates.

South Africa's higher education success rates are not only low but also racially skewed as White students perform significantly better than African and Coloured students in higher education (CHE, 2023; Essop, 2020). Lecturers need to keep these differences and the unequal 'playing field' in mind, as an understanding and awareness of who the students are is important for enabling meaningful access to the specialised, disciplinary knowledge of the discipline(s). To enable access, lecturers also need to make the learning, reading, and writing demands of the discipline as explicit as possible to their students.

If lecturers do not take the student into account<sup>2</sup> – their backgrounds, prior learning, their knowledges and values, and so on – not only is access to university learning impacted, but lecturers may also resort to a deficit discourse which views (mainly Black) students as being

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<sup>2</sup> Here I am not arguing that lecturers require detail knowledge of individual students, but rather that lecturers require a good understanding of the cohort of students that they are teaching.

under-prepared for higher education when they do not engage or learn as expected (Boughey & McKenna, 2016). Success, when understood through this deficit lens, is seen to depend on factors inherent to the individual student, rather than seen as influenced by the social context which the student comes from and the context they are entering into when coming to university. Boughey and McKenna (2016) explain how this results in students being seen as ‘decontextualised’ beings. In this view, students’ history, culture and language are ignored, meaning that who they are and where they come from is not valued or is deemed to have little impact on their chances to succeed at university. Rather, a student is understood to either have what it takes to succeed or not. This is evident in accounting education where learners are seen as lacking the necessary skills required by the discipline, with employers complaining about inadequate problem-solving and communication skills (Fouché, 2020). Who the students are, their prior knowledge, home and school learning, goals, and learning needs are downplayed. This discourse ignores the under-preparedness of higher education for meeting the needs of the changing student body (Smit, 2012), as the student as a social being and the role that universities and lecturers have in student learning and success are disregarded.

Furthermore, there is a gap between exit-level at secondary school and entry-level at higher education. This gap speaks to the difference between the ‘taken for granted knowledge’ and the knowledge students have acquired in prior learning (CHE, 2013). The articulation gap affects students from all backgrounds. It is complex and involves subject knowledge as well as academic literacies. To understand the articulation gap and to help students bridge the gap through the curriculum, teaching, and assessment, lecturers need to have a better understanding of who the students are, i.e., their background and their prior learning (Lewin & Mawoyo, 2014). Under-preparedness does not mean that a student does not have the cognitive ability to succeed. Students are struggling because they do not know the ‘Discourses’ of the university (Boughey & McKenna, 2016). The big ‘D’ here denotes James Paul Gee’s definition of Discourses as more than knowledge and skills, encompassing values, behaviours, actions, and forms of knowing (Gee, 2015).

The home and school backgrounds all students come from shape how they engage with the university context, academically and socially. Universities are not all the same, and they serve different learning and teaching purposes, which in turn influences lecturers’ expectations, students’ expectations, and the teaching and learning practices at the university. To explore these issues, I turn to an overview of the higher education landscape in South Africa post-1994,

and how this has shaped the identity and character of different universities, including the University of Johannesburg, a comprehensive university, and the research site for this study.

### ***1.3.2 Overview of the higher education landscape in South Africa***

Prior to the Education White Paper 3 (1997), ‘A programme for the transformation of higher education’, there were two types of higher education institutions in South Africa: traditional universities; and Technikons and training colleges, such as teaching and nursing colleges. The focus of the universities was on general and professional education, with subjects such as law, medicine, political science and sociology. Technikons and colleges were focussed on vocational and career-orientated qualifications, such as nursing, design, journalism, and teaching (Shay, 2015a). The qualifications offered by the technikons were typically three-year vocationally-orientated diplomas while only universities could offer three-year formative degrees (Garraway & Winberg, 2019; Shay et al., 2011; Shay, 2015a). Furthermore, universities included a focus on producing research, while technikons placed greater emphasis on classroom or lecture hall teaching and learning and could not offer postgraduate qualifications. This, however, changed in the early 2000s with the restructuring of higher education institutions as part of a process to establish a single, coordinated and differentiated higher education system, offering quality education to all South Africans (Badat, 2007; Bozalek & Boughey, 2012; White Paper 3, 1997). As a result of this process, a series of mergers took place, including the amalgamation of colleges into universities. South Africa went from 36 to 26 public universities: 12 traditional universities; eight universities of technology (previously technikons); and six comprehensive universities.

Comprehensive universities were largely established through the merger of traditional universities and technikons and colleges with the hope to increase access to a wider diversity of students and to improve articulation between different qualification types (Shay et al., 2011; Webbstock, 2016). As such the comprehensive universities can offer vocational and career-focussed qualifications as well as professional and general qualifications. With the mergers, there was a decoupling of the qualification pathway and the types of institutions (Shay, 2015a; Webbstock, 2016). Therefore, all three types of qualifications (vocational, professional, and general) can now be offered by any of the traditional universities, universities of technology or comprehensive universities.

At a high level, degrees (professional and general) are intended to foreground theoretical knowledge, be focused on a broader field of practice, and be applicable to a wide context (Muller, 2009; Shay, 2013, 2015a). Diplomas (vocational), by contrast, are intended to be more practical, and focussed on the specific skills and knowledge required for practice (Muller, 2009; Shay, 2013, 2015a). The knowledge base in vocational education is generally characterised by principles of practice, or theoretically informed practice (Garraway & Winberg, 2019; Shay, 2013). As such, vocational knowledge consists of principled theoretical knowledge as well as practice or procedural knowledge. Since the mergers, there is a bigger challenge for universities of technology and comprehensive universities to keep the focus on the purpose of qualification, specifically vocational education (Garraway & Winberg, 2019; Shay, 2015a). Due to various tensions, including funding and prestige, academic drift is taking place with degree programmes replacing diploma programmes (Shay et al., 2011). Comprehensive universities are facing additional challenges, as policies often apply across all qualifications and these institutions lack their own identity (Webbstock, 2016). As this study is focussed on a three-year diploma (vocational education) at a comprehensive university, an awareness of these challenges is important.

To recap and summarise then, the world is changing at a rapid rate, with the only constant being change. These changes have implications for the field of accounting, as the ways accountants work are shifting and due to technological developments, many of the roles of accountants can now be done by computer systems as well as AI, resulting in a decrease in accounting jobs. The decrease in jobs is a concern in a country like South Africa, with its high Gini coefficient and associated high unemployment and poverty levels. As such, many students see higher education as their way to a better future and out of poverty (Boughey & McKenna, 2021; Case et al., 2018). The concern, however, is that formal access to university does not necessarily mean access to the knowledge and ways of being distributed by the university. Or, as Wheelahan (2015) explains, social inclusion does not necessarily lead to social justice. This is because social inclusion is concerned with providing a place, but without considering the nature of participation; while social justice is about the nature of participation and the outcomes that can be achieved. The question one then needs to ask is, if diploma (vocational) qualifications are more practical, and focussed on specific skills, yet the world of work is changing, what kind of access are these qualifications providing? And will this access enable students to participate and succeed in the world of work?

## **1.4 Research questions**

The main aim of this study is to gain insight into how the pedagogies in a knowledge-driven vocational field, like accounting, are preparing students to become lifelong learners in a rapidly changing world. As such, the study is concerned with how the pedagogies are enabling or constraining epistemological access to powerful knowledge. Epistemological access is a concept was first developed by Wally Morrow in 2009 and it is discussed in detail in Chapter 3. In short, it refers to access that goes beyond formal access to the institution as it includes access to the knowledge of the discipline. Powerful knowledge, also unpacked in detail in Chapter 3 is understood in this study as knowledge that gives students access to the ‘goods’ they need to succeed in their chosen field, meaning relevant skills, aptitudes, concepts, processes, and practices. To achieve this aim, this study addressed the following overarching research question:

**In what ways is access to powerful knowledge enabled and/or constrained in accounting education?**

This overarching research question was addressed through two sub-questions:

- What is powerful knowledge in accounting education?
- How is access to powerful knowledge enabled and/or constrained in accounting education through the pedagogies used?

By addressing these questions, this exploratory study offers a different way of looking at how the pedagogies used in a knowledge-driven vocational field impact on epistemological access to powerful knowledge, and which can bring students into a transformative relationship with knowledge. To do this work, Legitimation Code Theory (LCT) provided the necessary theoretical lenses and analytical tools to explore and question the pedagogies.

## **1.5 Structure of the thesis**

This chapter has outlined the motivation for this study and why this study is important in the context of a changing and uncertain world, especially within the context of South Africa. This discussion is extended in Chapters 2 and 3. Chapter 2 starts by unpacking the field of accounting. It provides an overview of the different kinds of accountants, the regulatory and

professional bodies, and the knowledge, skills, attributes, and dispositions that students need to obtain as future accountancy professionals. This is followed by a discussion of the changes within the field of accounting, as accountants are no longer seen as ‘number-crunchers’, but rather as engaged business partners. The chapter then draws on relevant accounting education literature to discuss the criticisms and requirements of the field in relation to curriculum, pedagogy, and assessments. The chapter concludes by asking, ‘Do the requirements of the field of accounting align with the purposes of higher education?’

To address this question, Chapter 3 starts with a discussion of the purposes of higher education and the concern of a narrow view of higher education for employment. It argues that the educational purpose of higher education is much wider, incorporating the transformative nature of a university education. In essence, there is a need for universities to provide all students with meaningful access to the ‘goods’ of a higher education: advanced skills, disciplinary knowledge, and ways of thinking, reading, writing, and acting that enable them to become specialised ‘knowers’, for example, accountants (or lawyers, historians, etc.). This is the powerful knowledge this thesis is concerned with. The chapter elaborates on the kind of access and the specialised knowledges that are required to enable a transformative education and what this means for a vocational qualification, like the Diploma in Accountancy.

In Chapter 4, the theoretical framework adopted in this study, drawn from Legitimation Code Theory (LCT), is explained. The chapter starts with an in-depth discussion of LCT – what it is, how others have used the theory, and why LCT is suitable to address the research questions posed in this study. Hereafter, the specific LCT tools I have used in the analysis of the data, constellations and Semantics, are discussed, again with reference to how these have been used by others, and why these are appropriate tools for this study.

The methodological approach followed in this study is described in Chapter 5. This chapter describes the data that were gathered, how these data were analysed and how the theoretical tools were operationalised in making meaning of the data relative to the research questions and aims of the study. In the second part of the chapter, I explain my position as a researcher and the steps I took to ensure trustworthiness and credibility, as well as the ethical considerations of the study.

Chapter 6 provides the first of three analysis chapters. Drawing on constellations to visualise the knowledge composition of the two modules under consideration in the study: Management Accounting (CFM3A); and Auditing and Internal Control (AIC3A); the chapter characterises the kinds of knowledges found in the two modules, in terms of principled and procedural knowledge. It then moves to a step-by-step explanation of how the constellations were built, first for CFM3A, and then for AIC3A. The analysis draws on the learning outcomes in relation to the textbook and summaries of key concepts.

Chapters 7 and 8 build an understanding of *what* is being taught, and they question *how* the content is taught, in order to consider whether lecturers are creating meaningful access to the knowledges in the modules. These chapters both enact semantic gravity, from the Semantics dimension of LCT to analyse the pedagogies used in CFM3A (Chapter 7), and AIC3A (Chapter 8). These two chapters follow the same structure, starting with a discussion of the aims of the modules and what the lecturers wanted to achieve. They then consider the enacted curriculum, in other words, what happened in the various teaching sessions as well as the assessments. The chapters then consider the implications of these enactments for students' access to powerful disciplinary knowledge. In both chapters, aspects of learning, such as literacy practices, like reading, are discussed as they pertain to questions about access to knowledge.

Chapter 9 concludes the thesis, drawing the threads of all the chapters together. The chapter opens with a reminder of the aim of the study and provides a summary of how the research questions have been answered. The findings are synthesised, and conclusions on how the pedagogical practices enabled or hindered students' access to powerful knowledge in these two modules are drawn. The chapter then brings the findings from this study into conversation with the broader field by considering the implications of the findings for accounting education, vocational (and professional) education more broadly, and academic staff development. The chapter also provides a discussion of the limitations of the study and suggests areas of further research. The chapter concludes with a self-reflection on my own pedagogical practices and development.

## **CHAPTER 2:     CONTEXTUAL FRAMEWORK: ACCOUNTING AND ACCOUNTING EDUCATION**

### **2.1   Introduction**

Chapter 1 provided an overview of this study. In particular, the rationale for the study was established based on my own desire to become a better lecturer, and the implications of the changing and uncertain world on the discipline of accounting within South Africa and the higher education landscape. As such, the aim of this study is on how the pedagogies used in a discipline like accounting are preparing students to be adaptable, lifelong learners in a changing world. This chapter builds on Chapter 1 by drawing on literature to contextualise the field of accounting.

Many people associate accounting with chartered accountants in the case of South Africa, or professional accountants in other countries. However, the field of accounting is a broad field, with various sub-disciplines and career opportunities. As this study is focussed on a Diploma in Accountancy, a shared understanding of the field of accounting is important. By creating this shared understanding, I am able to show how the diploma fits into the overall field, and how the diploma is different as well as similar to other accounting qualifications. The focus of the first part of this chapter is to create this shared understanding. I start by providing a brief summary of the field of accounting, the sub-disciplines, and educational routes to becoming an accounting professional. This is followed by an explanation of the role of the International Federation of Accountants (IFAC) within the field of accounting. The last part of the chapter is focussed on accounting education – the role it should play in preparing students for the changing world of work as well as the criticisms of accounting education.

### **2.2   Field of accounting**

In South Africa, the field of accounting and being an accountant is often associated with the chartered accounting (CA) qualification. However, the field of accounting is much broader, as it is essential to a wide range of industries with unlimited roles (ACCA, n.d.). As this study is focussed on a Diploma in Accountancy and how students, through the pedagogies used in two modules, are guided to become accountancy professionals, I start with a brief overview of the

discipline of accountancy, possible roles of accountants, and associated professional bodies. This broad overview will help to establish a shared understanding of the discipline of accountancy and to position the Diploma in Accountancy in the broader discipline.

As a starting point, it is important to look at the terms, accounting and accountancy. These terms have different meanings, but they are often used interchangeably (*Accountancy vs. Accounting: What's the Difference?*, 2023; Cook, 2022). Accountancy is the broader field that includes financial reporting, auditing, and advisory services, whereas accounting refers to the recording, summarising, and analysing of financial transactions (Aggarwal, 2023). As such, accounting refers more to financial accounting, one of the roles in the field of accountancy. Other roles within the field of accountancy include management accounting; internal and external auditing; taxation; and financial management (van Rensburg, 2023). The responsibilities and tasks of the various roles are influenced by the kind of industry and size of the entity. The responsibilities (what the persons need to do) determine the required qualification and professional designation. In smaller businesses, a person may take on more than one role i.e., financial accountant and internal auditor, whereas in larger businesses, there are large financial departments, with a number of people taking on similar roles.

Two of the main roles or sub-disciplines of accountancy are financial accounting and management accounting. The focus of financial accounting is on the reporting of financial information to internal and external parties (Datar & Rajan, 2018; van Rensburg, 2023). Transactions are recorded to a set standard, and as such, reports can be compared across the world (van Rensburg, 2023). Financial accounting is based on the standards provided in the International Financial Reporting Standards (IFRS). The IFRS standards are used by most countries across the world. Other countries, like the United States of America (USA), use Generally Accepted Accounting Principles (GAAP) (Datar & Rajan, 2018; van Rensburg, 2023). The reports prepared by financial accountants are annual reports such as the Statement of Comprehensive Income, and the Statement of Financial Position. The purpose of the reports is mainly to communicate the financial position of a company, based on past performance to the stakeholders or the external users (Datar & Rajan, 2018).

Management accounting, on the other hand, is focussed on providing useful information to managers for decision-making, planning, and control, and as such, the role of management accountants is more future-orientated (Drury, 2018; van Rensburg, 2023). The information

used by management accountants consists of financial and non-financial data (Datar & Rajan, 2018; van Rensburg, 2023). Historically, management accounting was only used by internal users, however, due to more recent developments and with the requirements of Integrated Reporting<sup>3</sup>, the role of management accountants now also includes Sustainability Reporting, an external reporting function (van Rensburg, 2023). The focus of management accounting can be on a small part of the business, or on the business as a whole, while financial accounting reports on the whole business (Drury, 2018). As management accounting is concerned with planning and decision-making, the reports may be prepared for various intervals, ranging from a day to a week, a month or a year (Drury, 2018). Financial accounting as well as management accounting use cost accounting information (Marimuthu, 2016). Cost accounting uses various costing methods to trace the cost to produce a product. Financial accounting will use historical data, while management accounting uses current cost and predictions. There is thus a connection between financial accounting and management accounting due to the overlap of cost accounting (van Rensburg, 2023). Cost accounting is one of the two modules explored in this study, given its critical role in accountancy practice.

Another role within accountancy is that of an auditor. Auditors are involved in various activities and there are different kinds of auditors, i.e., external auditors, internal auditors, and forensic auditors (Adams et al., 2019). Simply stated, auditing is about providing assurance that the financial information is reliable and credible (ACCA, n.d.; Adams et al., 2019). External auditors are independent from the company and follow a prescribed process (set out in the International Standards on Auditing) to form an opinion about the fair representation of the financial statements (Adams et al., 2019). In South Africa, external auditors must be registered with the Independent Regulatory Board for Auditors (IRBA). In the past, only chartered accountants (CAs), registered with the South African Institute of Chartered Accountants (SAICA) as CAs, could become external auditors. However, from April 2024, professional accountants registered with Association of Chartered Certified Accountants (ACCA) can also register with IRBA (Nagy, 2023). Internal auditors on the other hand, perform independent assignments on behalf of the board of directors, usually to evaluate the effectiveness and efficiency of internal control systems (Adams et al., 2019). As such, internal auditors do not

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<sup>3</sup> Integrated reporting reflects on the commercial, social, and environmental context in which a company operates. The report is in addition to annual financial statements.

focus only on the financial aspect, but on the whole business, as they are responsible for the state of governance, risk management and control within the organisation (IIASA, n.d.). In South Africa, many internal auditors are chartered accountants, registered with SAICA or with the Institute of Internal Auditors (IIA). However, a person does not have to be registered with a professional body to be employed as an internal auditor (Adams et al., 2019). Auditing is the second module explored in this study.

The various roles, or sub-fields mentioned here do not comprise a complete list but are merely an indication of the different roles that exist within the field of accountancy and how each one serves a different, but equally important role within a business. With the different roles, there are also various routes to qualify as an accountancy professional and multiple professional bodies to register with. I will now turn to the qualification routes and professional bodies, as the educational paths have implications for curriculum decisions and pedagogical practices.

### **2.3 Becoming an accountancy professional**

As accountancy is a broad field with various sub fields, the path to qualify as a specific kind of accountant such as a professional accountant<sup>4</sup>, management accountant, or internal auditor, is not always clear. In South Africa, the only path that is clearly structured and set out is that of a chartered accountant. To qualify as a chartered accountant (CA(SA)), a student must complete a Bachelor of Commerce (Accounting)<sup>5</sup> degree at a university that is accredited by the South African Institute of Chartered Accountants (SAICA). Upon completion of the Bachelor's degree, the student needs to complete a one-year Postgraduate Diploma in Accounting science (CTA). Thereafter the student needs to complete three years of practical training (articles) and pass two professional qualifying examinations before they can register as a CA(SA) with SAICA (NMU, 2024; Pullen & Waghid, 2022).

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<sup>4</sup> The role of a professional accountant differs from that of a chartered accountant as a professional accountant cannot sign-off on financial statements and external audit reports.

<sup>5</sup> The name of the qualification might differ between institutions. For example, the University of Johannesburg refers to the degree as a Bachelors of Accounting (BAcc); the University of Cape Town refers to the qualification as a BCom specialising in Financial accounting: Chartered Accounting; while Nelson Mandela University refers to it as a Bachelor of Commerce (Accounting). (More information is available on the various university websites [https://www.uj.ac.za/wp-content/uploads/2021/10/uj\\_accountancy\\_undergraduateprogrammes\\_2024.pdf](https://www.uj.ac.za/wp-content/uploads/2021/10/uj_accountancy_undergraduateprogrammes_2024.pdf); <https://commerce.uct.ac.za/college-accounting> and <https://www.mandela.ac.za/Study-at-Mandela/Discovery/Qualification-details?appqual=RR&qual=40103&faculty=1400&ot=02&cid=68>).

In South Africa, the Bachelor's degree as well as the postgraduate diploma is strongly governed by the professional body, in this case SAICA (Lubbe et al., 2020; Verhoef & Samkin, 2017). This means that the curriculum and competency framework is prescribed by SAICA, and universities are expected to adhere to these. The strong control by SAICA in South Africa is unique, as this is not the case in most other countries (Lubbe et al., 2020). For example, in the United Kingdom (UK) where the Association of Chartered Certified Accountants (ACCA) is one of the more prominent professional bodies, a university qualification is not a prerequisite for writing the professional qualification examinations. There are concerns in South Africa, as well as in other countries (i.e., the UK), that the link between professional bodies and university qualifications is too strong, with the university qualifications imitating the professional courses and becoming less rigorous (Herbert et al., 2020; Lubbe, 2021). This means that universities may no longer be seen as the developer and holder of expert knowledge (Hopper, 2013). Looking back at the various roles within accountancy (see Section 2.2), the CA qualification is strongly linked to becoming a financial accountant and external auditor, although a person with this qualification can work in various industries and roles.

As mentioned earlier, the educational path for other accountancy roles is not as clearly set out as that of a CA. Although there are professional bodies associated with the various other accountancy roles (e.g., management accountant, professional accountant, tax practitioner, internal auditor), specialisation happens later on. Students could start with a BCom Accounting degree or a Diploma in Accountancy, depending in part on their Grade 12 (last year of school) results. Those who complete a BCom Accounting degree, can enrol for a postgraduate diploma, specialising in a specific area, for example management accounting. Students who started with a Diploma in Accountancy will first have to complete a bridging qualification for entry to the postgraduate diploma. Thus, specialisation for the diploma students starts with the bridging qualification. The education path is the same for degree and diploma students once they enter the postgraduate diploma. Upon completion of their studies, a student can register with a specific professional body and follow its requirements. The different path, ranging from the chartered accounting route to the Diploma in Accountancy are illustrated in Figure 2.1.

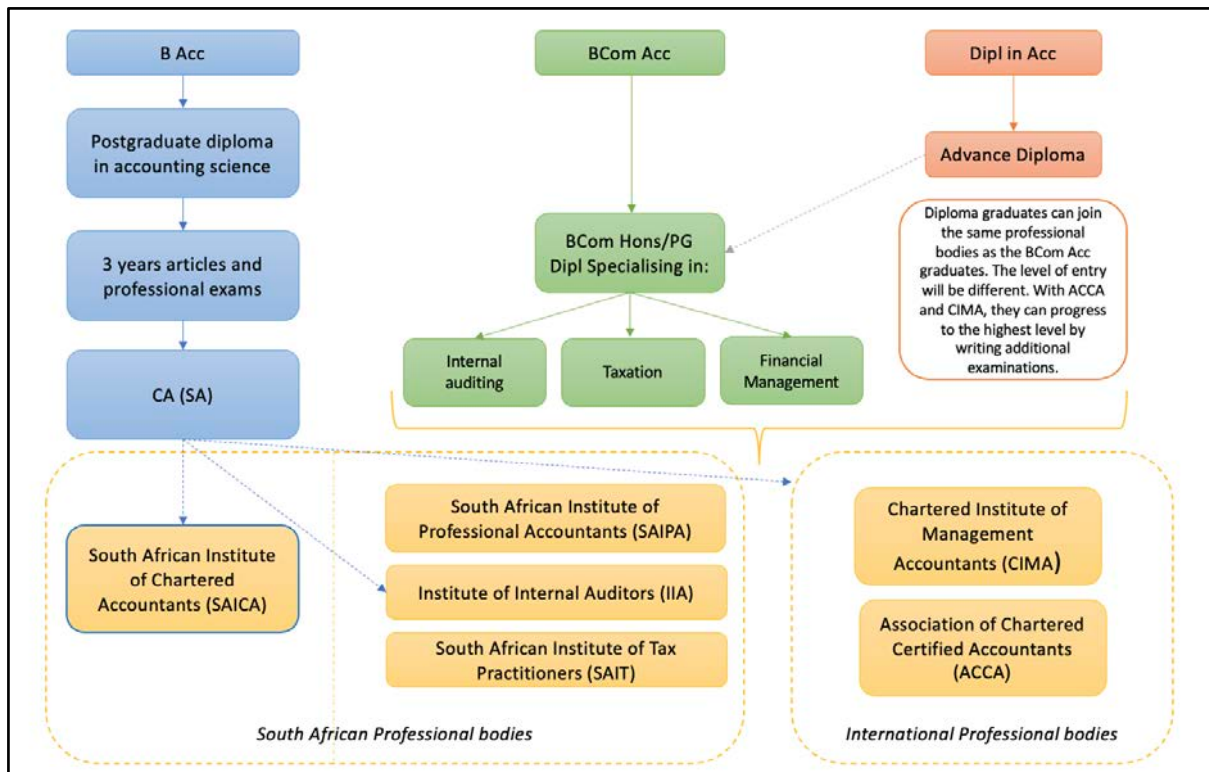


Figure 2.1: Paths to becoming an accountancy professional.

In Figure 2.1 we see that the path for a chartered accountant (CA) is very clear, thus, a CA can join various professional bodies. The requirements of the professional bodies are not all the same, and the level of entry will depend on the student's qualification, and experience, as well as the relevant university's accreditation with the specific professional body. Based on the accreditation, students might be able to apply for exemptions, helping them to enter at a 'higher level' and resulting in fewer examinations to be written with the specific professional body (CIMA, n.d.). For example, students who complete the diploma in accounting at UJ can register with CIMA and apply for exemptions of the four Certificate in Business Accounting modules, whereas a student who has only a senior certificate will have to complete the four Certificate in Business Accounting modules before they can continue with the Operational (first level) of the professional qualification.

Because the Diploma in Accountancy is aligned with various professional bodies, students can decide on their preferred specialisation route after completion of the diploma. The purpose of the diploma further indicates that students should be competent in performing reporting functions, management advisory services, and taxation services on an accounting technician level (UJ, 2022). Accounting technicians are involved in the many day-to-day functions in the

accounting environment and play an important role in producing reliable financial information (IFAC, 2019b; SAICA, n.d.). They can work across industries, including big corporations, small and medium enterprises as well as the public sector (CAPA, 2020; IFAC, 2019b; SAICA, n.d.). In smaller organisations, accounting technicians often work on their own and are involved in all aspects of financial management in the business; while in larger organisations, accounting technicians assist professional accountants. Accounting technicians play a key role in preparing timely, credible, and reliable financial information that can be used for decision-making, especially in larger businesses (IFAC, 2019b). Therefore, accounting technicians require basic accounting knowledge, as well as skills like communication, ethics, corporate governance, data analysis, strategic thinking, problem solving, and even forensics (CAPA, 2020). Development of the various skills are considered critical to remaining relevant in a changing world (CAPA, 2020). Although the job title of 'Accounting Technician' is not often used, many countries, such as Canada, UK, New Zealand, and South Africa have recognised the importance of accounting technicians (IFAC, 2019b). In South Africa, the designation AT(SA) is used for Accounting Technicians and is governed by SAICA. Many students, after obtaining the accounting technician designation continue with their other professional bodies like ACCA and CIMA.

In this section I have outlined the various paths that a student can follow to become an accountancy professional, ranging from a chartered accountant to an accounting technician and not all paths are as clearly laid out as that of a chartered accountant in South Africa. There are three aspects that are common to most professional qualifications: a relevant university qualification; completion of the professional examination/s as stipulated by the professional body; and the completion of the relevant practical component. The kind of professional knowledges and skills that are valued by these professional bodies has implications for the curriculum and pedagogy.

## **2.4 Professional knowledges and skills**

Globally, professional accounting bodies represent, promote, and enhance the accounting profession (Jui & Wong, 2013). Through the professional bodies, members can remain relevant and competent as they get access to training, tools, and guidance (CFRR, 2021). The various

professional bodies and organisations generally have a competency framework or educational standard indicating the skills and knowledge required by their members.

The International Federation of Accountants (IFAC) is the global organisation for the accounting profession. IFAC has 180 Professional Accounting Organisations (PAOs), in 135 countries with more than three million members (IFAC, 2024b). Member organisations include professional bodies like SAICA, CIMA and ACCA, (mentioned in Sections 2.2 and 2.3 of this chapter). IFAC works with their member bodies to ensure that the development of future accountants remain relevant, and of high quality. To do this, the International Accounting Education Standards Board (IAESB) developed eight International Educational Standards (IESs) to improve the quality of professional accounting education and the credibility of the accounting profession (IFAC, 2019a). The aims of IFAC and the IAESB are to enhance professional accounting education and to strengthen the profession in a way that will serve the public interest (IFAC, 2019a). Member bodies are required to use the IESs as the minimum requirement when developing their educational standards and competency frameworks (Helliard, 2013). The member bodies may add additional requirements, for example to make a qualification specific for a specific industry sector (i.e. public service) or a specific role (i.e. internal auditor or management accountant) (IFAC, 2019a).

The eight IESs are focussed on entry requirements to programmes, Initial Professional Development (IPD) and Continuing Professional Development (CPD). The IESs included for IPD include Technical Competence<sup>6</sup> (IES2), Professions Skills (IES3) and Professional Values, Ethics and Attitudes (IES4) as well as Practical Experience (IES5) and Assessment of Professional Competence (IES6). The content or syllabus that should be taught in accounting programs is dealt with in IES2. As such, IES2 lists a number of modules or topics including financial accounting, management accounting, audit, assurance, taxation, governance and law (Helliard, 2013; IFAC, 2019a). Each one of the educational standards consists of several competency areas with specific learning outcomes. Within this, there are three levels of proficiency that describe the requirements at foundational, intermediate, and advanced level. The levels indicate that the expectation is not for a student to obtain all the skills at an advanced

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<sup>6</sup> Technical competence is explained as ‘the ability to apply professional knowledge to perform a role to a defined standard’ (IFAC, 2019a, p. 33).

level during their studies, but rather that it is a continuous process where complex and specialised practices are developed over time.

The IESs, as developed by IFAC and the IAESB contain several important definitions that provide valuable insight for accounting education and the professional competencies required by aspirant accountancy professionals. The definitions pertinent to this study are that of *professional competency*, *professional knowledge*, *technical competence*, *professional skills*, *professional values*, *ethics*, and *attitudes* as well as *professional accounting education*.

The various definitions emphasise the importance of the integration of knowledge, skills, and values, as is evident in the definition of professional competency, which is defined as:

...the ability to perform a role to a defined standard. Professional competence goes beyond knowledge of principles, standards, concepts, facts, and procedures; it is the integration and application of (a) technical competence, (b) professional skills, and (c) professional values, ethics, and attitudes.

(IFAC, 2019a, p. 10)

From the definition of professional competence, it is clear that becoming an accountant is more than just the acquisition of knowledge, as one should be able to apply and integrate the technical competence with professional skills, values, ethics, and attitudes. This definition provides a high-level understanding of what is required to become an accountancy professional; however, for the purposes of this study, we also need a more detailed understanding of *professional knowledge*, *technical competence*, *professional skills*, *professional values*, *ethics*, and *attitudes*.

In IFAC's (2019a) definition of *professional knowledge*, there is a strong link to *technical competence*. This is because *professional knowledge* consists of the essential body of knowledge for professional accountants and consists of accountancy subjects (i.e., financial accounting, management accounting, Taxation, Audit and Assurance) as well as other business disciplines (e.g., Business law, Information technology, and Economics) (IFAC, 2019a). The ability to apply the professional knowledge in a specific role to a defined standard is referred to as *technical competence* (IFAC, 2019a), emphasising the application of knowledge and not

just acquisition of knowledge. In addition to professional knowledge, students further require professional skills as well as professional values, ethics, and attitudes.

*Professional skills* consist of intellectual, interpersonal, as well as communication, personal, and organisational skills; while *professional values, ethics, and attitudes* refers to the characteristics that would identify an accountancy professional as a member of the profession (IFAC, 2019a). The characteristics of an accountancy professional are often described as the principles of conduct or ethical principles; and in the case of the accountancy profession, these include integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour (IFAC, 2019a). What is further important is the integration of *technical competence* (application of the body of knowledge) with *professional skills* and *professional values, ethics, and attitudes*. Bringing this back to accounting education, IFAC (2019a, p. 21) defines professional accounting education as “Education and training that builds on general education, and imparts (a) professional knowledge; (b) professional skills; and (c) professional values, ethics, and attitudes”. Therefore, there is a need for all accounting education qualifications, like the Diploma in Accountancy, to ensure that students are getting access to not only the body of knowledge but also to the professional skills and professional values, ethics, and attitudes in a way that will enable students to apply and integrate the knowledge and skills. This means that there should be a focus on what a student needs to know (body of knowledge) as well as who a student needs to become (professional skills, values, ethics, and attitudes) as an accountancy professional.

As discussed in Section 2.3, the purpose of the Diploma in Accountancy is to prepare students to become accounting technicians, who play a key role in the financial management of a business. Additionally, upon completion of the diploma students have various specialisation options to pursue. As such, it is important that the Diploma in Accountancy provides students with a good foundation for further studies and the world of work. The focus of this study is thus on how the pedagogies used in a specific accounting diploma are enabling (or constraining) students to develop the necessary competencies to become an accountancy professional. While the study is not focused on the syllabus or curriculum, understanding the professional knowledges, skills, and attributes that are valued by the profession and included in the curriculum, is necessary for evaluating the pedagogies that students are gaining access to (i.e., knowledge or knowledge as well as skills and values), and how.

Now that I have established an overview of accountancy and the routes to becoming an accountancy professional, as well as the related educational requirements set by IFAC and the IAESB, I turn to the literature on accounting and accounting education to provide an overview of what the field is saying regarding how students are being guided to become accountancy professionals. I start with an explanation of what accounting is and the developments within the discipline. This is followed by a discussion of what is required in the field of accounting education. Thereafter, I discuss the criticisms of accounting education.

A note on terminology: At the beginning of this chapter, I explained that although the term *accountancy* refers to the wider field of accounting; and *accounting* is used more in reference to financial accounting, the terms are used interchangeably in this thesis. One area where these terms are used interchangeably and often shift more towards *accounting*, is in the literature. As such, academic journals will refer to accounting education and not accountancy education. Therefore, in alignment with the literature, I will use the term *accounting* to refer to the wider field of *accountancy*. When necessary, I will use *financial accounting* (as an example) when the reference is specifically to the sub-field of accounting.

## **2.5 Accounting as professional practice**

An understanding of what accounting is, is important, as it guides what is taught and how it is taught, and thus what is learned by students as future leaders of the discipline (Carnegie, 2022). Accounting is a universal discipline used globally by businesses. Historically, accounting was described as a discipline with a focus on recording, classifying, summarising, and analysing financial information (Carnegie et al., 2021; Helliard, 2013). The main purpose of accounting has historically been to provide information for internal and external decision making (Aulia, 2020). In the past, the discipline was mainly concerned with gathering data and conveying information to management (Flood, 2014), thus focussing on reporting while over-simplifying complex realities (Helliard, 2013). Accounting was perceived as a neutral, a-political, technical practice, mainly concerned with calculations (Sikka et al., 2007). Traditionally, accountants have been portrayed as skilled workers, experts guided by rules and procedures and focussed on compliance (Howieson, 2003). Thus, accountants were (and sometimes still are) often referred to as ‘number-crunchers’ and seen as back-office workers (Mpedi, 2024).

However, in recent years we have seen various changes and challenges within the business environment (Albrecht & Sack, 2000; Herbert et al., 2020) that include technological developments, globalisation, financial scandals, and a greater awareness of the environment and sustainable practices. The changes and challenges within the business environment have had implications for the work that accountancy professionals are doing as well as the way in which the work is done (Herbert et al., 2020; McGuigan, 2021; Tharapos, 2022). With the development of technology over the last two decades especially, many of the daily, repetitive tasks done by accountants, such as the recording of invoices and payments, are becoming redundant. These transactions are still recorded but the recording has become an automated process done by computer programmes and machines (Herbert et al., 2020; McGuigan, 2021; McGuigan & Kern, 2016; Rebele & Kent St. Pierre, 2019). As such, there are fewer entry level roles and junior positions available. A recent study by the University of Oxford indicates that 95% of accountants could lose their jobs as machines take over ‘number crunching’ and data analysis (Griffin, 2019). Furthermore, linked to the technological developments and globalisation is the outsourcing of certain departments to shared service centres (Herbert et al., 2020). This means that many large companies, particularly those based in countries with higher labour costs, such as the UK, no longer employ their own people to do basic, often mundane, tasks, but rather outsource these functions to service centres based in countries with a lower labour cost. With this we see the emergence of ‘off shoring’, which is reducing employment opportunities for accountants (Boyce et al., 2019; Herbert et al., 2020; Pincus et al., 2017), especially those in entry level roles, such as the students who are the concern of this study.

In the same context of globalisation, the world has also experienced various financial scandals over the last two to three decades, many of which have led to the collapse of large companies. One of the biggest corporate bankruptcies was that of Enron in 2001 in the USA. In this example, the management of the company, with the approval of the auditors, concealed liabilities and reported higher profits in their published accounts (Sikka et al., 2007). After the collapse of Enron there were scandals like Lehman Brothers, Worldcom and Wirecard. In South Africa, we have seen several business scandals including Steinhoff, Tongaat Hulett, VBS Bank, KPMG, and Gupta-owned companies, to name a few (Coffee, 2019). The scandals drew attention to the ways in which companies used accounting techniques to hide liabilities and increase profits, while auditors turned a blind eye (Sikka et al., 2007). In most cases, the focus was on the maximisation of shareholder wealth, while the interest of the public and workers were ignored. In the case of Enron, 25 000 employees were affected (Sikka et al., 2007); while

many investors and municipalities lost their savings and investments in the collapse of VBS bank (Moodley et al., 2024). These scandals have implications for professional ethics, values, and attitudes, which were discussed in Section 2.4.

The business world is also being faced with challenges related to the natural environment and sustainability. The levels of air and water pollution are a clear indicator of how humans are impacting the environment. Air pollution, inadequate water supply, hazardous wastes, and poor sanitation have all intensified with industrialisation and urbanisation, resulting in harmful living conditions, fatal illnesses, and the destruction of ecosystems (*Understanding Poverty*, n.d.). As a result, we have witnessed scandals related to sustainability fraud, as explained by Ding et al. (2023). For example, Volkswagen (VW) fitted certain diesel vehicles with a device to record lower nitrogen oxide emission levels, to be within the allowable US regulatory levels (Ding et al., 2023; Hotten, 2015; Markowitz et al., 2017). Thus, through cheating, VW was able to meet the requirements of the US emission test, resulting in sustainability fraud. As sustainability reporting is part of Integrated Reporting (see Section 2.2), management accountants now have the responsibility to report on these matters.

Greater awareness of environmental and sustainability matters has led to increased appreciation within organisations regarding their responsibility to society and the environment in which they are operating (Marx & van der Watt, 2013). Shareholders are now interested in non-financial reports that provide information on environmental, social, transformational, ethical, safety, and health information (Marx & van der Watt, 2013). As such, all companies now must comply with regulations regarding integrated reporting (including sustainability and environmental issues). Accountancy professionals play an important role as they provide these advisory, reporting, and financial services (Marx & van der Watt, 2013). Management accountants, specifically, can play an important role as part of their job is to gather data, evaluate alternatives, and make recommendations (Vanini & Bochert, 2024). For example, management accountants can help an organisation to choose between single-use plastic and more expensive, but sustainable, alternatives. Choosing the cheaper option could result in lower cost and higher profit, but it is not necessarily the most ethical, environmentally friendly option.

Therefore, although accountancy professionals are not directly involved in resolving environmental issues, there is an increased need to realise that accounting is not a neutral, technical practice. With the changing world and business environment, coupled with financial

scandals and environmental problems, accounting must be recognised as a social and moral technical practice (Carnegie et al., 2021; Tharapos, 2022). Furthermore, accounting is connected to human behaviour, and the decisions made by accountants impact on people and the planet (Carnegie, 2022; Helliard, 2013). When accounting is used for the benefit of humans and non-humans and the betterment of society and the natural environment, it can help to shape a better world (Carnegie, 2022). Thus, accounting can help to answer big questions and solve ‘wicked’ problems (Carnegie et al., 2021).

With these changes and challenges in the business world and its impact on accounting, there is an increased need to revisit accounting education and how students are being prepared to become accountants. This is even more important in the case of a Diploma in Accounting as historically, the purpose of a diploma was focussed on employment (see Chapter 1, Section 1.3.2). In the case of the diploma, job opportunities include entry level and junior level positions: positions that are now becoming more and more redundant. There is thus a need to carefully consider the extent to which the diploma is suitably preparing students for the world of work. All accounting students require access to the same broad body of professional knowledge and need to develop certain skills and dispositions (Helliard, 2013; see also Section 2.4). The extent and depth of integration of the knowledge and skills will, however, depend on the level of the qualification (Lawson et al., 2014). For example, the extent and depth of integration at diploma level or the CIMA operational level will not be the same as for a degree or the CIMA strategic level. These considerations have significant implications for the choices made in accounting education.

## **2.6 Accounting education**

As explained above, the changes in the world and the role of accountancy have resulted in an increased need for accountants to have multi-disciplinary skills and the ability to apply their knowledge within various contexts and focus more on critical advisory services (Howieson, 2003). As such, accounting education has an important role to play in preparing students adequately for a rapidly changing professional environment (McGuigan & Kern, 2016; Tharapos, 2022). The universal nature of accounting and its interactions with the real world, individual behaviour, and social systems emphasise the need for effective accounting education.

At a high level, accounting education should enable graduates to master the theoretical knowledge, develop the competencies to apply the knowledge in complex real-work situations, and develop relevant professional dispositions (Trede et al., 2012). The aim of accounting education is thus to guide students to become accountancy professionals, as lecturers integrate theory with practice (the *why* and the *how*) and establish links to non-accounting courses. In addition to this, there is a need for accounting education to recognise and acknowledge that accounting is not only about the technical practice, but that the discipline has a wider societal role to fulfil (Boyce et al., 2019). Therefore, the focus should be on technical knowledge as well as how it connects to world around us (Chabrak & Craig, 2013).

Keeping this high-level view of what accounting education should do in mind, I now turn to a more in-depth discussion, based on relevant literature, of what is called for within the field of accounting education (Section 2.6.1); and the criticisms of accounting education (Section 2.6.2).

### ***2.6.1 What is called for in accounting education***

Employers in all accounting sub-disciplines, like financial accounting, auditing, management accounting, and taxation are seeking a multitude of skills as the work of accountants is shifting from ‘backroom number crunchers’ to ‘engaged business professionals’ (Tan & Laswad, 2018). Accounting education has an important role to play here. Students need to be prepared to cope with the challenges of the changing world; accounting education thus needs to focus on developing broader skills that include corporate social responsibility, an ethical awareness as well as an awareness of their obligations to the wider public (Lubbe, 2017). Students need to be able to integrate foundational, management, and accounting competencies that include external reporting and analysis; planning and control; taxation compliance and planning; information systems; assurance and internal control; as well as professional values, ethics, and attitudes (Lawson et al., 2014). These demands of accounting graduates are leading to a greater need for accounting education to integrate technical knowledge with the development of professional values, competencies, and dispositions (Flood, 2014; Herbert et al., 2020; Pincus et al., 2017; Rebele & Kent St. Pierre, 2019; Sikka et al., 2007).

Various terms are used in accounting education literature and the various educational standards (i.e., IES3 on professional skills), to refer to the competencies and skills required by accountants. These include pervasive skills, generic skills, transferable skill, soft skills, non-technical skills, and employability skills (Keevy, 2020). All these terms typically refer to written and verbal communication, problem-solving, critical and analytical thinking, teamwork, lifelong learning and so forth (Tsiligiris & Bowyer, 2021). These are all vital to becoming a skilled and adaptable professional in a constantly changing field/profession. These skills are, however, not generic. For example, an auditor must be able to write reports, explaining what they have observed and what the potential risks are, while a management accountant must be able to present values, such as an Operational Budget in a format that will be accessible to the managers of a company. As such, the communication skills required by an auditor are different to those required by a management accountant. Therefore, the various skills, such as communication skills, need to be integrated into, and taught as part of the relevant modules within the curriculum, rather than in a general ‘communication skills’ module, so that students develop the specific skills in contextualised ways. Furthermore, as future accountants, students must cultivate certain values and attitudes.

As with skills and competencies, various professional bodies and researchers use different terminology to refer to the professional values and attitudes required by students. For example, IFAC (2019a) and SAICA (2021) speak about ‘professional values and attitudes’, while CGMA (2019) uses the terms ‘ethics, integrity and professionalism’. In the literature, we see reference to personal qualities that goes beyond soft skills (Tsiligiris & Bowyer, 2021). No matter the terminology used, the various sources all refer to similar values and attitudes. These include timeliness, courteousness, respect, responsibility, reliability, commitment to continual improvement and lifelong learning, and social responsibility, thus an awareness and consideration of the public interest and ethical behaviour (IFAC, 2019a). Ethical behaviour is further explained as consisting of five fundamental principles: integrity, objectivity, professional competence and due care, professional behaviour, and confidentiality (IFAC, 2019a).

This brief discussion of the skills and competencies, as well as professional values and attitudes, evidences the need for the curriculum and teaching to integrate technical knowledge with the development of professional values, competencies, and disposition, which is no simple task. However, this is important, and not only a requirement discussed in the literature by

accounting education practitioners and researchers, but also a requirement of IFAC for professional competency (as discussed in Section 2.4). Another way to think of the integration of knowledge, values, dispositions, and competencies is that students need to develop a professional identity (Trede et al., 2012).

Professional identity, in simple terms, is the ‘doing’ and ‘being’ in practice. This identity is formed and shaped by the values, dispositions, and behaviours that are valued by accountants and the relevant professional bodies (Herbert et al., 2020; Trede et al., 2012). Arguments made in the field that privilege identity development argue that accounting education is not just about the teaching of technical knowledge but should include a focus on the development of the whole person (Aulia, 2020; Boyce et al., 2019; Trede et al., 2012). Additionally, students need to develop the ability to critique the ‘status quo’, to think of alternatives and have an openness to approach problems in a different way (Chabrak & Craig, 2013; Herbert et al., 2020; McGuigan, 2021). Hopper (2013) suggests that there is a need for a jurisprudence-type module within accounting education to provide a place to examine the philosophical, theoretical, moral, and ethical assumptions of accounting. The ways of thinking developed in modules like this would, in theory, enable a disposition of lifelong learning necessary for moving and changing with the profession and the world around it (Hopper, 2013; McGuigan & Kern, 2016; Rebele & Kent St. Pierre, 2019; Sikka et al., 2007). Students need to embody the competencies, skills, values, and attitudes of the profession, meaning that they become part of their ways of being, and their professional identity as an accountant. Even though the development of an accounting identity is a continuous process, lecturers have an important role to play as they can create opportunities for beginning this process of development and ensuring the focus of the curriculum and teaching is not only on the acquisition of technical knowledge and skills.

Further to the subject knowledge and developing the professional identity of an accountant, there is a need to establish connections between accounting topics and the social world (Chabrak & Craig, 2013). Students need to understand accounting within its social contexts and be able to see how accounting relates to social, ethical, and environmental issues (Boyce et al., 2019). As such, accounting education should be future-focussed and prepare students to help build an ethical and sustainable future (Tharapos, 2022). In other words, accounting education should focus on the public interest and not only focus on the maximisation of shareholder wealth (Chabrak & Craig, 2013; Sikka et al., 2007; Tharapos, 2022). Bringing these aspects together, accounting education should enable students to see that accounting is

part of the world and foster an understanding of the impact of accounting decisions on the wider social and natural world.

From the above, it is clear that to be and become an accountant, students need more than a narrow focus on technical, subject knowledge. Students need to develop a broader range of knowledge, skills, and attributes that will enable them to see how accounting practices impact on the social world around them. Issues around ethics and sustainability should be emphasised. The focus should be the development of the whole person (Boyce et al., 2019). Considering the discussion in Section 2.4, we see that what accounting education is asked to do is in line with the changes in the business world as well as the field of accounting. As the field of accounting is no longer seen as only a technical practice, and the impact of accounting on the social and natural world are acknowledged, there is a need for accounting education to ensure a broader focus and not be limited to technical knowledge.

This stance re-emphasises the important role of accounting education in preparing students for a rapidly changing professional environment. There are, however, concerns about whether accounting education can fulfil this, as the discipline has been criticised for many years for not preparing students adequately for their eventual professional roles and practice.

### ***2.6.2 Criticisms of accounting education***

In addition to the changing business world, there appear to be further matters that accounting education need to deal with. Over the last 40 years, several reviews on the state of accounting education have been undertaken across the world by a number of accounting organisations (Albrecht & Sack, 2000; Flood, 2014; Fouché, 2020). All these reviews shared similar findings, in that the relevance and appropriateness of accounting programmes were questioned (Boyce et al., 2019; Flood, 2014).

When one considers the context of accounting education research, it is evident that researchers in different national contexts draw on the same reviews and reports. Furthermore, accounting education literature often focuses on the problem at hand in a general way, while the context of the specific country is backgrounded. Therefore, although accounting education research is dominated by research from Western countries, accounting education is described as an international effort (Marriot et al., 2014). Based on the various reviews, reports, and accounting

education literature we see that there are commonalities as well as similar issues across the world.

Accounting education is criticised for struggling to keep up with the changes taking place in the practice of accounting, leading to a gap between what is taught and practised (Albrecht & Sack, 2000; Flood, 2014). Particular critiques are that students are not being prepared for the workforce of the future (Lawson et al., 2014; McGuigan & Kern, 2016). This is a result of curricula that remain focussed on technical knowledge (Boyce et al., 2019; Chabrak & Craig, 2013; Flood, 2014; Hopper, 2013). The curriculum is further described as being outdated and having a narrow technical focus (Tan & Laswad, 2018). As such, broader perceptions of the wider social, environmental, and ethical implications of accounting are neglected (Boyce et al., 2019). The content (syllabus) taught is driven by textbook authors, with textbooks showing little change over the past 30 to 50 years (Albrecht & Sack, 2000; Pincus et al., 2017; Rebele & Kent St. Pierre, 2015). A further critique regarding the connection between the discipline and the wider practice of accounting is that financial scandals are addressed superficially with almost no reflection on the role of accountants in these. This means, in terms of student learning, that the conceptual, social, and theoretical basis of accounting is not analysed (Sikka et al., 2007). The focus appears to be on learning how to contribute to the maximisation of shareholder wealth, while public interest and social impact is not dealt with (Sikka et al., 2007). A related critique is that professional bodies have too much control over university qualifications, resulting in university qualifications that are imitating professional accounting courses (Boyce, 2004; Herbert et al., 2020; Sikka et al., 2007). Universities are thus not seen as the holder and developer of relevant expert knowledge (Hopper, 2013); the curriculum is overfull, and pedagogical rigour is diluted (Herbert et al., 2020). As Sikka et al. (2007) have argued, under the control of the professional bodies, accounting education will remain decontextualised from the complexities of the real world, and this will limit students' development of the required professional knowledges, skills, and attitudes.

The educational programme of aspirant accountants is further seen as being atheoretical and therefore unable to equip accountants to lead change or manage social responsibility as "it limits the possibility of producing accountants of insight, imagination, creativity and ethical leadership" (Parker, 2007, p. 46). This means that students are unable to question and interrogate accounting rules as intellectual curiosity and critical thinking are not being developed (Flood, 2014). The literature suggests that this is a consequence of accounting

education that remains focussed on quantifiable outcomes, neglecting or under-developing broader capabilities and skills such as communication, leadership, critical thought, and emotional intelligence (McGuigan & Kern, 2016; Tan & Laswad, 2018). This further means that the skills and attitudes necessary for lifelong learning are not adequately or overtly fostered (Flood, 2014). Scholars argue that there is no meaningful attention to the wider social, environmental, ethical, contextual, and cultural dimensions of accounting, due to the over-emphasis on technical knowledge (Boyce et al., 2019; Hopper, 2013).

When considering the criticisms of accounting education, against what is called for in the field as discussed in Section 2.6.1, we see that accounting education is indeed not keeping up with the changes in the field. A starting point to consider the potential gap between what is called for in accounting education and what is actually happening, is to look at the accounting education curriculum.

### **2.6.3 *Accounting education curriculum***

Curriculum is a well-known word, but it is a complex concept to explain and understand, with no agreement on a shared definition (du Toit, 2011). The content or topics to be taught and learned by students are seen by some as the curriculum, while others understand curriculum to include the content as well as skills, values, and attitudes (Shay, 2015b). A definition of curriculum is not important for this study; what is important to understand is that curriculum is more than the knowledge that students need to learn. In this study, I use the following explanation of curriculum:

curriculum plays multiple roles in that, through its content, pedagogy and assessment, it should introduce students to, and develop their mastery of, different schools of thought, knowledges and ways of knowing. Further, it should encourage students to think critically and creatively about the world around them and their place within it, hence ensuring higher education's role in nurturing critical students and thinkers, aware of and responsive to their particular sociocultural contexts, rather than only narrow field specialists.

(Clarence, 2019, p. 89)

Curriculum thus refers to how students are enabled to develop their professional competency and a related professional identity. The curriculum is further influenced by factors like institutional policies and culture; lecturers' personal approaches, values, and style; the expectations and requirements of professional bodies; and the surrounding socio-economic context and political context.

As discussed earlier (see Section 2.4), in Accounting education, the knowledge students need to learn and master tends to be based on the competency frameworks of the various professional bodies (Herbert et al., 2020; Hopper, 2013; Lubbe et al., 2020; Sikka et al., 2007). Although it is difficult to determine the extent to which various accountancy degrees and diplomas have changed to keep up with the changing business world, one can look at the actions various professional bodies have taken in this regard. For example, IFAC implemented revisions to IES 2, 3, 4 and 8 from January 2021. These revisions were made to address the demand for accountants to have more knowledge of information and communication technologies as well as to further emphasise professional scepticism, skills, and behaviours (IFAC, 2024). Similarly, a revised competency framework for accounting technicians was published in 2019 by IFAC and the Association for Accounting Technicians (AAT) (IFAC, 2019b). Additionally, in recent years, professional bodies like SAICA, ACCA and CIMA have all revised their competency frameworks and educational standards in response to the changing business environment and associated implications for accounting professionals (see for example AICPA & CIMA, 2019; SAICA, 2021). In all these changes and revisions, there is a stronger focus on the development of a professional identity, thus the integration of technical knowledge, skill, values, and attitudes.

In addition to the changes by the professional bodies, research with a specific focus on the curriculum has been published over the last eight years. In one such study, Tsiligiris and Bowyer (2021) reviewed a broad range of research reports published by various professional bodies to develop a conceptual framework for accounting education. The proposed conceptual framework was designed to refocus accounting education on sustainability, adaptability, and lifelong learning. It includes subject knowledge, 'soft' skills (communication, critical thinking, problem solving, and emotional intelligence), business skills, ethical skills, and digital and data skills (Tsiligiris & Bowyer, 2021). In another similar study, Tharapos (2022) proposed that accounting education should consider a greater focus on digital technologies, professional skills, and leadership. Various other studies have looked at core competencies such as pervasive

skills (Keevy, 2020; Mhlongo, 2020), critical thinking skills (Cloete, 2018; Terblanche & De Clercq, 2020, 2021), and ethics (Venter & van Dyk, 2024). These studies all emphasise the importance of what students need to learn in a fast-changing world and as such are speaking to what is required of accounting education to prepare students to be well-rounded accountancy professionals that can succeed in an unpredictable, rapidly changing business environment. However, due to bureaucracy and hierarchies, changing university qualifications is difficult and takes a long time (Albrecht & Sack, 2000). Furthermore, although there is often a strong link between professional bodies and accounting qualifications, there is no control over the extent to which degree and diploma programmes follow the competency frameworks (Helliard, 2013). Finally, there is limited evidence that lecturers read accounting education articles or that literature impacts on their practice (Rebele & Kent St. Pierre, 2015).

Here, it is important to remember that curriculum is more than what students need to learn; that it goes beyond the syllabus and course materials. Curriculum is also about how the pedagogies and assessments enable students to master the knowledge as well as develop a professional identity. Thus, although there might be concerns about the strong control IFAC and professional bodies have over the content as well as the relevance of the content, lecturers do have control over the pedagogies and assessments used. Therefore, lecturers need to consider how the pedagogies and assessments enable access to the knowledge for the students and how students are enabled to develop the professional identity of an accountant. One should remember that an effective and inspiring lecturer has a greater impact on a student's educational journey than any other factor (Albrecht & Sack, 2000; Helliard, 2013).

#### ***2.6.4 Accounting education pedagogies and assessment***

The accounting education literature on pedagogies and assessment emphasises similar needs for the field to what was discussed in Section 2.6.1. As such, there seems to be a need for accounting education to move away from pedagogies that focus on technical knowledge and procedural tasks (Aulia, 2020; Helliard, 2013; McGuigan, 2021). Scholars argue that lecturers should move away from traditional, passive, teacher-centred approaches (Helliard, 2013; van Niekerk & Delport, 2022; Viviers & de Villiers, 2020). Teacher-centred teaching methods refer to teaching approaches where the lecturer is seen as the expert who needs to transmit the content knowledge to students as inexperienced learners (Biggs, 1999; L. J. Wilmot & Merino, 2015). The focus is on what the teacher does. The concern is that teacher-centred approaches are more

likely to promote memorising of the content as facts (L. J. Wilmot & Merino, 2015) and may limit student engagement, the development of critical thinking skills (van Niekerk & Delport, 2022) as well as professional scepticism, skills, and behaviours (IFAC, 2024). There is thus a need for more student-centred approaches in accounting education. Student-centred approaches to teaching are about enabling students to develop their own understanding of the content, and guiding the students to see how the knowledge could be used in their social and future professional world (Biggs, 1999; L. J. Wilmot & Merino, 2015).

Essentially, what is being called for are innovative teaching techniques (McGuigan, 2021); that are more holistic and integrated (Boyce et al., 2019; McGuigan & Kern, 2016). The pedagogies used should have a broader focus to include technical knowledge while integrating aspects of the social and natural environment (Boyce et al., 2019; Carnegie et al., 2021; Chabrak & Craig, 2013; Hopper, 2013). Students should be guided to think for themselves, consider alternatives and debate current issues (Helliard, 2013). There is thus an increased need for teaching that provides opportunities for students to consider the potential implications of calculations on people and the environment. Teaching that provides students with opportunities to consider alternatives and reflect on the possible consequences can assist in the development of the identity of an accountant (Hopper, 2013; McGuigan, 2021; Trede et al., 2012). The use of case studies, and real-life problems, as well as discussions of current issues have been proposed as useful teaching tools that could help to improve student engagement and encourage reflections (Boyce et al., 2019; Helliard, 2013; Hopper, 2013; Sikka et al., 2007). Scholars argue that the pedagogies used should enable students to develop as critical thinking accountants who consider the planet and people (Carnegie et al., 2021; Chabrak & Craig, 2013; Hopper, 2013). There is also a need for assessments to reinforce the development of critical skills and not to only focus on right /wrong or computational type questions (Fogarty, 2020; Hopper, 2013). Furthermore, researchers argue that accounting educators should move away from exams and look at new ways to assess (Sangster et al., 2020); for example, through integrated assessments that mirror real-life situations (Cloete, 2018); and group work and case study projects (de Klerk et al., 2024).

Coupled with the need for more innovative and integrated pedagogical approaches, as discussed above, there is a need to develop students more holistically or as a whole person (Boyce et al., 2019; Pym, 2017; Trede et al., 2012). The accounting education literature on the development of the students indicates that there are two aspects to consider. Firstly, there

should be an awareness of who the students are (Chabrak & Craig, 2013). As such, students' background, culture, socio-economic context, and prior understandings should be considered in the pedagogies used (Aulia, 2020; Chabrak & Craig, 2013; Herbert et al., 2020; McGuigan, 2021; Pym, 2017). Students enter university each with their own background and ways of viewing the world. As such, lecturers need to consider the background of students and make the requirements of the field explicit to them (Helliard, 2013; Lucas & Tan, 2013). Secondly, the curriculum should provide students with access to the knowledge in a way that they can understand and apply the various concepts. The pedagogies and assessments should enable students to develop the relevant skills, values, and professional competencies that are valued by the profession. Access to the knowledge, skills, values, and competencies are important for students to develop the professional identity of an accountant (Bunney et al., 2015; Herbert et al., 2020; Trede et al., 2012).

In short, we thus see that there is a need for pedagogical approaches to integrate knowledge with the development of the student as an accountancy professional, while positioning accounting within the social and natural world. Furthermore, the pedagogical requirements speak to the needs of accounting education in a changing business environment.

In the discussion of accounting education literature (Section 2.6), I have shown that there is a shift in accountancy from a technical focus to a more integrated approach that recognises the role of accounting in the social, political, and environmental contexts surrounding the field. This shift has implications for the accounting/accountancy curriculum, including the knowledge (the *what*) that should be taught, and the pedagogies and assessment (the *how*) used to facilitate and enable access to the knowledge. Students, through their engagement with the knowledge, pedagogies, and assessments, should develop the identity or 'ways of being' of an accountant. This raises questions regarding the kinds of pedagogies and assessments that are most effective in accounting education – a question this study addresses.

## **2.7 Conclusion**

This chapter has introduced the field of accounting as a broad field with various educational paths and associated professional bodies. In this broad field, IFAC, as the global organisation for the accounting profession, plays an important role, as it sets the minimum educational

standards for all accounting professionals. The educational standards emphasise the importance of integrating technical knowledge, professional skills, professional values, ethics, and attitudes. Therefore, the role of accounting education is to ensure that students gain access to the relevant knowledge, skills, values, ethics, and attitudes to become competent accounting professionals.

Furthermore, accounting education needs to keep up with the changing social, political, and environmental context, and the implication on the work of accountants. Accountants are no longer seen as ‘number-crunchers’, but rather as engaged business partners. Accounting is now recognised as a technical, social, and moral practice, rather than a narrower technical practice. Consequently, when considering the needs of the field, it is clear that accounting education should enable students to develop the professional identity of an accountant, or to put it differently, students need access to the specialised knowledge, as well as professional skills, values, ethics, and attitudes of the field.

However, accounting education has been criticised for many years for not adequately preparing students for the world of work. The field is criticised for its strong focus on technical knowledge and not enabling students to develop the professional identity of an accountant. Furthermore, the pedagogies used are seen as teacher-centred while assessments are not helping students to develop the necessary critical skills. Although the educational standards are in alignment with what is called for from accounting education, the criticisms of accounting education indicate that the field is still struggling to prepare students adequately for the changing role of accountants. This raises the question of the extent to which the requirements of the field are in line with the purposes of higher education.

In the next chapter I turn to the purposes of higher education. Chapter 3 starts with a discussion of the purposes of higher education, followed by a discussion of the kinds of access that students require, as well as the knowledges that students require access to, so that they can realise the educational purposes of higher education.

## **CHAPTER 3: THE PURPOSES OF HIGHER EDUCATION AND EPISTEMOLOGICAL ACCESS TO POWERFUL KNOWLEDGE**

### **3.1 Introduction**

In the preceding chapters I discussed the social, political, and ecological changes happening in the world, and the impact these have not only on the way we live, but also on the work of accountants. I gave an overview of the different accounting disciplines, the pathways to becoming an accountant, what the field is asking for, and the criticisms of accounting education. With both the changing world of work and the criticisms of accounting education, there is a sense that universities are required to do more to ensure that the demands of industry are met, and that students are ready for the challenges they will face in a complex and uncertain professional world. This raises questions about the purposes of higher education and the extent to which universities can ensure that students are ready for the fast-changing world of work.

Drawing on the work of critical social researchers (Ashwin, 2020; Case et al., 2018; Lange, 2012; McArthur, 2011), I argue that the main purpose of higher education is to bring students into a transformative relationship with powerful bodies of knowledge. An important principle of this transformative relationship with knowledge is that there needs to be an understanding of who the students are; their home and school background; lived experiences; and current levels of subject specific knowledge and understanding thereof. Furthermore, the pedagogies used should enable students to gain access to the specialised knowledge as well as specific skills, values, and attitudes required to become an accountant.

The chapter starts with an overview of the purpose of higher education, providing an explanation of why a focus on employability as the purpose of higher education is problematic. Thereafter, drawing on literature, I explain what a transformative relationship with specialised knowledge is, and why it is important in a changing world as well as the implications for the pedagogy. Following this, I discuss the need for access to ‘powerful knowledge’, and what this means for vocational education. I conclude the chapter with a discussion of transformative education within accounting education.

### 3.2 Purposes of higher education

For many students, a higher education qualification is seen as a way to increase their financial position, move out of poverty and improve their, and in some cases, their family's life chances (Case et al., 2018; Kramm & McKenna, 2023). In a country like South Africa, it is understandable that many working-class students will see higher education as a way to improve their lives, as the unemployment rate remains high. At the end of 2023, the overall unemployment rate in South Africa was 31.9%, while the unemployment rate for the youth (15 to 34 years) was at 43.4% (StatsSA, 2023). Yet, in South Africa there is still a relatively high 'graduate premium', meaning that the employment prospects for graduates in South Africa are good with significant material advantages (Boughey & McKenna, 2021; Case et al., 2018). However, one needs to remember that cultivating employability is not the only purpose of higher education.

The purposes of higher education go beyond employment because higher education has an educational, social, and civic role to fulfil (Boughey & McKenna, 2021; Clarence, 2021; McLean et al., 2019; Smolentseva, 2023). In South Africa, the 1997 White Paper on Higher Education, subtitled 'A programme for higher education transformation' identifies four purposes for higher education (White Paper 3, 1997). These are:

- The development of the intellectual abilities of individuals.
- The development of society and providing high-level skills to the labour market.
- The shaping and forming critical citizens.
- The creation, sharing and evaluation of knowledge.

These four criteria indicate that one of the purposes of higher education – the second bullet – is focussed on employment. However, the Paper highlights that students should also develop intellectually and as critical citizens. The development of critical citizens refers to people that are critical and responsible and that can reflect and evaluate current thinking, practices, and behaviour for the common good (Lange, 2012). The purposes of higher education are thus for students to thrive intellectually and economically (as a result of employment), to develop as critical citizens, and to contribute to their communities and broader societies (Boughey & McKenna, 2021).

Consequently, there are various concerns with a higher education that is too focussed on the personal benefits, or narrower understandings, of employment. This narrow view of employability as the main purpose of higher education could undermine or side-line the forms of teaching and curriculum that enable students' necessary intellectual ability and critical citizenship. Furthermore, a narrow, employment-focussed view implies that there is a logical link between education and the requirements of work, coupled with an understanding of the economy, and the assumption that one could know what qualifications will be useful in the next four to five years (McArthur, 2011). This is, however, not the case. In Chapter 2, Section 2.5, I reflected on how the changing world is impacting on the role of accountants. Due to technological developments, globalisation and a greater awareness of the social and environmental context, accountants are no longer performing a neutral, a-political and technical (gathering and reporting information) set of practices; rather, they are now performing social and moral technical practices, connected to human behaviour and the wellbeing of the planet. It is thus evident that in a changing and complex world it is hard to be certain of the kinds of qualifications that will be required in the near future (R. Barnett, 2012). Another concern is that a focus on employability foregrounds better life chances with increased income while the educational purposes of higher education are backgrounded (Ashwin, 2020). Ashwin (2020) explains that although employability and the development of generic skills are important, these should not be seen as the primary educational purposes of an undergraduate university education, or higher education generally. There is thus a need for universities to put greater emphasis on the non-economical purposes of higher education (Singh, 2014).

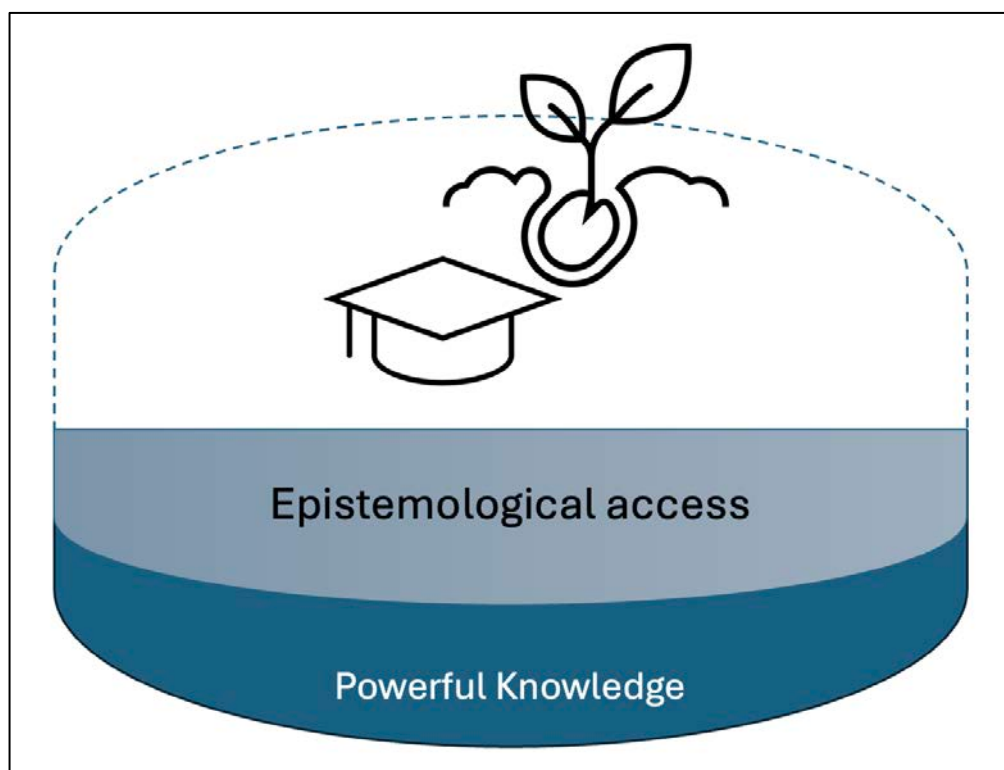
An alternative to employability is to think of higher education as preparing students for the workplace. Preparation for the workplace is a more expansive way of thinking about this purpose, as it includes the enhancement of the individual's wellbeing and it focuses on making contributions to society, while employability narrowly links the purpose back to employment (McArthur, 2011). McArthur (2011) further proposes that higher education should be a transformative experience where students are enabled to develop and celebrate their own identities. Various scholars support this idea, as they argue that the educational purpose of higher education is to put the student in a transformative relationship with disciplinary and professional knowledge (Ashwin, 2020; Case et al., 2018; Kramm & McKenna, 2023; Lange, 2012).

A transformative higher education means that as students engage with disciplinary and professional knowledge, they develop different ways of understanding, seeing, and interacting with the world. These will allow them to experience the world in new ways and enable them to do new things (Ashwin, 2020; Kramm & McKenna, 2023). The transformative purpose of higher education is therefore future-orientated (Ashwin, 2020). For example, in accounting, the initial focus is on routine tasks like recording and reporting. From here, students need to move to more meaningful tasks, as they must be able to communicate the reports to others. Such a task requires a deeper understanding of the reports, as students are required to draw on the body of knowledge that underpins their degree. Hereafter, instead of just interpreting the report, some students might consider possible implications of the report on people and the planet, as well as options to limit harm (Ashwin, 2020). These movements from routine tasks to more meaningful tasks, to considering possible implications, are important for becoming critical and reflective accountants, as discussed in Chapter 2. However, a transformative higher education cannot be left to chance. The curriculum (which includes the content, pedagogies, and assessment) should be designed with the intention of putting students in a transformative relationship with disciplinary and professional knowledges.

In aligning this study with the transformative nature of higher education, there are important pedagogical requirements that should be mentioned and explained. Firstly, the knowledge that students require access to are not lists or facts, but rather structured, powerful bodies of knowledge that come together as a coherent whole (Ashwin, 2020; Maton, 2020; Rusznyak, 2020). Secondly, this kind of transformative education requires lecturers to have a deep understanding of why the knowledge they are teaching is powerful, and what students should be able to do with the knowledge in the world (Ashwin, 2020). Thirdly, the design and focus of assessments should be to evaluate whether students have developed a deep understanding of the structured bodies of knowledge. Assessment that is focussed on simple learning or memorising of facts is at the expense of a deeper engagement with the subject (Ashwin, 2020; McArthur, 2021). Lastly, lecturers and institutions need an understanding of who the students are, their background and lived experiences, as well as their current level of knowledge and understanding of the discipline. Teaching should begin with the real student, the student in the class, and not the ideal student (Ashwin, 2020; Northedge, 2003). The ideal student refers to a student that has the relevant prior knowledge and dispositions that the lecturers and university expect them to have (Ashwin, 2020). However, as students all have different lived experiences, backgrounds, and understandings about the discipline, it is important that the lecturer design

the pedagogy to guide the students in the class to have the best possible chance to have access to the disciplinary knowledge (Ashwin, 2020; Northedge, 2003).

In essence then, to provide a transformative higher education, students require access to the powerful bodies of knowledge (powerful knowledge). To provide this, universities and lecturers need to understand who their students are and what knowledge they require access to. This raises the need for ‘epistemological access’ (Morrow, 2009) and an understanding of ‘powerful knowledge’ (Young, 2008). The transformative nature of higher education, underpinned by epistemological access to powerful knowledge, is illustrated in Figure 3.1.



*Figure 3.1: Educational purpose of higher education (own illustration)*

The educational purpose of higher education is illustrated as obtaining a qualification that leads to transformation (the sprouting seed). To obtain the qualification that can lead to a transformative nature with knowledge, students require epistemological access to powerful knowledge. This chapter will now consider epistemological access and powerful knowledge in greater detail.

### 3.3 Epistemological access

In considering the kind of access that is required for a transformative higher education, it is important to first consider what is meant by ‘access’ in this study. Morrow (2009) explained that there are two forms of access: formal access, and epistemological access. Formal access refers to a space at a university. A student applies to a university, gets accepted and is offered a place. Once the student pays the necessary fees, they get formal access to the services and structures of the university, but not necessarily access to the knowledges that are valued and distributed by the universities. As such, although formal access is important, students further require epistemological access. Epistemological access goes beyond formal access as it alludes to access to the knowledges the university distributes (Morrow, 2009). Epistemological access means that students gain access to the knowledge and ways of being in a discipline, in a way that will enable them to become participants in academic practices (Luckett, 2019; Morrow, 2009; Shay & Steyn, 2016). As Slonimsky and Shalem (2006) put it, all social practices have a point – their principled ways of knowing, doing, being and so on – and responsive pedagogy must enable students to grasp the point of the practice and to develop the powers to work towards it. Therefore, epistemological access in relation to this study refers to students developing the professional identity of an accountant, as they are guided to engage with the professional and theoretical knowledge of the discipline.

Luckett (2019) explains that epistemological access is enabled by making the demands of learning, reading, and writing in the discipline explicit to the students. This means that in a discipline like accounting, theoretical concepts must be explained in a way that will help students to make sense of the concepts and enable them to link the theoretical concepts to the practical calculations. Providing examples or scenarios that the students can relate to, is one effective way to introduce theoretical concepts and illustrate the practical applications. Creating this kind of applied theoretical learning means that lecturers need to know who the students are and their level of academic preparedness; an understanding of the disciplinary knowledge and how it is recontextualised into the curricula; as well as an understanding of how to facilitate learning through appropriate pedagogical interventions (Shay & Steyn, 2016). As such, epistemological access is about access to the disciplinary knowledge and about the pedagogical practices that guide students in their understanding of the knowledge and ways of being in the discipline (McLean et al., 2019). We thus see that an understanding of who the students are, as well as an understanding of the disciplinary knowledge and specialised ways

of being, is important for epistemological access that leads to a transformative higher education. Fundamentally, epistemological access is about giving students access to powerful knowledge (Shay & Steyn, 2016).

### **3.3.1 Powerful knowledge**

The concept of ‘powerful knowledge’ was developed and shared by Michael Young in a paper published in 2008, *‘From constructivism to realism in the sociology of the curriculum’*. Powerful knowledge is specialised knowledge and thus different from everyday knowledge (Young, 2008; Young & Muller, 2013). While everyday knowledge is usually tied to the present or a specific context, specialised knowledge is more abstract and generalisable (Shay & Steyn, 2016). For example, when a person enters a shop to buy a toasted sandwich, they know that there is a specific price for the sandwich. The person could further have an understanding that the price of the sandwich is related to the cost of the ingredients used, and that the owner of the shop is aiming to make a profit. This general understanding of the cost and selling price is everyday knowledge as it is tied to the specific sandwich, in a specific shop at a specific time. But in this example, knowledge of the relevant costing principles and an understanding of how to apply the principles to calculate the cost price of a sandwich is a form of specialised knowledge. The shop will further have some controls in place, one of which could be that a person needs to pay for the sandwich and receive a receipt before the sandwich is prepared. The person buying the sandwich will know that they need to pay, take the receipt, and wait for the sandwich, another form of everyday knowledge. However, from the view of an auditor, the process of paying and collecting a receipt is a control that is put in place to mitigate a specific risk. As such, an understanding of the risks and controls that are in place to mitigate risks is another form of specialised knowledge. Specialised knowledge is thus generalisable, abstract knowledge, that can be applied to a specific situation, in this case a shop selling toasted sandwiches.

It is specialised knowledge that will enable a management accountant or auditor to provide explanations about specific areas of concerns. Say, for example, that the sandwich shop is operating at a loss; a person without the relevant specialised knowledge might assume that the profit (mark-up) added to the cost price is too low and therefore increase the selling price. However, a management accountant that has the relevant specialised knowledge can draw on specific costing principles to establish more accurate explanations for why the business is

operating at a loss. Similarly, an auditor could look at the controls that are in place to manage the inventory process from receiving ingredients to selling a sandwich. The auditor, drawing on their knowledge of internal controls, would be able to identify weakness in the controls that could lead to a loss of ingredients or sandwiches, resulting in the business operating at a loss. As such, access to specialised or ‘powerful’ knowledge enables an accountancy professional to find reliable explanations to real business problems (see Shay, 2013; Young, 2008). Additionally, the acquisition of powerful knowledge provides students with the discipline-specific language, in this case the language of accounting, for participating in debates in their field of practice as well as in society (Wheelahan, 2015; Young, 2008).

Furthermore, access to powerful knowledge could help one to think in new and unimagined ways about the world, and is therefore essential for innovation (Shay, 2013; Young, 2008). As such, it is access to powerful knowledge that could help future accountancy professionals to think in new ways about the impact of business decisions on the world around us. For example, business decisions regarding the packing of the sandwiches. Single-use plastic might be a cheaper option, resulting in higher profit, while a cardboard box is more expensive, resulting in a lower profit. However, when considering the environment, the cardboard box is the better option. Accountants need to be able to provide the relevant information for decision-making for managers to make appropriate short- and long-term business decisions.

To distinguish between everyday knowledge and powerful knowledge, Young (2008) drew on the work of Jeanne Gamble (2006). According to Gamble (2006) there are two forms of knowledge: context-dependent knowledge, and context-independent knowledge. Context-dependent (everyday) knowledge is always tied to the real world as it comes from concrete events or experiences and is often generated through human interaction (Gamble, 2006). Practical knowledge, such as finding a route on a map or knowing how to repair an electrical switch, are examples of context-dependent knowledge; what Young (2008) refers to as *everyday knowledge*. Everyday knowledge can also be procedural; for example, following an instruction manual for a specific machine. We all acquire context-dependent, everyday knowledge as we grow up, and we need it to deal with everyday life (Young, 2008). However, because everyday knowledge is context-dependent, having only or mainly this form of knowledge does not enable a person to move beyond the everyday, which is an essential move we must make in higher education.

The second form of knowledge is context-independent knowledge, or what Young (2008) refers to as *powerful or specialised knowledge*. This is theoretical or conceptual knowledge that is not tied to a particular case, problem, or assessment task. Therefore, context-independent knowledge is generalisable and helps us to move beyond our own experiences. As such, context-independent knowledge enables one to apply concepts when the context changes, for example, in different assessment tasks or in calculating the cost of various products. Furthermore, access to context-independent knowledge enables one to connect different concepts and parts together into a complex ‘whole’, leading to cumulative learning. Being able to connect the parts into a whole is also requirement for a transformative higher education. Context-independent knowledge thus exists in abstract form and consists of knowledge that was generated in a context of thought, through testing and elaboration by specialist communities, as in the sciences, for example (Gamble, 2006; Young, 2008). Or, in the case of management accounting, in the development of different methods for allocating overhead cost to the products produced, like predetermined overhead allocation and activity-based costing, depending on the kind of production process used.

Both context-dependent (everyday) and context-independent (powerful) forms of knowledge consist of principled and procedural knowledge. Taking context-independent knowledge as an example, here the principled knowledge is abstract and consists of the principles or ‘rules’ that underlie a range of related problems; while the procedural knowledge could be about doing calculations or a specific experiment (Gamble, 2006). Consider, for example, percentages: knowledge on what a percentage is, where it could be used and why it is important, is principled knowledge, while doing specific percentage calculations is procedural knowledge. Even though, in some instances, principled and the procedural knowledges can be taught separately, there is always a relationship between them as they work together (Gamble, 2006).

Let me offer an illustrative example of this relationship. ‘Cost behaviour’, a fundamental concept in Management accounting, is an example of context-independent or specialised knowledge. The theoretical explanation of this abstract concept and the parts of cost behaviour (variable, fixed, mixed, or step cost) is principled knowledge. Examples of calculations that require students to identify the cost behaviour of a specific cost or to calculate the variable and or fixed cost are procedural knowledge. These examples of calculations help students gain a better understanding of cost behaviour. We thus see that in a sub-discipline like management accounting the principled knowledge and procedural knowledge operate alongside one another,

but the one does not necessarily lead to the other. As such, students might be able to identify and calculate the variable and fixed cost, but if they do not understand the meaning of the concepts (what, why, where) and how they are used within management accounting, they will not be able to use their answers correctly to calculate the cost of a product, or transfer this understanding to solving a problem in a different scenario/context. Similarly, theoretical knowledge of the concepts does not imply that one can do the necessary calculations. Therefore, the relationship between what cost behaviour is, why it is important and where it is used (principled knowledge), and the examples with calculations (procedural knowledge), must be maintained. The doing of the calculations helps with grasping the procedural knowledge. Additionally, when the principled and procedural knowledge are presented as a connected whole, the procedural knowledge can further help students to gain the required conceptual logic of the principled knowledge. Access to a combination of principled and procedural knowledge leads to higher levels of understanding that are not tied to a specific context, whereas access to procedural knowledge alone often leads to rote learning (Gamble, 2006).

Lecturers have the difficult task of guiding students in developing their understanding of both principled and procedural knowledge (Gamble, 2006; Shay & Steyn, 2016; Wheelahan, 2015). The concern is that in vocational qualifications the focus often shifts towards procedural knowledge as the emphasis is on applied, work-focused learning (Wheelahan, 2015). This is a pedagogical challenge in a qualification like the Diploma in Accountancy, as lecturers must be able to bring the principled and procedural knowledge together in a way that students can understand both, and connect the parts into a joined-up whole, in order to deepen their engagement with the requisite powerful knowledge. Powerful knowledge should be at the centre of the curriculum (Boughey & McKenna, 2021; Wheelahan, 2015); meaning that the pedagogies used by lecturers should facilitate access to what counts, in that curriculum and discipline or field, as powerful knowledge (Boughey & McKenna, 2021). Lecturers can guide students to build powerful knowledge cumulatively (connected with and building onto prior knowledge), by moving between concrete and abstract examples and concepts, and explicitly connecting parts together (Luckett, 2019; Muller, 2009). When access to powerful knowledge is not enabled, the concern is that a student's ability to use the knowledge in a different context over time could be hindered and lifelong learning could be constrained (Yucel, 2023).

Therefore, access to powerful knowledge is a matter of social justice, as curriculum and pedagogies that do not have powerful knowledge at the centre could continue to exclude

working-class students (Wheelahan, 2010, 2015). Boughey & McKenna (2021) explain that there is a greater possibility of excluding working-class students in a curriculum that foregrounds the everyday knowledge over powerful knowledge, because many middle-class students might be able to access the powerful knowledge outside of the classroom based on their access to abstract principles and practices. Middle-class students are also more likely to have access to a social network of people who have this powerful knowledge and can support their access to it (Case et al., 2018). This is a significant concern in South Africa, as higher and vocational education is depended upon by students and their families to improve their economic and social situation and help them create better life chances.

Each student enters higher education as an individual with their own approaches to reading, writing, and thinking, as well as understandings of what texts are and how to extract or make meaning from them, shaped by their own home and school learning and by their broader social environments such as church, soccer club, peer group and so on. For the purposes of this study, and based on the work of scholars such as Boughey (2013), Gee (2015), and McKenna (2004), I will term these ‘home literacies and practices’. Students come into the university and are faced with new ways of reading, writing, or thinking, which may be similar to or very different from their home literacies and practices. I will term these new ways of being required for success in the university, ‘academic literacies and practices’. Academic literacies and practices form part of our way of being in the world and vary significantly across fields of study. It is therefore important to understand how students develop academic literacies and practices.

Students’ home literacies and practices inform, to a significant extent, the ways in which students engage with university-level and disciplinary texts, practices, and literacies (Kapp & Bangeni, 2011). It is therefore important that lecturers teach not just the ‘what’ or ‘content’ knowledge of accounting, but also ‘how’ to write typical texts, how to read different kinds of texts (e.g., case studies, financial statements, and audit reports), and how to think through different kinds of accounting practices, such as identifying the cost elements and correctly applying these to calculating the total cost of a product. This is because becoming academically literate is not about gaining language proficiency (e.g., having ‘good’ English) (Boughey, 2013; McKenna, 2004). It is getting to know the social practices, the literacies of the module, of the subject, of higher education. It is the ability to engage critically with the forms of knowledge that are valued within a discipline and its component subjects and sub-disciplines. For example, in accounting, and more specifically cost accounting, students must be able to

identify total cost (rand value), units (kilograms, hours) and cost per unit (R/kg, R/h). These are key terms which students need to understand to complete procedural tasks. A lack of understanding of these concepts could result in students using the wrong information to calculate, for example, the total cost of a product. These concepts thus form part of the more explicit, procedural content knowledge of the curriculum. However, in addition to this, students need to understand the importance of accuracy, as this has major effects on the calculations, budgeting, and decision-making processes of a business. The disposition of being accurate is therefore a key value or way of being literate in accounting, yet it is not often explicitly addressed in the curriculum or pedagogy. In this sub-discipline, then, lecturers would need to emphasise and teach accurate reading and reporting as a literacy practice that references a powerful disposition (accuracy), and powerful forms of procedural and principled knowledge (applying core concepts to doing calculations that inform business practices).

Students who enter the university with literacy practices that are to some extent aligned to those required in higher education and their specific subjects, will find it easier to adjust to the required way of being (Boughey & McKenna, 2016; McKenna, 2004), while other students might experience alienation as the academic literacies and practices they have learned are too far removed from that required by academia. This is particularly the case when the new literacy practices are treated as if they were obvious or ‘common-sense’ rather than peculiar and needing to be acquired. Alienation also happens when students feel that their social and cultural contexts are excluded by the university (Case, 2008). Often it is working-class students whose home literacies and practices are far removed from those legitimated by academia, while the academic literacies and practices of middle-class students are often closer to that required by academia (McLean et al., 2019). This gap between the practices that students enter university with and the required academic literacies and practices for success in their degree or diploma study, has important implications for pedagogy, as students need to learn how to adjust to the new environment and to be transformed through their learning. Therefore, a key pedagogical requirement for access to powerful knowledge is to ensure that connections are made between the everyday knowledges of the students in the class and the powerful knowledge of the academy (Boughey & McKenna, 2021; Luckett, 2019; Wheelahan, 2010; Young, 2008).

We thus see that epistemological access to powerful knowledge is about the content that students require access to, as well as how access is provided through the pedagogies used. As such, the focus should be on the specialised knowledge as well as on the person who needs to

acquire the knowledge. The person who needs to acquire the specialised knowledge is referred to in this study as the ‘knower’ (Clarence, 2021; Maton, 2014; Maton & Chen, 2020). The knower is the student entering university with their own lived experiences who, through the curriculum, should be guided to become a specialist, disciplinary knower, in this case an accounting professional. Various scholars, like Maton (2014), Clarence (2021) and Blackie (2021, 2022) emphasise that knowledge and knowers are always linked and cannot be separated. When the knowledge that should be learned is seen in isolation from the person who needs to acquire the knowledge, there is no recognition of who the knowers are, and how they are shaped by their life world, or the ways of being required to become a specialised knower in the field.

We see this in accounting education (as discussed in Chapter 2, Section 2.6.2) where the field is criticised for its over-emphasis on technical knowledge, while who the students are and who they need to become to be regarded as legitimate accountancy professionals is backgrounded. There is thus a need for ‘knower awareness’ (Blackie, 2022; Blackie & Luckett, 2024). Knower awareness is about placing a greater focus on who the students are when entering university, their lived experiences, and the academic literacies and practices that they bring with them, as well as the ways of being that they need to develop to become specialised knowers in their field, in this case accountancy professionals (Blackie, 2022; Blackie & Luckett, 2024).

Knower awareness can be enhanced, in pedagogy, through the use of examples and scenarios that the students in the class can relate to (Blackie & Luckett, 2024). A lecturer may well use an example from their own lived experience to explain a concept or illustrate calculations. For example, a lecturer could use the *process of baking and decorating cupcakes* as an example to illustrate cost classification (direct material, direct labour, and overheads) as well as cost behaviour (variable, fixed, mixed, and step cost). As the lecturer is familiar with the process, they might skip over certain steps, while a student who does not have experience or understanding of the baking process might struggle to relate to the example. This is fully understandable as the student body is diverse, and the lived experiences of students will be varied. As discussed earlier, examples are used to make connections between abstracted and applied knowledge explicit and thus enable us to build knowledge cumulatively (Luckett, 2019; Muller, 2009). The concern is that if students cannot relate to the examples used, they might not be able to connect the parts together, thus constraining their engagement with and mastery of powerful knowledge. A way to ensure all students can relate to examples used, and to enrich

learning, is to draw on the different lived experiences of the students through discussions of various relatable metaphors or examples (Blackie & Lockett, 2024). Blackie and Lockett (2024) suggest that to realise the *power* in powerful knowledge, the knowledge must be enacted in the world by the person who has acquired it. Or, to put it differently, for specialised accounting knowledge to become powerful knowledge, the students need to understand the knowledge, ‘see’ how it can help them to make a difference in the world and develop the professional identity of an accountancy professional.

In a discipline like accountancy, the knowledge base is largely determined by professional bodies, who in turn are affiliated with IFAC as discussed in Chapter 2, Sections 2.4 and 2.6.3. I argued that the knowledge base of accounting has not really changed in decades and is subject to what publishers deem to be important (Rebele & Kent St. Pierre, 2015). Therefore, accountancy lecturers must accept the given knowledge base as the powerful knowledge of the discipline. Yet even though lecturers do not have much control around what counts as powerful knowledge, they can enact their own agency to make the knowledge more understandable and accessible through the pedagogies used and assessments designed. Therefore, including myself in this as an accounting lecturer, I would argue that we need to focus on the links we draw, the examples we use, the kinds of assessment tasks we design, and how we communicate and model professional values and ethics through our teaching. These will be different in a diploma than in a degree course, because of the differing purposes of the diploma and the routes students can take out of this qualification, as discussed in Chapter 2, Section 2.3.

### **3.4 Vocational education**

When exploring issues of powerful knowledge and epistemological access, it is important to contextualise the discussion within the context of the research context of this study, namely vocational education at a comprehensive university. As discussed in Chapter 1, Section 1.3.2, comprehensive universities have found it challenging to keep the focus on the purpose of qualifications, specifically in vocational education (Garraway & Winberg, 2019; Shay, 2015a). Furthermore, comprehensive universities are facing additional challenges as policies often apply across all qualifications and these institutions lack their own identity (Webbstock, 2016). Given that this study explores a three-year diploma (vocational education) at a comprehensive

university, an awareness of these contextual challenges is important, as it has implications for conceptual and contextual coherence.

### ***3.4.1 Contextual and conceptual coherence in vocational education***

The purpose of a vocational qualification is to induct students into a field of practice and to provide them with the theoretical knowledge that underpins the practice (Wheelahan, 2015). Wheelahan (2015) further explains that vocational and professional curricula are similar, as both need to prepare students for the field of practice, although the ways in which the preparation is done is different. The differences are located in the kinds of knowledge that are curriculated and how it is taught and assessed. A starting point when considering the curriculum of the various qualifications is to look at the conceptual and contextual coherence of the curriculum (Muller, 2009; Shay, 2015a).

Contextual coherence refers to the external logics of curricula when the specifications come from external sources. For example, a professional curriculum that includes occupational requirements (Muller, 2009). In the case of accounting, the educational standards and competency frameworks of IFAC, and the various professional bodies would provide these specifications. Where contextual coherence dominates, the focus is on coherence between the curriculum and the contexts in which the knowledge will be used. Conceptual coherence, on the other hand, refers to internal logics within curricula that come from the discipline. Internal logics are often referred to as the ‘spine’ of the discipline (Muller, 2009). Where conceptual coherence dominates, the focus is on coherence across the concepts (including theories, terminology, and ideological positions) in the curriculum. Both conceptual coherence and contextual coherence are important for curriculum design, and both are always present. Conceptual and contextual coherence can be illustrated as a continuum of strengths, as shown in Figure 3.2. One kind of coherence will always be more dominant, depending on, and influenced by, the specific qualification.

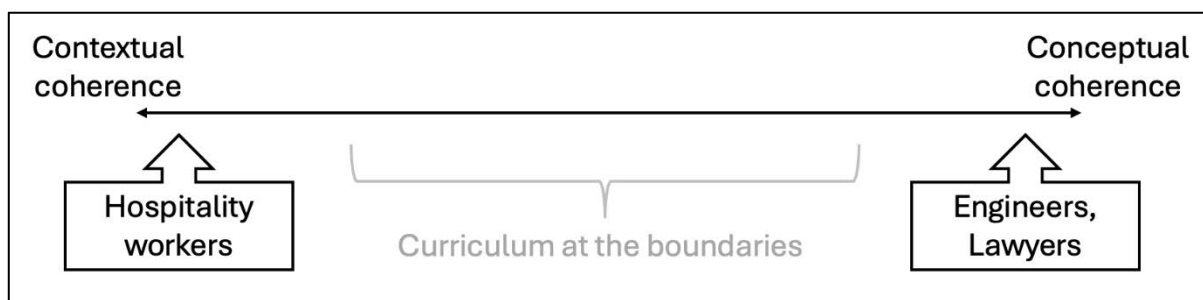


Figure 3.2: Contextual and conceptual coherence (Muller, 2009)

An example of a curriculum with stronger contextual coherence would be that of hospitality workers as the knowledge base is largely practical. This is different to engineering and law curricula which are more academic, as they draw more from theoretical knowledge and thus reflect stronger conceptual coherence (Muller, 2009; Shay, 2015a). The biggest challenges are the curricula that are in-between, also referred to as ‘curriculum at the boundaries’ (Muller, 2009; Shay, 2015a). Vocational curricula fall into this space, as they need to face inwards to the discipline as well as outwards to the field of practice (M. Barnett, 2006; Shay, 2015a). As such, vocational curricula should move between various levels of contextual and conceptual coherence (Shay, 2015a). The concern, as mentioned in Section 3.3.1, is that a curriculum that is too focused on contextual coherence will lock students out of the theoretical, conceptual knowledge of the discipline (Gamble, 2006; Wheelahan, 2010, 2015); conversely, one that is too theoretical will undermine the necessary practical and applied learning. Therefore, all accounting qualifications should have both contextual and conceptual coherence. However, the strength of conceptual and contextual coherence will depend on the specific qualification.

The fact that vocational curricula need to face both ways might seem to be at odds with the understanding of the educational purpose of higher education as being transformative in nature. However, that is not the case; in fact, it highlights the importance of the conceptual knowledge, the internal logic, and theoretical knowledge of the discipline(s). Furthermore, students need to have a contextual understanding of how the knowledge they acquire will be used in the workplace. To enable students to gain a contextual understanding of the conceptual knowledge, the curriculum and pedagogies used should focus on making the links between the various concepts and their practical application explicit to the students. Therefore, attention should be given to what should be taught (selection); the order in which it is taught (sequence); and time allocated to each part (timing) (Gamble, 2006).

There are important implications for the vocational curriculum to keep in mind. Firstly, the curriculum often requires integration of different kinds of knowledge (Shay & Steyn, 2016). As explained previously, students need theoretical knowledge of concepts like fixed cost, variable cost, mixed cost and stepped cost, as they must be able to define and explain these. They then also need to know how to calculate and identify the various costs and use the information to determine the cost of a product, thus procedural knowledge. This is just one example of how theoretical and procedural knowledge work together within accounting. Secondly, the vocational curriculum needs to face towards the discipline as well as to the workplace. As such, students need access to specialised disciplinary knowledge, and through the pedagogies used as well as the assessments, students must be able to 'see' how the knowledge will be used to solve specific work-based problems (M. Barnett, 2006; Shay, 2013; Wheelahan, 2015). Lastly, the curriculum should consider who the students are, the professional identity that is valued by the discipline, and how the curriculum will enable the development of the identity of an accountant.

### **3.5 Conclusion**

This chapter started with an explanation of the purposes of higher education. I explained the potential problems of a narrow economic/employability view of the educational purpose of higher education. Thereafter, I argued that in fast-changing social, economic and ecological contexts, the educational purpose of higher education should be to put students in a transformative relationship with knowledge, because the transformative nature of higher education is about epistemological access to powerful bodies of knowledge. I explained that epistemological access is more than formal access as it is about making the requirements (knowledge, skills, and values) of the discipline explicit to the students through the use of pedagogical approaches. Epistemological access thus enables students to gain access to the specialised disciplinary knowledge, or powerful knowledge, necessary for success at university and in their eventual professional roles. I argued, based on this understanding, that through the pedagogies used, students should be enabled to link the various knowledge parts into a connected whole, and thus be guided to form an understanding of what they can do with the knowledge in the world. Throughout the chapter, I emphasised the importance of knower awareness within the pedagogies used, meaning that lecturers should focus on who the students are as they enter university or the module, and who they need to become as accountants.

In considering the transformative nature of higher education, underpinned by epistemological access to powerful knowledge, we see that what is called for in accounting education is possible. In Chapter 2, Section 2.6.1, I showed that there is a need for accounting education to integrate technical knowledge with professional skills, values, ethics, and attributes to develop the professional identity of an accountant. Therefore, the focus should be on the development of the whole person. These aspects all form part of the powerful knowledge that students require to become accounting professionals. Furthermore, the pedagogies used, as discussed in Chapter 2, Section 2.6.4, should enable students to see how the specialised knowledge can be used in the world, in other words, students need to develop an understanding of the impact of accounting on the wider social and natural world. By developing this deeper understanding, students are put into a transformative relationship with knowledge.

I will now move to the next part of the study, which is focused on the ‘tools’ needed to understand how epistemological access to powerful knowledge is enabled through the pedagogies in two accounting modules. In Chapter 4, I introduce Legitimation Code Theory, the theoretical and analytical framework for this study. This is followed by the Methodology in Chapter 5 where I explain how these tools were operationalised in the research.

## CHAPTER 4: Theoretical framework

### 4.1 Introduction

Chapter 2 reviewed literature on accounting and accounting education to conceptualise the current study within the field, and to reveal what is known about the topic, what the field is criticised for and what the field needs to do, to better prepare students for the world of work. The literature review highlighted the need for students to gain access to the relevant disciplinary knowledge, skills, values, ethics, and attitudes to become effective accounting professionals. Additionally, accounting is now recognised as a social, moral, *and* technical practice which means accountants are required to be engaged business partners, not just ‘number crunchers’. However, accounting education is criticised for its strong technical focus and for not preparing students adequately for the changing world of work.

Chapter 3 argued that criticisms of accounting education and the demands of the field can be addressed by focussing on the transformative nature of higher education and providing greater epistemological access to powerful knowledge. The pedagogies used should enable students to build on prior knowledge and to link the various knowledge parts into a connected whole. At the same time, students should be guided to form an understanding of what they can do with the knowledge in the professional world. Part of this is ensuring that the requirements of the discipline are made explicit to the students through the pedagogies used.

To enable epistemological access to powerful knowledge, we need a way to identify the various kinds of knowledges and how these parts come together into joined-up wholes. Furthermore, we need a way to analyse the pedagogical practices to ‘see’ how these enable students to connect the knowledge parts and construct their own ‘wholes’. Legitimation Code Theory (LCT) provides tools that can help to visualise the knowledge that students require access to, as well as how this is done through the pedagogies used.

In this chapter, LCT, the theoretical and analytical tool used in this study, is discussed. The discussion starts with an explanation of LCT as a multi-dimensional framework and why LCT is well suited to address the research questions posed in this study. Hereafter, the discussion

focusses on constellations and Semantics specifically, outlining why they are suitable tools for the needs of the study.

## 4.2 Legitimation Code Theory (LCT)

LCT is a multi-dimensional framework that enables us to research and shape our practices, as it brings together the *what* and the *who* of a practice. Developed by Karl Maton from the early 2000s on, LCT is “a practical framework that is being used to explore a host of issues, practices and contexts in education and beyond” (Maton, 2013, p. 11). The framework of LCT builds on Basil Bernstein’s code theory to establish ‘knowledge structures’ and on Pierre Bourdieu’s field theory, to establish ‘knower structures’ (Martin et al., 2020; Maton, 2009, 2014; Winberg et al., 2020). LCT is a practical theory as it enables us to analyse and improve educational practices, curriculum design, and knowledge-building processes. Furthermore, LCT enables us to make the hidden principles of knowledge practices visible. As such, LCT helps us to determine the ‘rules of the game’, theorised in LCT as the ‘languages of legitimation’ (Maton, 2014). This kind of analysis “enables knowledge practices to be seen, their organizing principles to be conceptualised, and their effects to be explored” (Maton, 2014, p. 3). LCT enables us to explore cumulative knowledge-building (Maton, 2016).

LCT critiques existing theories of knowledge as leading to binaries, in other words, an either/or situation. It posits that practices in the real world do not fit into neat ‘boxes’ or fixed categories created by binaries (for example, Biglan’s well-known typologies of hard/soft disciplines, and pure/applied disciplines) (Maton, 2014, see also Biglan, 1973). LCT overcomes these concerns by offering a continuum of unlimited possibilities. It does so, by seeing everything in relation to something else; meaning that everything is relative, and nothing is ever fixed, as it is seen to change according to the context, time and so forth.

In addition to overcoming theoretical binaries, LCT enables the “knowledge blindness” (Maton, 2014) of much educational research to be overcome. A concern that has been raised about education research is that it largely focusses on classroom practices, the students’ background, their experiences, and the study content, and not on the nature of the knowledge itself. Knowledge blindness is a result of being more concerned with the content knowledge, (the ‘bits’) that students are required to learn, while the kinds of knowledges and the structure

of the knowledge (the connected whole) is backgrounded (Maton, 2014; K. Wilmot & McKenna, 2021). LCT helps us to look at knowledge as an object of study and not only at students' ways of knowing as it helps us to bring the nature of the context and the dispositions of the students as well as their context together (Martin et al., 2020).

Currently, there are three dimensions in LCT that have been well developed: Specialization, Semantics, and Autonomy, with a fourth dimension, Temporality, in the early stages of development and testing. Each dimension consists of two key concepts and explores different kinds of organising principles of practices (Martin et al., 2020; Maton, 2014). Specialization was the first dimension of LCT to be developed and explores practices in terms of 'knowledge-knower' structures (Maton, 2016). As such, Specialization helps us to establish *what* one needs to know (knowledge) and *who* one needs to be (knower) as a legitimate person in a practice. Semantics on the other hand examines how the context-dependence and complexity of practices change over time and space (Clarence, 2021; Maton, 2014). As Semantics is concerned with how knowledge is recontextualised into a syllabus and into teaching, learning, and assessment practices and how different forms of knowledge relate and change over time, it is key to understanding cumulative knowledge-building (Maton, 2020). Autonomy is the last dimension to be fully developed. Autonomy refers to the parts or 'constituents' of a practices and how these are related to each other. The relations can be from within the practice or from outside the practice (Maton & Howard, 2021; Winberg et al., 2020). Constellations are part of the multi-dimensional framework of LCT. Constellations work with all the dimensions rather than being a specific dimension. Constellations are descriptive, and offer a way of mapping practices (Maton, 2024).

Although any practice can be explored through all the different dimensions, the research question(s) determines the most suitable dimension/s to draw on. In this study, I have used constellations and the dimension of Semantics, as these provide the necessary theoretical and analytical tools required. Constellations are used to visualise the kinds of knowledges and the structure of the 'whole' that students require access to. Semantics is used to establish how the pedagogies used are enabling (or not) students to access what is being legitimated in the pedagogy to enable students to become accountants.

### 4.2.1 *Why Legitimation Code Theory*

This study utilises Legitimation Code Theory (LCT) to investigate the extent to which students are gaining epistemological access to powerful knowledge through the pedagogies used in two accounting modules. As discussed in Chapter 3, epistemological access speaks to how students are enabled to develop the specialised ways of being of the discipline, through their engagement with the knowledge. Epistemological access is enhanced when theoretical concepts are explained to students in a way that makes sense to them and enables them to link the theoretical concepts to practical calculations or problem-solving. Powerful knowledge refers to the specialised knowledge that students require access to. The knowledge consists of principled knowledge parts as well as procedural knowledge parts, that are connected to form ‘joined-up’ wholes. Furthermore, students should be able to connect the new knowledge to their prior knowledge. Included in powerful knowledge is the need to understand who the person is who needs to acquire the knowledge as well as the specialised ways of being, or the professional identity they need to develop, also referred to as knower awareness (see Chapter 3, Section 3.3.1).

Therefore, what is needed is a way to look at the specialised knowledge in a manner that can help to identify the various parts (principled and procedural knowledge); and how these parts come together to form connected wholes. This places attention on *what* students require access to. With the understanding of *what* students need access to, there is a need to look at whether the pedagogical approaches and assessments used enable students to form the required connected whole; in other words, *how* the pedagogical approaches and assessments used enable access to powerful knowledge.

LCT provides an appropriate theoretical and analytical framework for this study due to its ability to make the organising principles (the logics that shape and structure the practices of the field) of the field of Accounting explicit. This means that the tools offered by LCT can help to make the knowledge parts, and how these come together into a connected whole or wholes, explicit. Furthermore, LCT offers a conceptual toolkit that enables a deeper analysis of the organising principles underlying the pedagogical practices of this discipline. Therefore, the tools offered by LCT can help this study to analyse how the pedagogies used enable access to the knowledge in a ‘joined-up’ way, and in a way that students will be able to understand how they could use the knowledge in the world. As such, LCT provides tools that helps to make the

knowledge within the Diploma of Accounting – *what* students need to learn – explicit as well as *how* access to the knowledge is enabled through the pedagogical practices used by the lecturers included in the study.

#### ***4.2.2 Why LCT is well suited to address the research questions***

LCT has been adopted across the world to analyse a range of problems, practices and disciplines. Scholars from around the world (i.e., Australia, China, United Kingdom, Sweden, Brazil, Mexico and the United States) are using LCT to explore and address education problems in various disciplines such as academic development, English studies, teacher education, ballet, and Political Science to name a few. In the last ten years, there has been a rapid uptake of LCT in South Africa, with more than 86 peer reviewed articles and book chapters using it as its primary theoretical framework between 2010 and 2021 (K. Wilmot & McKenna, 2021). However, the use of LCT is not limited to educational studies and has been used successfully in other fields for example, freemasonry (Poulet, 2016); and politics (Siebörger & Adendorff, 2017). The diversity of research using LCT is evident in the database found on the LCT website (<https://legitimationcodetheory.com/publications/database/>).

Studies using LCT focus on various issues, such as knowledge and knower-building, curriculum development, pedagogy, and assessment across the disciplines, for example, science, biology, chemistry, engineering, doctoral writing, political science, and English literature studies. For example Ellery (2018) used LCT to understand what was required to enable epistemological access in a science programme at a South African University, while Lück, McKenna and Harran (2020) as well as Wolff (2021) used LCT in different ways to look at the relationship between the curriculum and what is required by industry. These are just three studies in which LCT was used to explore pedagogical development in ways that could, in the end, enable greater access to powerful knowledge (see Winberg et al., 2020 for further examples). Furthermore, other scholars have focussed on curriculum development and classroom pedagogies and showed how LCT could support lecturers in their own learning about pedagogy (K. Wilmot & McKenna, 2021). In these studies, scholars showed how LCT could help lecturers to ‘see’ what is happening in their teaching and begin to consider improvements or changes (see for example Clarence & van Heerden, 2021; Conana et al., 2021; Wolff, 2021).

LCT has also been used in research to understand various aspects of accounting education. Outside of South Africa, I could only find one accounting education study that has used LCT. In Australia, McPherson (2014) used the LCT dimension of Semantics with Systemic Functional Linguistics (SFL) in her doctoral study to investigate how professional accounting practices are represented in the university classroom discourse and what the implications of this are for the theory and practice in professional learning. McPherson focussed on a Master's in Accounting course. In South Africa, the accounting education studies that draw on LCT have focused on qualifications that form part of the chartered accounting (CA) education route. For example, Mkhize (2015) explored the knowledge and knower structures (thus what one needs to know and who one needs to be) that are legitimated in the Certificate in the Theory of Accountancy <sup>7</sup>(CTA) level. To do this, Mkhize used Specialization and the 4K-module (a deeper level of Specialization). In a recent doctoral study Lubbe (2021) used Bernstein's pedagogic device and Specialization to investigate the problem of curriculum change in accounting. The participants in Lubbe's study were professional accountants and the focus was on the CA qualification. Myers (2016, 2017) used LCT to investigate the impact of the hierarchical knowledge structure of accounting on teaching and learning of a first semester introductory accounting course. In this study, Myers looked at how students constructed knowledge during lectures, tutorials, and self-study periods. Thus, the focus of the studies by Mkhize, Lubbe and Myers were more oriented towards the syllabus, as opposed to classroom pedagogy, and were not focused, as my study is, on the diploma route, which is a gap in the research.

This study builds on the work of Mkhize, Lubbe and Myers as it asks questions around the kinds of knowledges and the structure of the specialised knowledges that students need access to, and how access is enabled through the pedagogies used. To answer these questions, constellations and semantic gravity have been used in this study. Constellations enable me to analyse and visualise the kinds of knowledges and the structure of the knowledges, while semantic gravity enables me to analyse how lecturers enabled, or undermined, cumulative understanding of the knowledge through the pedagogies used. I now turn to consider constellations and semantic gravity in more detail and to demonstrate the appropriateness of the theoretical and analytical tools.

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<sup>7</sup> CTA is on a postgraduate diploma/honors level, thus NQF8

### 4.3 Constellations

As discussed in Chapter 3, Section 3.3.1, the knowledge composition of a field is influenced by the kinds of knowledges, the structure of the knowledges, and the relations between the various parts. Consequently, there are often significant differences between the knowledge compositions of various fields and sub-fields. These differences further lead to differences between modules within the same qualification. As a result, the knowledge-building process between different disciplines and sub-disciplines can be different. To support the academic success of the students, lecturers should make the knowledge composition explicit to the students (Rusznayak, 2020). A useful way to do this is through *constellations*.

Constellations are a collection of objects, beliefs or ideas, that are constructed as belonging together (Maton & Doran, 2021; Rusznayak, 2020). A way to explain constellations is to consider constellations in astronomy. Constellations like Orion and Taurus are made up of *clusters* of stars, selected from an enormous number of possible stars. By connecting these clusters of stars, recognisable images like Orion and Taurus are formed (Maton & Doran, 2021; Rusznayak, 2020). Clusters are groupings of ideas, beliefs, or practices that come together and create meaning about a particular concept or *stance* (Lambrinos, 2020; Maton & Doran, 2021). The ideas, beliefs, and practices are single units of meaning, referred to as *nodes*. As these nodes are linked to other nodes, a cluster is formed and through the relationships, the meaning is increased. As such, a concept like cost behaviour is a cluster, consisting of nodes, that provides meaning on the importance of the concept, where it is used, who will use it and how to do the calculations. Different clusters, like contribution margin, cost behaviour, and margin of safety then come together to in a constellation for Cost-Volume-Profit analysis.

Constellations form part of cosmology analysis. A cosmology consists of a number of constellations and are condensed with meaning. There are five key concepts associated with a cosmology analysis. These are described as follows by Maton & Doran (2021):

- *clusters* are groupings of nodes (such as ideas, beliefs, or practices);
- *constellations* are larger groupings of nodes and may include clusters;
- *condensation* is how nodes, clusters, and constellations are imbued with meaning;
- *charging* describes the valuations given to nodes, clusters, and constellations; and

- *cosmology* refers to the organising principles underlying the selection, arrangement, and valuation of nodes in a constellation, which are revealed by analysing their legitimisation codes.

These key concepts are illustrated in Figure 4.1:

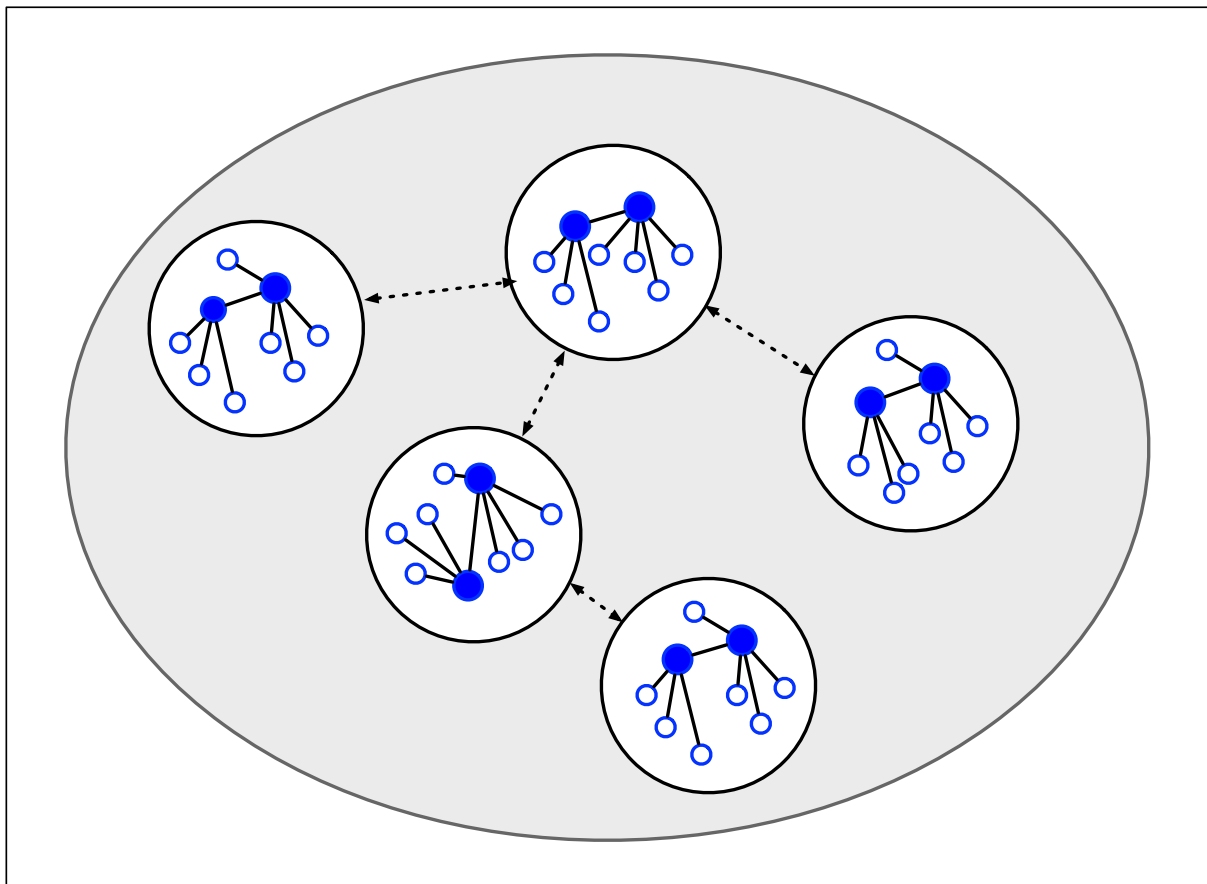


Figure 4.1: Cost and management accounting as a cosmology

*Nodes* are indicated as smaller blue outlined circles. When two or more nodes come together, a *cluster* (solid blue circle) is formed. As mentioned earlier, *constellations* are illustrated as bigger white circles and consist of nodes and clusters that are connected into a joined-up whole. When a number of constellations come together, a *cosmology* is formed, in this case, illustrated as a grey oval. We can thus think of a module, like Cost and Management Accounting 3A (CFM3A) as a cosmology. Each of the five topics form a constellation of ideas that are connected and condensed with meaning.

According to LCT, a constellation has coherence at a specific time and from a particular point to actors with a particular cosmology or worldview. Furthermore, cosmologies and constellations can vary across contexts and change over time. Thus, one can think of the current curriculum as a constellation that has relevance for a specific period and for a specific purpose. As such, in considering the changing context of accounting, and the implications for accounting education, one would be able to show the shifts in the focus of the field by drawing on constellations. Furthermore, how actors see the constellation will depend on their roles, thus, whether they are looking at the constellation as accounting educators, potential employers, or as those setting the educational standards.

#### ***4.3.1 The use of constellations in other studies***

The uptake of cosmology and constellation analysis in research has been slower than other LCT tools, however, there has been a significant increase in recent years. As with the dimensions, cosmology and constellation analysis can be used in different ways in research. In one of the earlier studies, Siebörger and Adendorff (2017) used constellation analysis to analyse how knowledge is co-constructed in parliamentary committee meetings in South Africa. Maton and Doran (2017) did a condensation analysis to reveal the complexity of knowledge practices in English discourse. In a more recent study, Clarence and van Heerden (2023) used constellations to visualise the aptitudes and dispositions that are valued in doctoral education.

Constellation analysis has further been used in several educational studies. For example, Lambrinos (2020) used constellations to show how ballet teachers bring ballet movements and the ways of being a ballet dancer together, over time. In this study, Lambrinos (2020) showed that when teaching younger ballet students, teachers had to explicitly mention the various steps for a specific movement. This was not necessary with the more experienced or advanced students. As students gained more experience, the teacher could start to link the various movements together without mentioning the individual steps, hence creating expertise over time through constellating and condensing prior learning with new and more advanced learning.

In another study, Maton and Doran (2021) used constellation analysis to reveal relations among ideas, enabling them to show the complexity of the body of knowledge. Maton and Doran

(2021) suggest that constellation analysis offers a way of mapping the content to be taught and learned. In mapping the content, key ideas and relations among ideas are highlighted. In a similar kind of study, Rusznyak (2020) drew on constellations to show that students' prior knowledge has an impact on how they are able to build knowledge within a specific course. As students must be able to integrate different parts into a coherent whole to succeed in their studies, it is important for lecturers to make these connections clear and explicit in their teaching. These studies are examples of how constellations can be used to reveal the different knowledge parts and how these parts are linked together to form joined-up wholes.

#### **4.3.2 *How constellations are used in this study***

For students to gain access to powerful knowledge, the pedagogies used should make the various kinds of knowledges explicit and make the connections between the parts clear to the students. The principles revealed by constellation analysis suggest that its application in this study will be useful. For example, studies have shown that constellation analysis, specifically the concepts of *nodes*, *clusters*, and *constellations* can help to make the knowledge parts and the connections between the parts visible to the lecturers. In this study, the use of constellation analysis helped to make the kinds of knowledges explicit as well as how the different parts came together into the whole. Constellations were developed by drawing on the curriculum of the two modules. Thus, by considering the concepts (nodes) students needed to learn, and how these concepts were connected (clusters) the constellations of the modules were developed. Additionally, the dispositions that students are required to develop, and that were made explicit in the curriculum, were included in the constellations. The methodological approach followed in the development of the constellations is discussed in Chapter 5, Section 5.5.2.

The development of the constellations was the first step in the analysis in this study as it helped to visualise the knowledge that students require access to. However, a different theoretical tool was needed to analyse how the pedagogical approaches enabled access to the specialised knowledge. For this part of the analysis, I drew on the Semantics dimensions of LCT.

#### **4.4 Semantics**

A key goal of pedagogy is to ensure that students gain epistemological access to powerful knowledge as discussed in Chapter 3. Done successfully, the specialised knowledges and ways

of being of the discipline become part of who the student is. Furthermore, access to powerful knowledge can help students to think in new ways about the world and the impact of the role of accountants in the world. As a result, a focus on this key pedagogical goal can help to address requirements (i.e., the need to develop the identity of an accountant); and the criticisms (i.e., that accounting education is too technical) of accounting education (see Chapter 2, Sections 2.6.1 and 2.6.2 for more detail).

In enabling students to learn and master powerful knowledge, the aim is to provide access to the appropriate knowledge in ways that students will be able to understand, so that they can connect the knowledge into a joined-up, cumulatively built whole, and draw on this knowledge as they continue with their studies, move into the workplace, and even in their personal lives. Additionally, the lecturer needs to consider the different kinds of knowledge, both principled and procedural, and explicitly guide students to connect the various parts into the required whole. Furthermore, the curriculum should have contextual and conceptual coherence, meaning that in accounting education, this should include theoretical knowledge (i.e., breakeven in CFM3A; and test of controls in AIC3A), as well as knowledge from the field of practice, thus practical knowledge. For example, how a business used breakeven or how test of controls was planned and executed in an audit. To put this differently, the learning should not be so specific that the focus is only on theoretical concepts or only on practical examples. What is needed is teaching that continuously moves between theoretical and practical knowledge. Henceforth, what we need is knowledge that builds over time, cumulatively, and across contexts, while all the parts are linked together into a whole.

The LCT dimension of Semantics offers a set of concepts that enables us to uncover the forms of knowledge and can help to establish how pedagogies enable students to build knowledge over time and in a cumulative rather than segmented or piecemeal way. Semantics can help to analyse the complexity of the knowledge structure as well as provide ‘tools’ for how this can then be taught to improve access to the knowledge, ultimately better enabling success for students.

The Semantics dimension conceptualises and explores practices through the lens offered by its two concepts: semantic gravity (SG) and semantic density (SD). Semantic gravity is the degree to which meaning relates to its context (Maton, 2009, 2013; Maton & Doran, 2017). Semantic gravity is weaker or stronger along a continuum of strengths. The more context-dependent

meanings and practices are, the stronger the semantic gravity, while the more context-independent the meanings and practices, the weaker is semantic gravity. For example, the concept of 'cost behaviour' in cost accounting. This concept is defined as the way in which cost relates or behaves in relation to the units produced. The cost can change in direct relation to the units produced, be constant or a combination of the two. The definition could be described as quite abstract, and it will not change when the context changes. This definition can therefore be described as exhibiting weaker semantic gravity (SG–). This is different to a discussion of specific examples of cost behaviour a lecturer might use in a classroom. As the cost behaviour of a specific cost item depends on the scenario, the concrete examples are more context dependent and will thus have a stronger semantic gravity (SG+).

Semantic density is the degree of condensation of meanings that are 'packed' into concepts or practices (Maton, 2013). It relates to the relative complexity of meanings (Winberg et al., 2020). The stronger the semantic density (SD+), the more meanings are condensed within the practice, while less complex meanings will have a weaker semantic density (SD–). Many subject-specific concepts will have stronger semantic density as there are a lot of meanings packed into them, and they are not readily understandable to those outside of the field. Returning to the example of the concept of 'cost behaviour' in cost accounting, we can say that cost behaviour is about how cost behaves in relation to production. The concept of 'cost' however, consists of a number of meanings itself: a cost item can be a variable, fixed, mixed, or step cost. Companies use this information for their planning and in decision-making. The concept of 'cost behaviour' therefore has a number of meanings 'packed in' and can therefore be described as exhibiting stronger semantic density. The semantic density can be weakened (and the definition made more accessible to students) if the lecturer explains this concept by describing the different aspects that go into it (e.g., 'cost items') as well as by using examples, class exercises, and case studies. The concepts of SG and SD work independently of each other; however, and as with the concepts in the other dimensions, both are always present in any given practice. What distinguishes different practices depends on how strongly or weakly the sets of relations are foregrounded at any point in time.

All practices are characterised by both semantic gravity and semantic density, each with its own relevant strengths, varying independently, resulting in an infinite number of relational positions. Changes in the context-dependence and complexity of meaning in knowledge practices can be traced over time. Educational research has shown that the weakening and

strengthening of semantic gravity and semantic density is one way of enabling cumulative knowledge-building over time (Maton, 2013, 2014). LCT uses the term ‘cumulative knowledge-building’ to refer to knowledge that builds over time and that can be transferred across contexts (Clarence, 2021; Maton, 2009, 2014, 2020). In short, cumulative knowledge-building is at the heart of education because it is a pre-requisite for lifelong learning which all higher education should be concerned with (Maton, 2020).

As such, effective pedagogies should enable students to build powerful knowledge cumulatively. The reason for this is that when a teacher (or lecturer) enacts pedagogy that moves between abstract and complex ideas to those that are more contextual and simpler (and back again), students learn to transfer knowledge gained in one context and apply it elsewhere. This involves a process of ‘unpacking’ and explaining complex ideas – i.e., a process of *strengthening* semantic gravity and *weakening* semantic density, often through the use of examples and simpler language – to repacking and building these ideas back up, i.e., a process of *weakening* semantic gravity as the teacher moves to more abstract terrain and a *strengthening* of semantic density as she links different meanings together. If this movement does not happen, knowledge can become so dependent on a specific context that it has meaning only in that context, or, by contrast, it may become so abstractly taught and learned that application is difficult to do effectively. This leads to ‘segmentalism’ or ‘segmented learning’ (Maton, 2014, 2020).

Segmented learning may happen when a lecturer prioritises a focus on specific examples and practical work from a particular context in teaching. If the lecturer does not complement this focus by exposing students to the meanings of the principles informing the contextual examples and showing them how these connect to other concepts and subjects, there is a risk of prompting students into segmented learning. Consider ‘cost behaviour’: if a lecturer focusses on doing the calculations (practical work) required to determine the cost behaviour of a cost item but does not explain why the calculations is done or how it will be used (principles) the learning could be segmented. By the same token, teaching abstracted concepts and their definitions without clearly applying them to or enacting them within a relevant example may lead to students memorising the theory without knowing what it means in practice, another form of segmented learning.

Semantics, specifically moving between SG+, SD- and SG-, SD+ and back again can help with overcoming segmentalism and moving towards building powerful knowledge cumulatively as it enables us to explore the context dependence and complexity of meanings and the implications these have on pedagogies. The ‘moves’ between strengthening and weakening of semantic gravity and semantic density are described as ‘semantic waves’ and can be graphically illustrated on ‘semantic profiles’ Maton (2014).

#### 4.4.1 *Semantic profiles and semantic waves*

Semantic profiles track the strengthening and weakening of semantic gravity and semantic density over time. Semantic profiles are valuable as they reveal changes in context dependency (semantic gravity) and complexity (semantic density). By plotting the traversing of movements over time a semantic wave is formed.

Semantic waves (Profile C), illustrated in Figure 4.2, show how it is possible to move between context-independent practices to context-dependent practices, while at the same time moving between the varying complexity of practices. The strengthening and weakening of semantic gravity and semantic density are shown as a wave (Profile C) as illustrated in Figure 4.2.

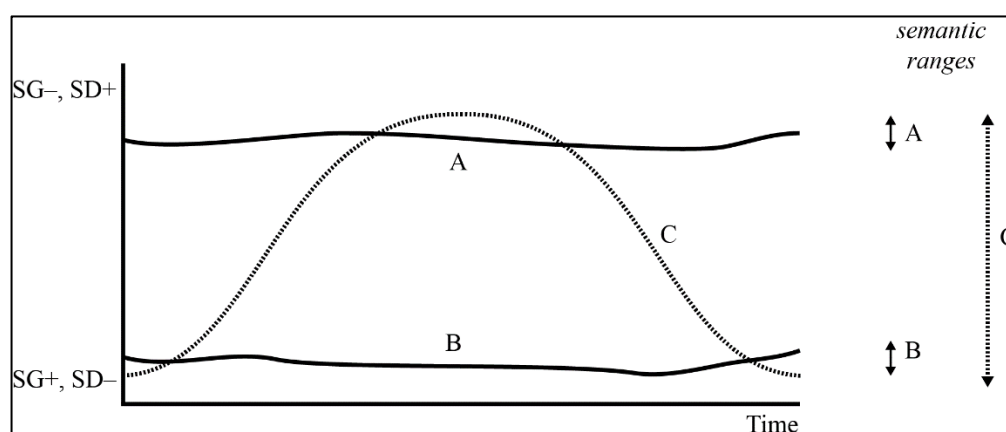


Figure 4.2: Semantic profiles (Martin et al., 2020, p. 143)

The use of Semantics at this broad level will be useful when looking at how the content of the module is taught, explained, and simplified for students to gain a good understanding and for cumulative knowledge-building to take place. Pedagogies that traverse the full semantic range (that is from highest to lowest point as illustrated by Profile C in Figure 4.2) will enable students to apply the knowledge learned at university in various contexts over time. As such, students

should be better prepared for the workplace. On the other hand, if a lecturer unintentionally enacts pedagogy that results in a high semantic flatline (see Profile A in Figure 4.2), they may restrict students' knowledge to very abstract principles. This will happen if a lecturer explains theoretical concepts like cost classification and cost behaviour in generalised ways without explicitly linking these with examples to unpack these concepts. As a result, students may memorise the theoretical concepts rather than applying them to practice of some kind, thereby disconnecting them from context and not joining them up within the desired whole of understanding. Similarly, if a lecturer only uses specific examples and simple explanations for concepts, they might be enacting a pedagogy resulting in a low semantic flatline (see Profile B in Figure 4.2). When the pedagogies are too context specific, students might struggle to understand the importance of, for example, the calculations for a business. Depending on the context, a high or low semantic flatline could have a negative impact on the students' learning and cumulative knowledge-building as they may struggle to apply the concepts in different contexts, meaning that access to powerful knowledge will be constrained.

#### ***4.4.2 The use of Semantics in other studies***

Semantics is a valuable tool for research that is concerned with curriculum and pedagogical practices that enables cumulative knowledge-building (Blackie, 2014; Maton, 2009, 2013). As such, semantic profiles have been used extensively in education research. For example, Clarence (2016) used semantic gravity and semantic density to explore how students in a foundational law course build disciplinary knowledge cumulatively and what they required to build knowledge in this way. She further suggests that Semantics provides a set of tools that could help lecturers to see and understand their own teaching more clearly and further help them to identify possible gaps between what students are learning and what is being taught.

Semantics has also been used in a number of studies that focussed specifically on curricula in vocational education (Shay, 2013, 2015a; Shay & Steyn, 2016; Winberg & Hollis-Turner, 2021). For example, Shay (2013) used semantic gravity and semantic density to differentiate between different curricula (i.e. generic, practical, professional/vocational, and theoretical). Through the theorisation of curriculum differentiation, Shay (2013) was able to show that powerful knowledge is about the integration of disciplinary knowledge and contextuality. In a later study, Shay (2015a) drew on Semantics to explain the complex relationship between practice and theory in professional and vocational curricula. Winberg and Hollis-Turner

(2021), through a critical review of the literature with a specific focus on the tension between theory and practice, showed that practical activities and tasks include different forms of knowledge, such as conceptual, procedural, technical, and conceptual knowledge. They argued that curricula and pedagogies should be designed to integrate these different forms of knowledges into practical tasks, and the links between the different forms of knowledges should be made explicit. Additionally, they noted a need for students to engage in authentic and relevant practical assessments tasks, as cumulative knowledge-building is supported through the integration of different forms of knowledge and relevant assessments tasks.

Various scholars have also used Semantics to look at different aspects of assessments. For example, Meidell Sigsgaard (2020) used Semantics to reveal how shifts between context-dependent, simpler meanings and more abstract, complex meanings can help students in their learning. In another study, Rootman-le Grange and Blackie (2020) drew on Semantics to determine if lecturers are assessing what they think they are assessing. In this study they found that as the lecturers aimed to make a Chemistry course practical, students were able to pass the course without being able to abstract principles and apply it in a different context. This led to their call for a different, integrated approach to assessment practice.

In the studies mentioned above, the scholars used both semantic gravity and semantic density as their theoretical and analytical framework. However, even though Semantics consists of the two concepts –semantic gravity and semantic density – and both are always present, one does not have to use both concepts at the same time. Over the years, various researchers have used only semantic density or semantic gravity, depending on the needs of their study. In one such study, Mouton et al. (2023) used semantic density to analyse sections of various textbooks to determine why Biology students found it difficult to engage with complex disciplinary text. Similarly, various scholars have drawn only on semantic gravity. For example, Macnaught (2020) used semantic gravity to show that when it comes to connecting theory and practice, lecturers tend to assume that students can make the connections. By drawing on semantic gravity waves, Macnaught (2020) showed different ways that lecturers can guide students in making the connections between theory and practice. In another study, Kirk (2024) used semantic gravity to show the importance of moving between various levels of context-dependency and context-independency in disciplinary writing tasks. Critical reflective writing was an unfamiliar task for the undergraduate sport and exercise students. Kirk (2024) further

explained that through effective pedagogical interventions, the ‘rules of the game’ can be made explicit.

#### ***4.4.3 How Semantics is used in this study***

As discussed in Chapter 3 Section 3.3.1, access to powerful knowledge is important for higher education in general and should help to address some of the concerns raised with regard to accounting education. There is thus a need for a continuous movement between principled and procedural knowledge, while the links between the various parts are made explicit. The principles revealed by Semantics, specifically as mapped using semantic gravity, suggest that its application in this study will be useful. For example, studies have shown that semantic gravity can help to make the movements and connections between different knowledge parts visible. As such, the use of specifically semantic gravity will help me to show how the lecturers, through their pedagogical practices, enable students to move between the principled knowledge (theory) and procedural knowledge (practical), and explicitly guide them to connect the parts into a joined-up whole. By the same token, this analysis can help me to show where these links are less explicit, thus contributing to a greater understanding of how access to powerful knowledge can be enabled and constrained, and how to mitigate the latter through more effective teaching.

As this study is concerned with how the pedagogies used enabled access to different kinds of knowledges, in a joined-up and cumulative way, I chose to focus on semantic gravity, which is used in conjunction with constellations. Although an analysis of semantic density, which would track the movement between weaker and stronger meanings in teaching, could impact on knowledge-building, the difficulty with using semantic density in this study was that often one concept was explained through the use of other discipline-specific concepts. Thus, the semantic density remained relatively strong throughout and did not vary significantly when captured in relation to semantic gravity on a semantic profile. For example, ‘breakeven’ is the point where the total revenue is equal to the total cost. When explained like this, as will be shown in the analysis of the data (Chapters 6, 7 and 8), the semantic density remains relatively strong as concepts like ‘total revenue’ and ‘fixed cost’ were used in the explanation without being unpacked or explained here. The same happened when the lecturers looked at the calculation of breakeven, as the formula was described to students as ‘contribution margin’ divided by ‘total fixed cost’. Tracing the semantic density here did not help to illuminate how

lecturers were joining concepts to one another to create more complex meanings. Additionally, tracing shifts in semantic density could not help to define the different kinds of knowledges included in the curriculum. Therefore, in this study I used constellations to show the meanings that were packed or condensed into topics and concepts, understood as relations between nodes and clusters, and between clusters and constellations of meaning. Constellations provided a more appropriate tool to make visible the *parts* that made up the meanings of topics and concepts. Through the use of constellations, I was able to visualise the curriculum and how different *parts* were brought together to form the ‘*whole*’ or bigger picture of the two modules that this study is focussing on. This is explored fully in Chapter 6.

#### **4.5 Conclusion**

In this chapter, I have outlined LCT as the theoretical and analytical framework enacted in this study. The chapter started with a brief description of LCT, how it emerged and how it has been used in different studies across the world. Constellations and Semantics, the parts of LCT enacted in this study, were discussed in close detail. Furthermore, the use of constellations and Semantics in other research projects similar and related to this study were discussed. These discussions highlight the potential of constellations to visualise the kinds of knowledges that students require access to. Furthermore, they highlight the potential of specifically semantic gravity as a tool to analyse the pedagogical practices used to help students ‘see’ and connect the relevant knowledges they need to grasp to be successful. The next chapter presents the Methodology that guided the study. It explains the research aims, the research design, and how the analytical tools were operationalised in the analysis of data.

## **CHAPTER 5: METHODOLOGY**

### **5.1 Introduction**

The previous chapters showed that there is a need for epistemological access to powerful knowledge in accounting education. Rapid changes, specifically technological developments, have direct implications for the world of work of accountants (see discussion in Chapters 1 and 2). Accountants are now no longer seen as ‘number crunchers’, but as engaged business partners. Therefore, to prepare future accountants to be lifelong learners and adaptable to the changes, there is a need for students to benefit from a transformative relationship with knowledge. This kind of relationship is enabled through epistemological access to powerful knowledge, as discussed in Chapter 3.

To understand the specialised accounting knowledges that students require access to, and how access is enabled or constrained through the pedagogical practices, Chapter 4 presented the theoretical lenses adopted in this study. I have argued that these lenses provide a way to better understand the specialised knowledges as well as the implications of the pedagogical practices used. The focus of this chapter is on how the study was done. The chapter starts with the aim and research questions asked in this study. This is followed by a discussion of the research design and the data that was gathered. Hereafter, the discussion turns to the analysis of the data and how the theoretical lenses of constellations and semantic gravity were used in the analytical framework. The chapter concludes with a discussion of my positionality as researcher, the credibility of the study, and ethical considerations.

### **5.2 Aims of the research**

The main aim of this study was to gain insight into how the pedagogies in a knowledge-driven vocational field, like accounting, are preparing students to become lifelong learners in a rapidly changing world. As such, the study was concerned with how the pedagogies are enabling epistemological access to powerful knowledge. To achieve the aim, this study addressed the following central research question:

## **In what ways is access to powerful knowledge enabled and/or constrained in accounting education?**

This overarching research question was addressed through two sub-questions:

- What is powerful knowledge in accounting education?
- How is access to powerful knowledge enabled and/or constrained in accounting education through the pedagogies used?

By addressing these questions with the proposed theory, this exploratory study offers a novel way of looking at how the pedagogies used in a knowledge-driven vocational field impact on epistemological access to powerful knowledge. Such access is necessary for students to be brought into a transformative relationship with knowledge.

In the following section, the methodological framework of the study is described. Thereafter, I describe the data that was gathered.

### **5.3 Research design**

This section outlines the research design the study adopted to address the research questions. It starts by describing the methodological approach; following this, the rationale for choosing the specific diploma and modules is discussed. This section is concluded with a brief discussion of the participants.

#### ***5.3.1 Methodological approach***

This study is concerned with the kinds of knowledges and types of knowers that are currently legitimated within a vocational accounting curriculum and investigates how pedagogies can bring students into a transformative relationship with knowledge to ensure greater student access and success. To do this study, I used a qualitative case study approach.

A qualitative approach focusses on phenomena that happen in the real world and it involves studying the phenomenon with all its complexity (Leedy & Ormond, 2005). Qualitative research draws on different knowledge claims, strategies of inquiry, and methods of data collection, and analysis (Creswell, 2003). Leedy and Ormond (2005) argue that through the

examining of numerous sources of data, a rich and meaningful picture can be constructed of the data. Given the aim of the research, which was to explore how students are being prepared to become lifelong learners, and how epistemological access to powerful knowledge is enabled through the pedagogies used, a qualitative approach was appropriate.

This research followed a case study approach. A case study can be described as a study in which the researcher explores a phenomenon, like an event or activity, in depth (Creswell, 2003; O’Leary, 2017). Furthermore, a key part of a case study as a method is to delve deep to gather comprehensive and detail data (O’Leary, 2017). The use of case studies in educational research assists researchers to improve their understanding of individuals, communities, and contexts (Hamilton & Corbett-Whittier, 2012). Thus, through a case study approach, I was able to do an in-depth inquiry into the phenomenon (current curriculum and pedagogies), in order to gain a better understanding of the dynamics of the phenomenon, within a real-life setting (Saunders et al., 2016). A key factor of case study research is to define the case and determine the boundaries (Cohen et al., 2007; Saunders et al., 2016). In this study, the case is the curriculum and pedagogical practices of two third-year modules within the Diploma in Accountancy.

### ***5.3.2 Rationale for choosing the case***

The case study site that was chosen for this study is the Diploma in Accountancy, offered by the Department of Commercial Accounting at the University of Johannesburg. Within this diploma, the study focuses specifically on two third-year, first semester modules: (i) Cost and management accounting (CFM3A); and (ii) Auditing and Internal control (AIC3A). Both these modules are core modules of the three-year diploma. The reasons for selecting the diploma and the two specific modules were for academic, personal, and pragmatic reasons.

The academic reason for selecting the Diploma in Accountancy was to gain a better understanding of how diploma students can be adequately prepared for the world of work in a changing world. As discussed in Chapter 2 (Section 2.5), the technological changes evident in the world are impacting the role of accountants, placing particularly entry level and more junior positions at risk. There is therefore a concern that if the diploma is preparing students for entry-level and junior positions, yet due to technological developments these positions are becoming redundant, then it raises the question of what we are preparing the diploma students for. To put

it differently, can we prepare diploma students to be adaptable in a professional world that is changing and uncertain?

Closely linked to the academic reason for ensuring that graduates are adaptable, lifelong learners, is the personal reason that I chose this case study. As already described in Chapter 1, I have been a lecturer in the department under study since 2013. This research was borne out of my own desire to assist young people to reach their potential and to equip them to thrive in a changing world. On a practical, pragmatic level, I chose to focus on the Accounting diploma because I am a lecturer within the department and therefore had easier access to the research site given that I knew the lecturers and could gain access to information and materials with relative ease.

The selection of the two modules that form the focus of the study were informed by two criteria. First, the modules had to be core modules within the diploma. There are four core modules in the diploma, including Financial accounting, Cost and Management accounting, Auditing and internal control and Taxation. The core modules form part of the third-year (final year) of study and in most instances (Taxation is the exception) there are prior year modules that are prerequisites (see Figure 5.1).

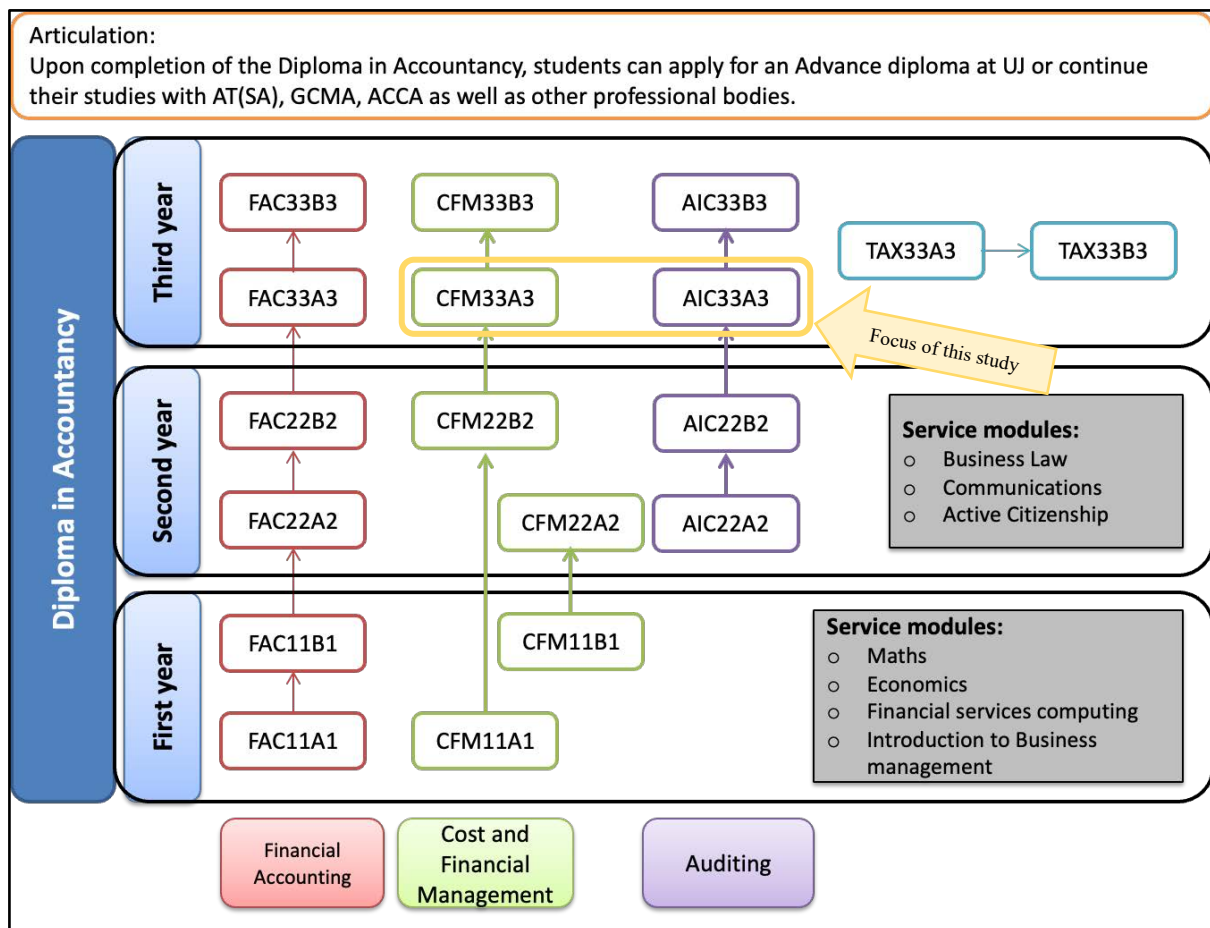


Figure 5.1: Structure of the Diploma in Accountancy

As all the core modules in the diploma are lectured by teams consisting of three or four lecturers, the second requirement was that all the lecturers of the specific team agreed to participate in the study. Participation of all the team members was required as I had to interview the team, observe all the lectures in the first semester, and I required access to all the study material as well as assessment papers. Based on the two criteria, an invitation to participate was sent to the lecturing teams of the core modules across all three years. Three teams agreed to participate. One team was for a first-year module, while the other two teams were both third-year modules. To make the level of teaching more comparable, I made the decision to include the two third-year modules in the study, thus Cost and management accounting (CFM3A) and Auditing and Internal control (AIC3A) were included in the study. The two modules are explained in much greater detail in Chapter 6 where I unpack the kinds of knowledges each value.

### **5.3.3 *Participants in this study***

The lecturing teams for both CFM3A and AIC3A consisted of three lecturers each, thus six lecturers in total were included in the study. Of the six participants, three were appointed at lecturer level, while the other three were appointed at senior lecturer level as they were qualified CAs, registered with SAICA at the time of the study. At the time of data collection, the CFM3A team had more than 28 years combined lecturing experience and had been lecturing CFM3A for approximately 21 years (combined). The combined lecturing experience of the AIC3A team was approximately 20 years, with only seven years of lecturing AIC3A. Overall, the participants had limited work experience before they were appointed as lecturers within the department. None of the participants held an education or teaching qualification, such as a postgraduate diploma in higher education. Such a qualification is not a prerequisite for disciplinary academics in South Africa; however, during the team interview, the AIC3A team indicated that as a team they had an interest in research related to teaching and learning.

## **5.4 *Selecting and gathering the data***

As the focus of this study was on how the enacted pedagogies helped to prepare students to become accounting professionals (or not), the data selected for this study were all related to pedagogical practices. Thus, the data gathered included the course documents, additional learning material, PowerPoint slides, various videos, lecture observations, prescribed textbooks, and assessments. In the following sections, I discuss these materials in detail.

### **5.4.1 *Documentary evidence***

For this study, I used the 2022 Yearbook of the College of Business and Economics (CBE). The Yearbook was available on the University website and contained information on the requirements and structure of all the qualifications offered by the CBE. As such, it provided information on the prerequisite modules, purpose of the modules, and the learning outcomes. In both the modules, the learning material required by the students was made available on the Learning Management System (LMS). Instead of asking the lecturers to provide me with the various documents, I requested access to their relevant modules on the LMS, which they provided. This afforded me a student perspective when navigating the module site which was

valuable as it gave me a sense of the volume of resources and how accessible these were to the students.

The learning materials were prepared by the various lecturers and consisted of course guides, additional learning materials (such as lecturer notes and additional questions prepared by the lecturers), PowerPoint slides, videos (of lectures and shorter explanations of specific concepts), as well as questions and solutions. Students were required to use these materials in addition to the prescribed textbook. Additionally, I borrowed hard copies of the prescribed textbook from both lecturing teams. In both cases, the prescribed textbooks were selected by the relevant lecturing team and all students were required to have access to the textbooks. The textbook and additional learning materials were used to visualise the knowledge compositions using constellations (Chapter 5), while the videos, PowerPoint slides, and questions formed part of the pedagogical analysis (Chapter 6).

#### **5.4.2 *Lecturer observations***

The focus of the study was on the pedagogical practices within the two modules. In order to analyse the pedagogical practices, particularly in relation to how students gained access to the various parts of the knowledge composition, and how the links between the various parts were made explicit, lecturer observations were important. In 2022, there were roughly 400 students in each of the modules. Within each module, students were divided into four groups, as it was university practice at the time to have smaller groups for Diploma qualifications, and most of the lecturing venues could only seat between 140 to 170 students. Therefore, each face-to-face session was repeated four times.

During the first half of 2022, there were still Covid-19 regulations to adhere to, one of which was the 50% venue capacity constraint. This meant that in some instances, the four groups were further divided to create eight groups. In CFM3A a lecturer would take responsibility for one or two of the topics. The responsible lecturer would prepare all the study materials for the topic, set the questions for the various tests and exams, and facilitate all the lectures for that topic to four or eight groups of students. This was done differently in AIC3A. In AIC3A, one lecturer would be responsible for the study materials and various questions for a specific topic, but the lecturing was shared with another lecturer on the team, with each team member lecturing two of the four groups.

Data relating to lecturer observations was generated differently for the two modules, as there were significant differences between the presentation and structure of the modules. In the case of CFM3A, the team followed a blended approach. As such, the introductory lecture of the topic took the form of an online lecture on the LMS. These lectures were recorded and the recording was made available to the students. I did not attend<sup>8</sup> the online lectures; instead I transcribed the recordings and used the transcriptions in the data analysis. Throughout the study, I used MS Stream to generate transcriptions of the recordings. Each transcript was then imported into oTranscribe and I listened to the recording to ensure the transcription was accurate, making corrections as needed. In addition to the online sessions, there were also face-to-face lectures taught by the lecturers as well as practical sessions and tutorials. Each of the eight groups had face-to-face lectures for Topics 1, 3 and 5; due to public holidays and test weeks, there were no face-to-face sessions for Topic 2 and 4. As the eight sessions for a specific topic were similar and taught by the same lecturer, I attended one of the eight sessions for a specific topic. The focus of these sessions was on specific questions the students had to complete after the online lecture.

The AIC3A team followed a more traditional approach, teaching all lectures face-to-face. Only one lecture was scheduled for the first unit and it focused on the revision of the previous year's modules. During the observation and data generation period, the relevant lecturer was ill and unable to teach, therefore the students received a video to watch. As with CFM3A, I transcribed the video and included the transcription in the data set. For the remaining four units, there were two face-to-face lectures per unit. This meant that over a semester each group had eight face-to-face lectures. Although these were not all offered by the same lecturer, the PowerPoint slides and focus of the lectures were the same. Therefore, I attended one face-to-face session per week for AIC3A, thus one of the possible four sessions per week. Over the course of the semester I made sure I attended sessions with each of the three lecturers.

I attended the various CFM3A and AIC3A lectures as an observer, making detailed handwritten notes of the lecturers' explanations and discussions with the students. In all the sessions

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<sup>8</sup> In all the classes I observed in person, I would sit at the back of the venue as I wanted to remain on the 'outside'. This would not have been possible in the online sessions, as my role on the LMS was that of a lecturer, meaning that in the online lectures, my name would appear as one of the lecturers presenting the module. Furthermore, many students did not attend the online lectures as they prefer to listen to the recordings in their own time.

(three for CFM3A and eight for AIC3A), I chose to sit at the back of the lecture venue. From this position, I was able to observe the lecturer, the PowerPoint slides, and the students' interactions with the lecturers. Furthermore, I was able to make video recordings of all the sessions without disrupting the normal flow of the lecture. The videos of the face-to-face lecture observations were not transcribed nor were they included in the data set; rather, I used the video recordings to provide detailed annotations to my original written notes and to check for accuracy in my observations.

### **5.4.3 Interviews with lecturers**

I conducted in-depth, semi-structured group interviews with each of the lecturing teams. (See Appendix A for the interview questions). The pedagogical practices that this study focussed on were designed by the various lecturing teams. As such, the focus of the team interviews was on gaining an understanding of the aims of the teams and how the modules were designed to meet these aims. Group interviews were conducted as the lecturers had been working together for a number of years and the focus was on the view of the team, and not an individual lecturer (Cohen et al., 2007). In this study, group interviews also enabled lecturers to build on each other's responses, thus a wider range of responses were generated (Cohen et al., 2007; Nieuwenhuis, 2014).

Both of the team interviews took place at the end of the semester, and in both cases, all three of the team members were present. As the interviews were at the end of the semester, the lecturers were able to reflect on their experiences of planning and teaching the modules. The interviews were done online, using MSTeams and recorded with the participants' informed consent. These recordings were transcribed into MSWord.

At the start of the year (January 2022), an invitation was sent to all the lecturers in the department for participation in group interviews. The aim was to gather data on the kinds of knowledges and kinds of knowers that are valued in the diploma. Five small group interviews were done with the 16 lecturers that agreed to participate. The responses from these interviews were quite generic, especially in relation to the dispositions and values required by accountancy professions. As such, this additional interview data did not yield any insights that were not mentioned by the CFM3A and AIC3A teams during the interviews. For this reason, this data source was excluded from the study.

#### **5.4.4 *Additional data sources***

In addition to the learning material, textbook, observations and interviews, I also exchanged emails with the lecturers, especially when I required clarity on a specific aspect while analysing the data. With permission from the participants, these emails were saved and became part of the data analysed for this study. Over the course of the semester, I occasionally had informal conversations with the participants, especially with the AIC3A lecturers. Interaction with the AIC3A team was easier as they had weekly face-to-face meetings after one of the lectures and often invited me to join them as they were keen to hear my view of the lectures. The CFM3A team met online, and as such, I seldom saw all three lecturers together. Although these informal conversations were interesting, the information gained was not noteworthy and therefore not included as part of the data used for this study.

In March 2023, while I was working on the knowledge composition of the two modules, I had an additional, face-to-face meeting with Janja<sup>9</sup>, one of the AIC3A lecturers. The meeting was scheduled with all three of the lecturer teams, but circumstances resulted in Ashima and Chris not being able to attend. The purpose of the meeting was to member check as I wanted to ensure that my understanding of the auditing concepts, procedures, and business cycles were accurate. As my background and subject area is Cost and Management Accounting, there was no need for me to clarify concepts with the CFM3A team. However, the summaries that I wrote from the textbook in order to visualise the knowledge compositions of both modules, were emailed to both teams to check for accuracy. In both cases, the teams made small changes to the summaries.

#### **5.4.5 *Exclusion of practical sessions and tutorials as a data source***

In addition to the online and face-to-face sessions discussed in Section 5.4.2, there were also face-to-face tutorial sessions for both modules, as well as practical sessions in the computer labs for CFM3A. These sessions were excluded from this study for various reasons. The CFM3A practical sessions were excluded from the data as the focus was not on teaching as such, but rather to provide students with an opportunity to practise the concepts and calculations of the topic, using Excel. As such, students would complete a specific question,

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<sup>9</sup> All names in this study are pseudonyms (See Section 5.6.3 for more on the selection of the pseudonyms).

for example, a cash budget on Excel during the session while the lecturer, with the assistance of tutors, would walk around and assist students with their specific questions. Although the practical sessions were a valuable learning space for the students, due to the nature of these sessions and the one-on-one explanations, I was not able to gather meaningful data to use in this study.

Likewise, the tutorial sessions for both CFM3A and AIC3A were excluded from the data for this study. The tutorials for both modules were led by tutors<sup>10</sup>, selected by the lecturers of the specific module. In both modules, the focus of the tutorial sessions was on doing a question. The lecturers would provide the tutors with a question or short case study to discuss with the students. As such, there was no teaching of new concepts or ideas in these sessions. Although the tutorials were part of the overall pedagogy for these modules, the decisions on what questions to focus on and when were made by the lecturers, not the tutors. Therefore the pedagogic role of the tutors was limited.

The questions that were discussed during the practical and tutorial sessions, as well as the solutions of these, were included in the data for this study, as these were part of the documents on the LMS, as discussed in Section 5.4.1.

A summary of the data sources is presented in Table 5.1. This table lists the documents, textbooks, number of lecturer observations, interviews and the additional information discussed in sections 5.4.1 to 5.4.4.

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<sup>10</sup> Tutors must have passed the module, and still be registered as a student at the university; the tutors for third-year modules are often registered for a postgraduate qualification, such as the advanced diploma (fourth year of study) or a postgraduate diploma (fifth year of study).

|                       | CFM3                                                                                                                                                                                                                                                                                                             | AIC3A                                                                                                                                                                                                                                                                                     |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | Yearbook of the College of Business and Economics (CBE)                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                           |
| Documents             | <ul style="list-style-type: none"> <li>• CFM3A Learner guide</li> <li>• Additional learning material document for Unit 1, 2 and 3.</li> <li>• PowerPoint slides</li> <li>• Homework and tutorial questions</li> <li>• Solutions of all the questions</li> <li>• Test papers</li> <li>• Concept videos</li> </ul> | <ul style="list-style-type: none"> <li>• AIC3A Learner guide</li> <li>• Additional learning material document for Unit 1, 2, 3 and 4.</li> <li>• PowerPoint slides</li> <li>• Homework and tutorial questions</li> <li>• Solutions of all the questions</li> <li>• Test papers</li> </ul> |
| Textbook              | <ul style="list-style-type: none"> <li>• Horngren's Cost Accounting: A Managerial Emphasis, Global Edition, 17/E</li> </ul>                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• Adams, A., Diale, T. &amp; Richard, G. (2020). Auditing notes for South African students. 11th edition.</li> </ul>                                                                                                                               |
| Lecturer observations | <ul style="list-style-type: none"> <li>• Recording of the introductory lecture.</li> <li>• Recording of the online lectures for each of the five topics.</li> <li>• Lecturer observations for three topics (there were no face-to-face classes for the other two topics).</li> </ul>                             | <ul style="list-style-type: none"> <li>• Recording of the introductory lecture.</li> <li>• Lecturer observations for eight different lectures, (each of the four business cycles were covered over two weeks).</li> </ul>                                                                 |
| Interview             | <ul style="list-style-type: none"> <li>• Team interview with the three lecturers.</li> </ul>                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>• Team interview with the three lecturers.</li> </ul>                                                                                                                                                                                              |
| Additional data       | <ul style="list-style-type: none"> <li>• Two emails</li> </ul>                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Two emails</li> <li>• One additional meeting</li> </ul>                                                                                                                                                                                          |

*Table 5.1: Summary of the data collected*

## **5.5 Analysing the data**

The analysis of data sources was an interactive process of dialogue between the data and the theoretical lenses offered by LCT (Maton & Chen, 2016). Before commencing with the data analysis, I read widely to ensure that I had a good understanding of the theoretical tools offered by LCT and to learn how others had used the tools in their research. My learning and understanding of LCT was further enhanced through my interactions with peers in the LCT Cluster at Rhodes University. The weekly meetings provided a space where I could present and discuss early drafts of the data analysis and learn from my peers on how they were using LCT in their studies. Moving from the conceptual and theoretical frameworks (as discussed in Chapters 3 and 4) to the data collection was relatively simple. The challenge came when I had to make sense of the data, through the lenses offered by LCT as the theoretical framework for this study.

My starting point, after the lecture observations, was to ensure that I downloaded all the documents, videos, and other resources from the LMS. These resources were organised in folders, similar to those used on the LMS, on my OneDrive. Furthermore, I completed the transcriptions of the CFM3A online lectures. Although I initially planned to type my handwritten face-to-face lecture observation notes and to code the documents, in the end, I found it easier to continue with the handwritten notes and use coloured pens for the analysis. Once I was confident that I had all the data, I started with the initial data analysis.

Throughout the data analysis, I reminded myself that the focus of the study was on the kinds of knowledges and how the parts came together as a connected whole to form the specialised body of knowledge valued in the discipline of accounting. Coupled with this, was how, through the pedagogies used, students were enabled to build knowledge cumulatively, thus connected and joined-up as a whole, leading to access to powerful knowledge.

### ***5.5.1 Step 1: Describing the data***

In the initial phase of the data analysis, my focus was on describing the data, specifically focussing on the online lectures (CFM3A) and lecture observations (AIC3A). At this stage, I was already immersed in the data, as I had just completed the transcripts; however, I found that I focussed too much on the content (the ‘what’) that was taught instead of the pedagogies used

(i.e., ‘how’ it was taught). The process of describing the data helped me to make this transition and it helped me to further immerse myself in the data set. This ‘soft-focus’ analysis allowed the data to speak on its own terms, revealing salient issues without imposing theory onto the data from the start, an important consideration in qualitative research (Maton et al., 2016).

To describe the data, I created a table with two columns on MSWord. I included the transcript of the lecture in the first column and the description or explanation of what was happening in the second column, as illustrated in Table 5.2.

| Transcript                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 05:58 So the question is. Calculate the <b>break even</b> for the company. 06:05 Now <b>break even</b> refers to that point where my <b>contribution</b> is equal to my <b>fixed cost</b> . So when I calculate my <b>contribution</b> , I can just cover my <b>fixed cost</b> . I'm not making a profit and I'm not making a loss. I'm <b>breaking even</b> , 06:28 but that should be familiar to you from last year. But just to sharpen your memory. OK, so break even, I'm not making a profit and I'm not making a loss. | The Lecturer now returns to the question - calculate break even (This is a dense ManAcc concepts). She then explains break even in abstract terms and by using 2 other ManAcc concepts, contribution and fixed cost. She then explain it again, using the same concepts, but in a different way.<br>Then reminds the students that this is part of the work they did the previous year.<br><br>Here the lecturer is unpacking break even, by bringing in two other concepts and through a general explanation. |
| 06:41 So, what do we need to calculate <b>break even</b> ? If I want to calculate <b>break even</b> I need <b>fixed cost</b> and <b>contribution</b> . That's the two big things. OK, like I said, if my <b>contribution</b> covers my <b>fixed cost</b> , I'm <b>breaking even</b> . I'm not making a profit and I'm not making a loss.                                                                                                                                                                                       | Now explains break even by telling students what is required to calculate it. This is not much different to the previous two explanations given for the same concept.<br>In this part the lecturer is reiterating the explanation given so far, not adding anything specific, and staying in the abstract.                                                                                                                                                                                                     |

Table 5.2: Description of data

While doing the ‘soft-focus’ analysis, I split the lecture into different parts based on what the lecturer was focussing on. For example, in Table 5.2, the lecturer spoke about *breakeven*. Here the lecturer started with a short theoretical explanation before moving to the calculation, thus, the transcript was split into the theoretical explanation (first line), and the calculation (second line). By splitting the lecture into the various parts, I was able to write more focused descriptions of how the content was taught. As such, in the first description in Table 5.2, the focus was on unpacking *breakeven* by linking it to two other concepts (*contribution* and *fixed cost*) through a general explanation. While in the second description, I was able to point out that the explanations of the relevant calculation are done in a similar way, and that these are often abstract.

As illustrated in Table 5.2, the process of describing the data afforded me the opportunity to see how concepts (indicated in green) were explained and linked together with other parts. Additionally, I was also able to get a feel for how the relevant lecturer made the content accessible as they moved between abstract concepts and everyday examples as well as calculations. As such, the descriptions helped me to get a sense of the kind of knowledges, dispositions, and attributes that were valued by the lecturers. Working in this way, I kept writing up the detailed descriptions until I had a good sense of what was happening in the data and I could see patterns emerging. At this point, I turned to the theoretical concepts offered by LCT.

Through the initial data analysis it became clear that, as found in previous studies, these accounting modules were operating as a knowledge code, where the specialist knowledge (epistemic relations) one requires was foregrounded, while who you needed to be (social relations) as an accountant was backgrounded (see Mkhize, 2015; Myers, 2016, 2017). The data further showed that knowledge was complex and that the structure of the knowledge and relations between parts within the modules were not the same. This led to the next step in the data analysis, which was to visualise the knowledge composition (kinds of knowledges, structure and relations) through the use of constellations.

### ***5.5.2 Step 2: Using constellations to visualise the knowledge***

The visualisation of the knowledge compositions was based on the textbooks that were prescribed for the two modules. In both modules, the textbooks were a key resource of the content (the ‘what’) students had to learn. As a first step, I worked through the relevant chapters of the textbooks to get an understanding of the knowledge that students needed to master in these two modules. These were lengthy chapters, therefore I prepared summaries of the textbook chapters and important concepts in CFM3A and AIC3A, as illustrated below in Figure 5.2 and Figure 5.3. Here it is important to mention that the focus was not on the complexity of the knowledge, but rather, the aim was to understand *what* was bought together. An understanding of the ‘*what*’ that was bought together was important, as the aim of the study was on how students gained access to powerful knowledge, through the pedagogies used. The constellations analysis is demonstrated in detail in Chapter 6.

In a module like CFM3A, there are several textbooks that could be prescribed to the students, with all the textbooks containing more or less the same theoretical explanations of the concepts, and examples of how to do the calculations. With AIC3A, there are fewer textbooks available; however, as the principles and processes are prescribed by international standards, the explanation of these would be similar, no matter the source. Thus, in both modules, the focus of the textbook analysis was on establishing the kinds of knowledges that students had to master: how the parts (various concepts, principles, and processes) were built together (structure); and how the parts were related to one another, as well as to students' prior knowledge. Through writing the summaries, I was able to start identifying different knowledges, as well as how the knowledges were structured and related to other parts.

To generate a summary of each of the five topics in CFM3A, I started with the relevant chapters in the prescribed textbook. After I prepared the summaries, I turned to the additional learning material to ensure that the summaries were complete and contained all the important concepts. In writing these summaries, I used different colours as a starting point to differentiate between concepts (blue); theoretical knowledge (purple); and calculations (orange); as seen in Figure 5.2.

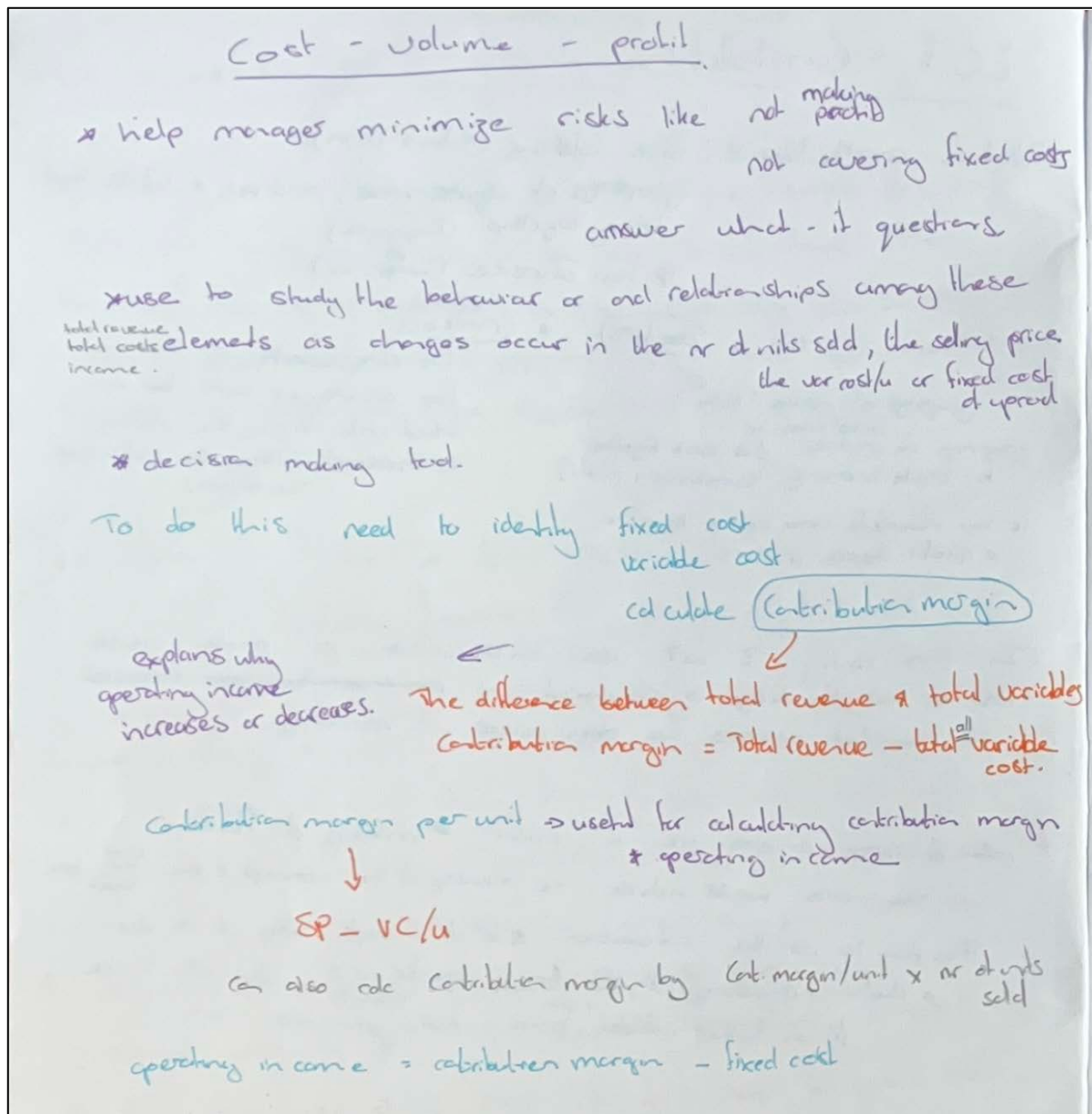


Figure 5.2: A summary of Cost-volume-profit analysis (CFM Topic 1)

The next step was to build the clusters and constellations. To illustrate how the various parts came together to form clusters and constellations, I used the initial summaries to write short synopses for the initial part of 'Multi-product Cost-Volume-Profit analysis', the first topic in CFM3A. These summaries were used in Chapter 6 as the basis for the constellations. I selected this topic as there were clear links to prior knowledge, as well as concepts from other modules like Financial Accounting. These links enabled me to illustrate the structure and relations within the constellations for Multi-product Cost-Volume-Profit analysis. The synopses were reviewed and verified by the CFM3A team, who confirmed that I had correctly captured the

content and understood the basis of the knowledge that students required to succeed in this module.

The approach that I followed in preparing the synopses for AIC3A was slightly different. As I was not as familiar with the content and due to the volume of the work, I started by making a summary of the concepts and procedures as explained in the first lecture (see Figure 5.3). The focus of this lecture was to revise the key concepts, principles, and procedures that were done in Auditing 2 (two prior modules). These concepts, principles, and procedures are discussed in various chapters of the textbook. As these concepts, principles, and procedures form the basis of AIC3A, the first lecture provided a good overview of the foundational knowledge.

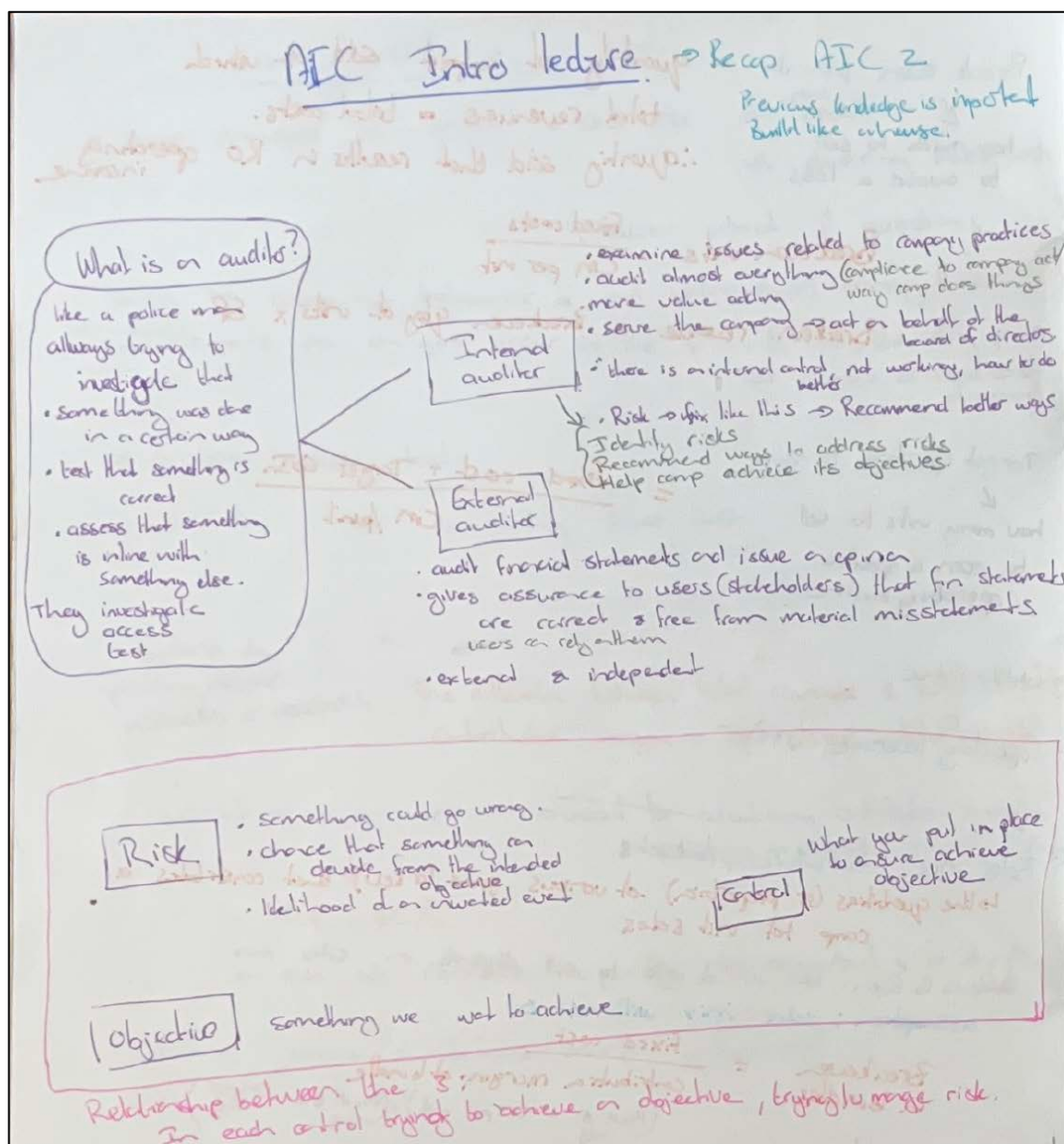


Figure 5.3: A summary of the key concepts, principles and procedures for AIC3A

This initial summary provided me with a basic framework for the module. To ensure that the framework was correct, and that I had covered all the important concepts, I had a meeting with the AIC3A team to confirm the framework. Hereafter, I drew on the various chapters from the textbook to expand the framework and to prepare the necessary synopses for the constellations. The synopses were then verified and confirmed by the lecturing team.

In working through the textbook to prepare the summaries, it became clear that each of the concepts could be explained theoretically; however, they also had a procedural component to them. The theoretical aspect included an explanation or definition of the concept, where it

would be used, why it was important, who would use it, and so forth. The procedural aspect, in contrast, was focused on how to do the calculation or, in the case of AIC3A, how to conduct the audit. In these modules, the theoretical and procedural knowledge were also an indication of the different kinds of knowledges being valued. Drawing on Gamble (2006), the theoretical knowledge, on the one hand, can be described as principled knowledge. Principled knowledge, like the definition of a concept, is abstract and context-independent and the meaning, or why the concept is important and where it will be used, will not change. On the other hand, as the doing of specific calculations or conducting an audit depend on the specific situation, it is more context-dependent and practical (application). As discussed previously, practical, context-dependent knowledge is sometimes described as procedural knowledge (Gamble, 2006).

Having established the knowledge structure of the two modules (i.e., what students were required to gain access to), I could then move on to the analysis of the pedagogies employed. Here, semantic gravity was used as it enabled me to gain an understanding of how the pedagogies helped students to gain access to the kinds of knowledges in a joined-up and connected way that will enable access to powerful knowledge.

### ***5.5.3 Step 3: Using Semantics***

The first step in the semantic gravity analysis was to immerse myself in the data by reading the data and considering if the teaching input was abstract or context specific, and why. Drawing on my theoretical knowledge of semantic gravity as well as features illuminated in other studies such as Gamble's (2006) account of principled and procedural knowledge, and Muller's (2009) contextual and conceptual coherence, I made notes of how the lecturers shifted between the theory and the practical concepts. To do this, I returned to the transcripts of the various lectures as well as the descriptions of the data (see Section 5.5.1). With the constellation in mind, and my theoretical understanding of semantic gravity, I worked through the transcripts and noted how the lecturers moved between the explanation of concepts (more theoretical and abstract), and the calculation or application of concepts (more practical and context-dependent). This analysis forms the basis of the findings in Chapters 7 and 8.

Although I had initially planned to use NVivo for the data analysis, in the end, I found it easier to work with hard copies. Throughout the process, I made notes with various coloured pens and highlighters, as illustrated in Figure 5.4 and Figure 5.5.

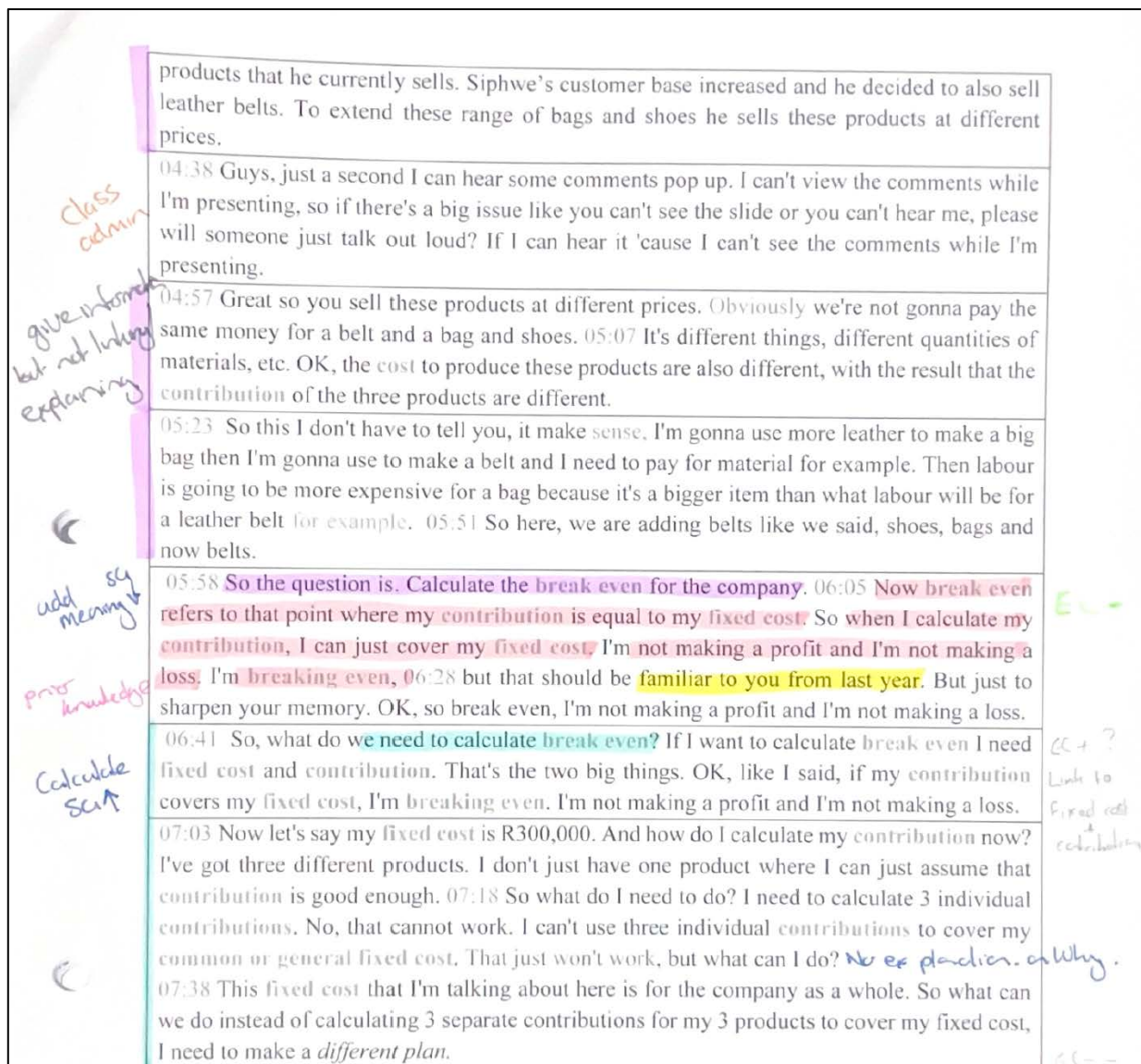


Figure 5.4: Shifts in context (CFM3A)

For CFM3A, I worked through the transcripts of the five online lectures and used highlighters to indicate what was happening in the lectures (as demonstrated in Figure 5.4). For example, I used pink when the lecturer added meaning to a concept (i.e., 'breakeven refers to that point where my contribution is equal to my fixed cost'); blue where the focus was on calculations; purple where the lecturer spoke about the scenario; and yellow when the lecturer referred to prior work. As I continued with the process, and became more familiar with the data, I was able to go back and add more notes to the data analysis, as seen in the margins of Figure 5.4.

I followed a similar process for AIC3A; however, as I used copies of my handwritten observation notes, I found it more useful to write notes of what happened, as illustrated in Figure 5.5.

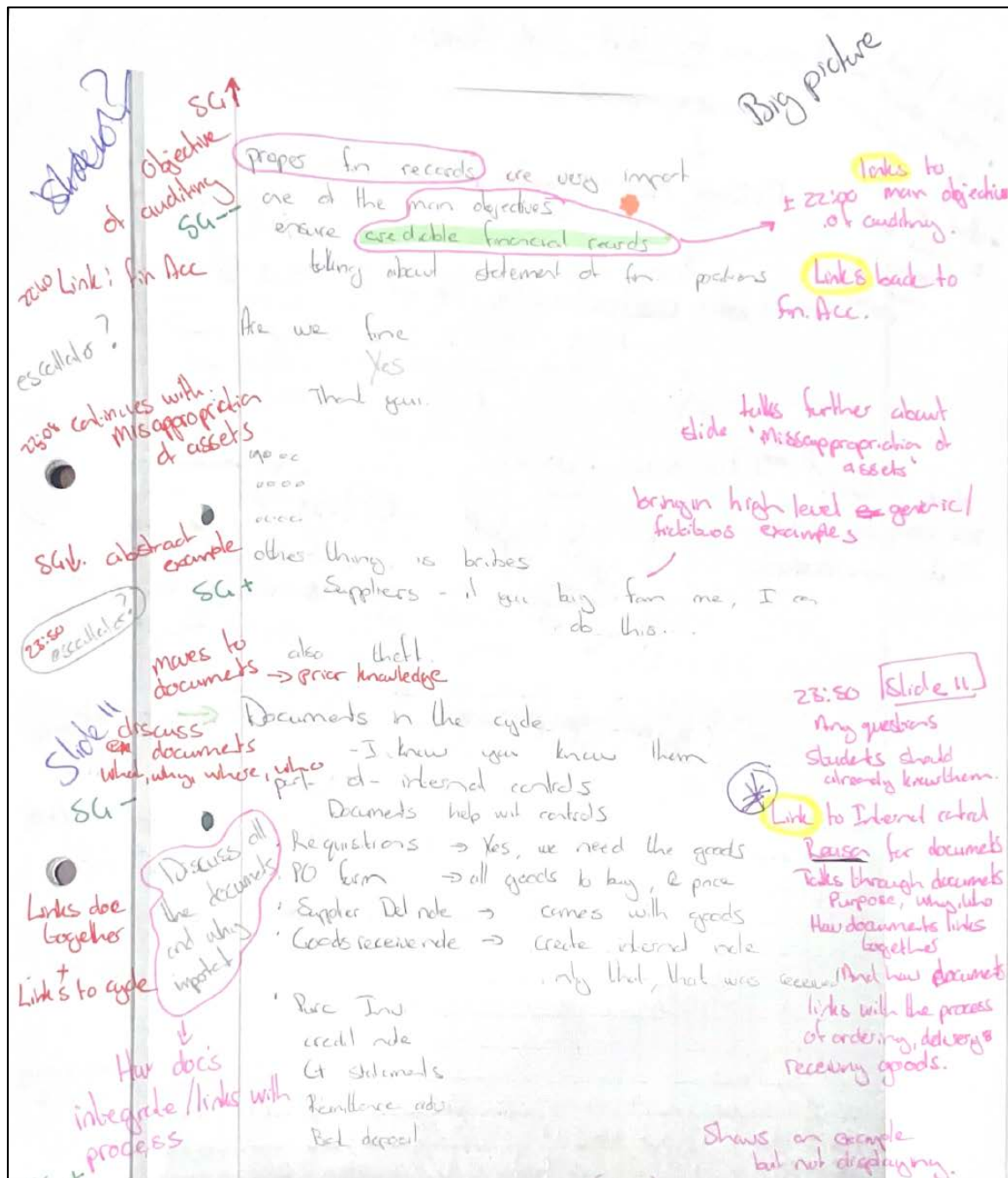


Figure 5.5: Shifts in context (AIC3A)

The original notes of the lecture are the grey section in the middle. I then annotated these descriptions with additional points informed by the theory, noting how and when the lecturer moved between abstract explanations and concrete examples, as well as when they made links to other cycles and modules.

Through the process of describing the data, I could start to distinguish between explanations that added meaning to a concept, and those explanations that were ‘flat’, i.e., when no new meaning was added. In so doing, I was able to get a better understanding of how the links between the parts were made explicit, and where parts were left ‘hanging’ for students to make the connections. The analysis of the lecturer observation was an iterative process as I moved backwards and forwards between the raw data (video recordings, transcripts) and the process of conceptualisation. Through this iterative process, I was able to develop, define, and describe the various levels of principled knowledge (context-independent) and procedural knowledge (context-dependent). The various levels were developed into a translation device for analysing shifts between different kinds of knowledge. As the development of the translation device was an interactive process, based on the raw data generated for this study, it pertains to the specific data set in this study. The semantic gravity translation device is presented in Table 5.3.

| Concept                                                                                | Description                                  | How the concept manifests in the study                                            | Example                                                                                                                                                                                |                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <div>SG –</div> <div>↑</div> <div>SG 0</div> <div>↓</div> <div>SG +</div> </div> | Context-independent;<br>general;<br>abstract | Principled knowledge<br>(why, when)<br>Link to other parts to form bigger picture | CFM3A                                                                                                                                                                                  | AIC3A                                                                                                                                                                           |
|                                                                                        |                                              |                                                                                   | a <b>budget</b> is a plan and it helps us to control and to evaluate where we are and where we should be                                                                               | Need to know about risks, because that is why we need controls<br>What are the risks related to receiving part of the cycle                                                     |
|                                                                                        |                                              | Theoretical explanation of a calculation or procedure                             | If I want to calculate breakeven I need fixed cost and contribution.                                                                                                                   | Main objective of the acquisition and payment cycle: Order correct quantity of goods at the correct quality at an appropriate price.                                            |
|                                                                                        | Context-dependent;<br>concrete               | Calculation or procedure within a context                                         | Now Siphiwe said that he's planning on selling 60 units. And that the selling price is R500. So if I multiply 60 units with R500, it'll give me R30,000 total revenue or sales revenue | talk about cash sales. Hm let's think about ShopRite, so if you go to ShopRite and buy bread cash, when will the money get out of your pocket. It will be the same time, right? |

Table 5.3: Translation device for semantic gravity

The translation device presented in Table 5.3 was developed from the data as the study unfolded, in response to, and in dialogue with, the theory. It provided a useful tool to traverse the gap between theory and data, providing an external language of description that helped to foster a dialogue between theory and data (Maton & Chen, 2016). Reading the translation device (Table 5.3) from left to right, the first column indicates the concept (e.g., SG+); the second column provides an explanation of the concept (e.g., ‘context dependent’); the third column provides a description of how the concept manifested in the data; and the fourth and fifth columns provide examples from the data. The use of the translation device helped me to make the data, explanations, and findings more explicit, and provided greater transparency on the data analysis process (Maton & Chen, 2016). Furthermore, the translation device was a vital tool for consistent data analysis, as I could refer back while analysing the data. The translation device for semantic gravity was used to analyse the pedagogies used in CFM3A and AIC3A, which is the focus of Chapters 7 and 8 respectively.

## **5.6 Researcher positionality, credibility, and ethics**

Qualitative research has many challenges as there are not specific, clear-cut methods or procedures. Furthermore, the research involves people (researcher and participants) and people can be fallible, biased and subjective (O’Leary, 2017). As a qualitative researcher, I had a responsibility to conduct research that was credible and had integrity. Integrity in research has to do with the quest to produce knowledge that captures the ‘truth’ and displays an ethical responsibility towards the people one is working with (O’Leary, 2017). As such, I had a responsibility to ensure that, in my quest to produce knowledge, I reached conclusions that were free from error and unrecognised bias. With that, I had a responsibility to ensure that the participants in my study were protected at all times.

As a qualitative researcher, I am influenced by my position and experiences in relation to the participants in this study (Greene, 2014; Williams, 2009). Therefore, I first discuss my own positionality in this study before I discuss issues related to credibility and integrity in this specific research project.

### 5.6.1 Positionality

I am a lecturer within the Department of Commercial Accounting, the department responsible for the Diploma in Commercial Accountancy. Thus, the lecturers who volunteered to be part of this study are my colleagues. Over the years, I have built good relationships with the lecturers, especially those who have been in the department for several years. Since I joined the department, my colleagues and I have had various discussions about issues like why students might be struggling, what we as lecturers could do differently, and so forth. We thus have a shared desire to help students succeed in their studies. I believe this shared desire to help students succeed, as well as our collegial relationship, played a role in the lecturers' willingness to potentially make themselves vulnerable as participants in this study.

The lecturers' vulnerability stems from the fact that they opened up their classrooms to me and allowed me access to their teaching documents with a view to understanding if their teaching of the module is facilitating access to powerful knowledge. The lecturer participants know me as a colleague, a lecturer with a heart for the students, and as an ethical and trustworthy person. As such, they trusted that I would conduct the research as accurately as possible, in the spirit of working together to improve the teams' overall pedagogic approach for the betterment of the student learning experience. Throughout the research process, the lecturers provided honest opinions and were able to 'push back' at times, such as during member checking, to correct my observations or to provide further details which helped me to generate accurate data.

One could thus say that I was doing research in my 'own backyard' (Williams, 2009), as both modules are in my department and I lecture the two modules that are prerequisite modules for CFM3A. By conducting research in my own institution and department, I was also an *insider* (Trowler, 2011). Being an insider and conducting research in your 'own backyard' comes with both benefits and challenges.

One of the benefits, as mentioned earlier, was that the participants trusted me as a colleague and as such, did not 'hold back' in the interviews. Their openness helped me to collect rich data. My experience as a lecturer in the department also provided me with *insider* knowledge (Trowler, 2011) as I understood the dynamics in the department; the struggles and challenges faced by lecturers; how the various modules were structured and scheduled; how assessments were done; as well as who the students are in general; to name a few. This knowledge and

understanding were beneficial as I did not have to first spend time gaining an understanding of the department. Furthermore, through my experiences in the department and the data generated in this study, I was able to provide thick descriptions and meaningful accounts (Trowler, 2011).

Even though my insider knowledge of the department was beneficial, it was also a challenge. There is concern that when conducting insider research aspects of the data might be ‘normal’ or ‘neutral’ to an insider researcher, and as such, it may become difficult to ‘see’ what the data is showing (Trowler, 2011). Throughout the study, I was aware of my ‘closeness’ to the data. To mitigate this challenge, I kept going back to the raw data to ensure that the analysis was as true to the data as possible. The use of theory when building the constellation and the translation device was key for helping me achieve this perspective.

Despite the perceived challenges of insider research, as the study unfolded, I found the opposite to be true too: as an insider, I was also able to ‘see’ absences in the data. For example, when lecturers expected students to have the relevant reading and writing skills, without making these explicit. As such, throughout the study I was conscious about my position as an insider researcher and the challenges that came with it and implemented strategies (such as a translation device) to mitigate any perceived limitations.

Another challenge of insider research is that one could collect data that once analysed, might be harmful to colleagues, in that it might put them in an unexpectedly vulnerable position. This kind of knowledge is referred to as ‘guilty knowledge’ (Williams, 2009). Guilty knowledge, once made public, could portray the department, the team, or the individual lecturer in a negative way. Consequently, guilty knowledge could harm the relationships between the researcher and the participants, that are built on trust. This knowledge is difficult as the researcher has a responsibility to report the ‘truth’ while also protecting their participants from harm (Williams, 2009).

This was a difficult issue for me to think through and to navigate through the research project. My colleagues trusted me with the data I gathered through the lecturer observations and the interviews. I did not want to do anything that could break the trust or impact the relationships that I have built over the years with my colleagues. My concern was that once the data was analysed and the theory applied, it may portray their pedagogical practice differently than what they intended or anticipated. By sharing these findings with them, and the wider academic

community, there is a risk that I may unintentionally betray their trust in me or cause them harm. While I did not want to cause harm or do anything that could jeopardise my relationships with my colleagues, I also needed to maintain and uphold my ethical responsibility to report the ‘truth’. Throughout the study, my focus was reporting the truth while protecting the anonymity of the participants, as indicated in the consent forms. I was guided in this by my supervisors, and through sharing work in progress with peers, whose questions and prompts enabled me to reflect on the balance between protecting my relationships with colleagues and ensuring the integrity of my study. In Section 5.6.3 I return to my ethical responsibility as a researcher.

In doing this research, I came to realise that although I am the researcher, I am also implicated in my own research. In observing the lecturers and analysing the data, I started to ‘see’ my own practices through the theoretical lenses used in this study. As such, if I were to do this study on my own pedagogical practices, there would be similarities in the findings. Furthermore, as I am a lecturer in the department, I want to work with my colleagues to ensure that our students can succeed in a changing world. I therefore have a vested interest in this study. This vested interest, however, could make me biased. Throughout the study, it helped me to keep the goal of the study in mind. As mentioned in Chapter 1, this study came about in part because I wanted a better understanding of what it means to be an effective lecturer. Additionally, the goal of this study was to understand how accounting modules can be designed and taught in a way that enables greater access and success, assisting students to be and become accountants.

With this understanding of my positionality, I now turn to the measures I took in this research project to ensure credibility and integrity.

### ***5.6.2 Credibility and Integrity***

As a qualitative researcher, I had a responsibility to ensure that there was credibility and integrity in the research process (as mentioned in Section 5.6). Qualitative research is often criticised for producing findings that cannot be generalised, and as such, one cannot really claim reliability and validity (Agius, 2013; Maxwell, 2012). Therefore, to ensure credibility and integrity in qualitative research, it is important to consider indicators like trustworthiness, dependability, authenticity, transferability, and audibility (Agius, 2013; Maxwell, 2012). These indicators are discussed in the following subsections.

### *Dependability and trustworthiness*

Research, regardless of the approach, is an activity that should be done with discipline, rigour, and a level of standardisation (O’Leary, 2017). As such, the research methods used in the study should be implemented consistently. Consistency in research is often referred to as ‘reliability’, which refers to the extent to which the same results can be obtained by repeating a specific test or procedure (O’Leary, 2017). As such, it should not matter who performs the test or procedure, as long as the same process is followed, the results should remain the same. However, this is not the case when working with people. As people are complex, it is unlikely that the same results can be obtained every time, therefore, reliability is not an appropriate measure in qualitative research (Agius, 2013). Alternative indicators in qualitative research are dependability and trustworthiness. Dependability in research refers to methods that are systematic, well-documented, and designed to account for research subjectivities (O’Leary, 2017). Trustworthiness speaks to the extent that it is possible to retrace the steps followed in the data analysis, to come to similar interpretations (Agius, 2013).

In this study, I worked systematically through the data of both modules to ensure dependability. Throughout the study, I followed the same data analysis process for both modules, as discussed in Section 5.5. Additionally, the use of detailed evidence such as quotes from interviews, summaries of lecturer observations, as well as examples from assessments, helped to show trustworthiness, as it provided the reader with insights into the thought process. Furthermore, the creation and use of a semantic gravity translation device assisted me in providing the necessary analytical transparency to overcome the potential threat of subjectivity (K. Wilmot, 2019). The translation device helped me to make my thinking more transparent and helps to guide the reader in understanding the basis of my claims to knowledge. As such, it provides a mechanism for a more accessible and reproducible analysis, increasing trustworthiness in the analysis process (K. Wilmot, 2019). Additionally, as mentioned in section 5.5.3, the translation device was a vital tool to ensure consistency during the data analysis. The translation device, as well as various iterations of the analysis, were presented at the LCT research cluster to further reduce potential limitations and to strengthen the dependability and trustworthiness.

### *Transferability*

Transferability is about whether findings and/or conclusions from a study are useful to a different setting, population or group (O’Leary, 2017). O’Leary (2017) further explains that

transferability addresses matters of relevance and appropriateness of the arguments. In quantitative research, generalisability usually refers to the extent to which the findings can be generalised to a wider group, thus not only those that were studied. Transferability is thus similar to the concept of generalisability.

Although the data generated in this study was from two third-year modules within a specific three-year diploma qualification, the findings are applicable and transferrable beyond this study. The framework that I developed for the visualisation of the kinds of knowledge and the structure of the knowledge will be useful for accounting education more generally. The framework can further be adopted in other vocational and professional qualifications to facilitate a better understanding of the different kinds of knowledge at play. Additionally, the framework for the analysis of the pedagogical practices could also be used for other vocational and professional qualifications.

### **5.6.3 Ethical considerations**

Ethics is an important part of research and central to research integrity (O’Leary, 2017). A way to understand ethics is to look at the meaning of *ethos*, the Greek word from which it was derived (Gray, 2013). *Ethos* refers to character and custom, as such, there are two parts to ethics to consider: *ethics as character* and *ethics as custom*. Ethics as character refers to the values of the researcher, while ethics as custom refers to the rules, protocols and standards that are required by formal structures like the university ethics committee (Williams, 2009). Over the years, scholars have raised concerns with ethics as custom, as the focus can shift to enforcement without truly considering the participants throughout the study (Small, 2001; Williams, 2009). These concerns can be addressed by considering ethics as character, alongside ethics as custom.

Ethics as character, as mentioned earlier, refers to the values of the researcher. As such, it is about trustworthiness, honesty, moral values, and a concern for the well-being of others. Therefore, ethics as character can also be described as a ‘process of being’ or ‘ethics of care’ (Williams, 2009). The consideration of ethics as character is especially important in qualitative studies where data are obtained from people, as was the case in this study.

Throughout this research project, I had to consider the participants in all the decisions I made, while at the same time, I had a responsibility to represent the ‘truth’. In this study, the focus

remained intentionally on lecturer teams. As such, no single lecturer can be isolated in either positive or negative ways. With this, it is also important to emphasise and remember that this study is not focused on assessing the lecturers' competency as teachers. The purpose of this study is to determine, as a collective, how we as lecturers of an accounting diploma can transform our pedagogies to improve access, success, and cumulative knowledge-building for the students.

Although I was guided by ethics as character in this study, I was also bound by ethics as custom. For this study, I obtained ethical approval from Rhodes University as a registered student (Appendix B). As the fieldwork was done at the Department of Commercial Accounting of the University of Johannesburg (UJ), I further required approval from UJ. Although UJ accepted the ethical approval from Rhodes University, I had to first obtain approval from the head of the department to do the study, and I had to gain approval from the Executive Director: Research and Innovation before commencing the study at UJ. Both the HOD and the Executive Director provided me with signed documents, indicating their approval (see Appendices C and D).

### *Informed consent*

When I reached out to lecturers to participate in the study, the first step was to explain the focus of the study. The next step was to gain informed consent by ensuring that all participants were fully informed as to the purpose and scope of the case study and their role within it (Appendix E). All six participants completed the informed consent form, which included their right to withdraw at any point during the study. About a year after collecting the data, I contacted the six participants to ensure that they were still comfortable with being part of the research process. At this point, I offered to discuss the study and emerging findings with them individually. Of the six participants, five gave renewed consent without requesting a discussion, while one participant requested a discussion. This meeting took place at a venue of the participant's choice. After the meeting, the participant gave renewed informed consent.

The anonymity of participants was a concern as the module teams have only three members. To overcome this, all identifying remarks like years of experience, gender, or race were eliminated, and pseudonyms were used. I wondered how I would select suitable pseudonyms and decided to rather ask the participants to select their own pseudonym. However, my plan did not work, as the participants indicated that I could select pseudonyms for them. In the end, I decided to use names of some of the best sport climbers in the world as pseudonyms. In

December 2019, just before I registered for my PhD, my family got involved in sport climbing. Initially we only climbed at an indoor climbing gym near our home. Later on, we took up outdoor climbing as well. During my studies, climbing was an important part of my life. It was an opportunity to spend quality time with my family (indoors and outdoors), to exercise and to clear my head. Through the climbing I also connected with people and made new friends, who provided incredible support during my studies. While I was busy with my data analysis, our family watched two documentaries on sport climbers. The one *'Free solo'* (the story of Alex Honnold, and the other *'Dawn wall'* (about Tommy Caldwell). One evening, as we were talking about climbing, and the commitment and determination it takes, I got the idea to use the names of sport climbers as pseudonyms. As such, the pseudonyms I selected are that of top international male and female climbers. These names have no connotation or relation to the participants in this study.

## **5.7 Conclusion**

This chapter has provided a detailed description of the research process that was followed in this study. The chapter started with an outline of the research aims and the research questions that informed this study. This was followed by an explanation of the methodological approach, the research design chosen for this study, as well as the process that was followed for the generation of data. The data analysis was described in detail. This included the development of the semantic gravity translation device for the analysis of the pedagogies used. The chapter also addressed issues related to positionality, credibility, and integrity, as well as ethical considerations.

The next three chapters enact the theoretical tools and analytical process that has been described in Chapters 4 and 5. Chapter 6 focusses on the knowledge composition of CFM3A and AIC3A. In this chapter, constellation analysis is used to visualise the different kinds of knowledges and how the parts are linked to form a connected whole. In Chapters 7 and 8, the pedagogies used in CFM3A and AIC3A are analysed and interpreted through the lens of semantic gravity.

## CHAPTER 6: UNPACKING AND VISUALISING KNOWLEDGES

### 6.1 Introduction

As I have argued thus far in the thesis, students need access to both principled and procedural knowledges as this is necessary for epistemological access to powerful knowledge. Therefore, an understanding of how the different kinds of knowledges come together to form a joined-up whole are important as the structure of knowledge should guide the pedagogical approaches used (Quinn & Vorster, 2019). As students move into the world of work, they need to know how to *do* the various calculations (procedural knowledge). Additionally, students require an understanding of *what* the calculation means, *how* the business will use the calculation, and *why* the information is important (principled knowledge). Therefore, access to both principled and procedural knowledge is important as it enables lifelong learning which, in professional fields make it possible to move into different positions within the workplace, or even change workplaces (M. Barnett, 2006; Wheelahan, 2015). In a changing professional world, with the associated implications for accountants (see Chapter 2), lifelong learning and career mobility is important.

Furthermore, the knowledge structure of a discipline impacts on knowledge-building in that discipline. Accounting has a hierarchical knowledge structure (Myers, 2016) which means that foundational knowledge needs to be in place as it becomes the basis for further learning (as discussed in Chapter 3). By bringing the kinds of knowledges and structure of knowledge together, and by indicating the relations between parts, it becomes possible to see knowledge as a web of interrelated forms of knowledge as well as actions we perform with the knowledge. To see this in more explicit terms, this chapter uses constellations to make visible the kinds of knowledges, and knowledge structures, as well as relations between the various parts (i.e., concepts, calculations, and procedures). A constellation analysis affords a useful visual representation that reveals how different ‘parts’ come together to form the ‘whole’ or ‘bigger picture’ of the knowledges that students need access to in the respective modules.

The chapter starts by briefly characterising the kinds of knowledges found in each module, drawing on Gamble’s (2006) distinction of principled and procedural knowledge. Following this characterisation of knowledge, the chapter then offers a constellation analysis of the two

modules under consideration: CFM3A and AIC3A. Mapping the constellations in this way affords a more holistic understanding of the knowledge structure of each module and highlights the prior learning that is assumed. Making this explicit is a necessary first step before considering how access to this knowledge structure and composition is provided through the pedagogies adopted. The analysis presented here is thus a prerequisite to Chapters 7 and 8 which explore the pedagogies in more detail.

## **6.2 Knowledge in Cost and Management Accounting (CFM)**

Cost and Management Accounting (CFM)<sup>11</sup> is a subfield of accounting. Historically, the focus of CFM has been on the internal operations of a company, as management accountants typically provide information to management to help with planning, decision-making, and control. In recent years, however, there have been developments within the discipline which have opened the focus somewhat. For example, complying with the requirements of Integrated Reporting,<sup>12</sup> the role of management accountants now also includes Sustainability Reporting, an external reporting function.

Students are introduced to the foundational concepts of Cost and Management Accounting in their first-year module. A clear understanding of these foundational principles and calculations is necessary for the second- and third-year modules, as well as for the workplace. Therefore, the first-year module is a pre-requisite for the second-year module, which is a pre-requisite for the two third-year modules. The way in which the modules build on each other gives an indication of the importance of prior knowledge and the hierarchical structure of CFM. The focus of this study is on the third-year, first semester CFM module, CFM3A. The module first looks at multi-product cost volume profit analysis. It builds on single-product cost volume profit analysis that was taught in the second year. Thereafter, the focus of the module shifts to budgets (cash, operational, and flexible budgets) and standard costing. Budgets and standard costing are new topics but require students to draw on foundational prior knowledge from the first-year module, and to some extent from the second-year module.

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<sup>11</sup> The abbreviation for Cost and Management Accounting is CMA. However, in this study CFM is used as that was the abbreviation for the module at the time of data collection.

<sup>12</sup> Integrated Reporting reflects on the commercial, social, and environmental context in which a company operates. The report is in addition to annual financial statements.

### 6.2.1 The nature of knowledge in CFM3A

The purpose of the module as illustrated below (Figure 6.1) was focused on performance measurement in business. Students were required to prepare, analyse and apply<sup>13</sup> management accounting principles and techniques to prepare information for decision-making purposes.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>PURPOSE</b></p> <p>The purpose of this module is to introduce performance measurement in business. In this module, students will prepare, analyse and apply management accounting principles and techniques to prepare information for decision-making purposes.</p> <p><b>OUTCOMES</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"><li>• prepare an operational budget for the production process;</li><li>• compile a cash budget and evaluate the future cash flow position of a business;</li><li>• compile a flexible budget;</li><li>• calculate and evaluate the flexible budget variances;</li><li>• calculate and interpret sales and production cost variances within a standard costing system using various costing methods; and</li><li>• perform multi-product break-even analysis.</li></ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Figure 6.1: CFM3A purpose statement and learning outcomes.

As can be seen in Figure 6.1, the learning outcomes appear to be relatively simple and straight forward. In their abbreviated form, however, the learning outcomes alone do not give a clear sense of the kinds of knowledges that are required and how students are required to build on prior knowledge. For example, an outcome such as ‘*perform multi-product breakeven analysis*’ is more complex than it may seem as it implies that students need to know what breakeven analysis is, the elements or calculations that it should contain, and are able to do the relevant calculations.

Due to the abbreviated nature of the learning outcomes, the knowledge composition (structure, relation, and typologies) is not visible; in fact, much of the learning expectations remain tacit. To make these expectations more explicit, the analytical tool of constellations is now used to map the interrelated web of the knowledge composition required in the module. Undertaking a mapping exercise such as this can make the overall knowledge composition more visible. The visualisation of the knowledge composition helps to make the requirements of the modules and how the different parts fit together explicit.

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<sup>13</sup> In the department, *apply* is described as ‘Put to practical use or make use of a relevant theory, formula or law’.

### 6.2.2 *Making the knowledge in CFM3A visible*

CFM3A consists of three units with a total of five topics. The learning material for this module consisted of the prescribed textbook, an additional learning material document for each of the units, PowerPoint slides, and short concept videos. The textbook for this module was selected by the lecturing team. The team justified their selection of the specific textbook by arguing that it covered most of the work, used everyday language, was understandable, had good practical examples, relatable context, and it covered different types of organisations (CFM3 Team Interview). All the other documents and videos were prepared by the lecturing team. Given that the textbook contained the most detailed explanation of each of the topics covered in the module, it was the most appropriate data source to inform the constellation mapping. Students were required to use the textbook as part of their preparation for the online lectures and learning in the module.

Each topic in CFM3A can be visualised as a constellation that consists of clusters and nodes that are linked together. As a reminder, a node is a single unit of meaning. Clusters are groupings of nodes that come together to provide more meaning about concepts, practices, or beliefs. In CFM3A there is theoretical knowledge (such as concepts and principles); and practical knowledge (such as doing specific calculations). When working with calculations, students are required to know the definition or meaning of what they are calculating as well as how to perform the calculation (i.e., they need to know the formula). The definition and formula are two nodes that come together in a cluster focused on the calculation. When working with theoretical knowledge, the students are required to understand *why* a calculation is performed, *who* will use the calculation, and *how* the information/calculation could help the business with planning and decision-making. In this case, the *what*, *why* and *how* are different nodes that come together to form a principled knowledge cluster that provides theoretical information regarding the calculation or specific concept. When taken together, the principled knowledge cluster and the calculation or procedural knowledge cluster start to form a constellation. Clusters can also be related to other clusters or nodes that form part of a different constellation. For example, the multi-product ‘cost-volume-profit’ (CVP) cluster is related to the single-product contribution margin and breakeven clusters. To highlight instances where students are required to draw on knowledge (whether that be theoretical or practical) from prior modules, the relations between the various clusters are indicated with a dotted line.

For reasons of brevity and clarity it is not possible to show detailed constellations for each of the topics covered in the module. Therefore, as a proof of concept, I will show how the detailed constellation for a part of Unit 1, ‘multi-product cost-volume-product (CVP)’ is formed (in reference to learning outcome four). I will indicate the relevant structures, relations and kinds of knowledges that are part of multi-product CVP. In the last part of this section (Figure 6.9), I show the constellation of the full module, or the ‘bigger picture’ of what knowledge has been brought together to create the curriculum in CFM3A; or, put differently, the knowledge the students had to learn in CFM3A. The remainder of this section now turns to explain how the constellations were built.

In the first summary (Synopsis 6.1) cost-volume-profit analysis (CVP) is discussed in terms of *who* uses it (the managers); and *what* it is used for (a short-term decision-making technique, to minimize risk, what-if questions, decision making and to determine behaviour and relationships between income and various cost components).

Cost-volume-profit analysis (CVP) is a short-term decision-making technique, used by managers to minimise the risk of not making a profit, to answer what-if questions like how many units should be sold to make a certain profit and for decision-making. CVP is further used to study the behaviour and relationship between total revenue, total cost and income as changes occur in the selling price per unit, the number of units sold, the variable cost per unit, or the total fixed cost.

Multi-product cost-volume-profit analysis builds onto single-product cost-volume-profit analysis. The difference between the two is that with single-product cost-volume-profit analysis, the assumption is that the company manufactures and sells a single product, whereas with multi-product cost-volume-profit analysis, the company manufactures and sells multiple products. The basic concepts between the two are the same, with small differences in the calculations.

*Synopsis 6.1: CVP Introduction*

By giving information regarding *who* uses CVP and *what* CVP is used for, the theoretical knowledge of CVP is emphasised. The *what* and the *who* are nodes that both add theoretical

meaning to CVP. As these nodes come together, a principled knowledge cluster is formed. In this study, purple is used to indicate principled knowledge.

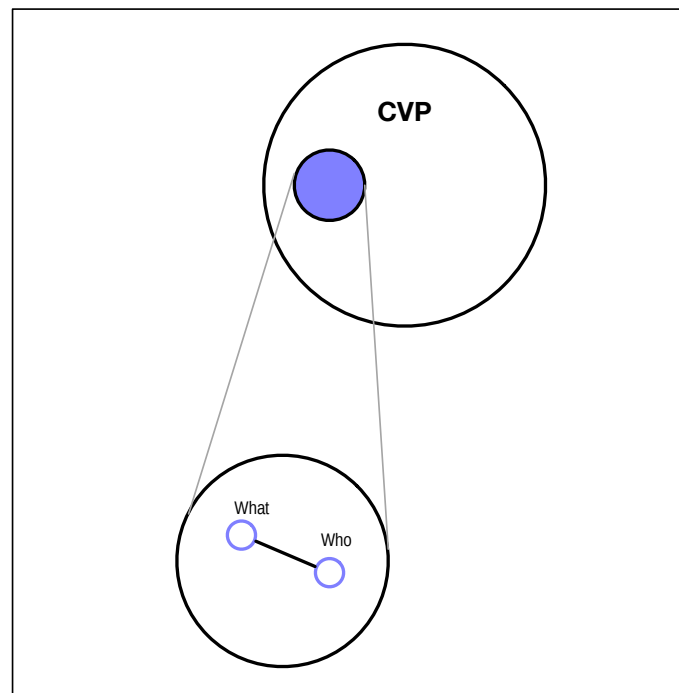
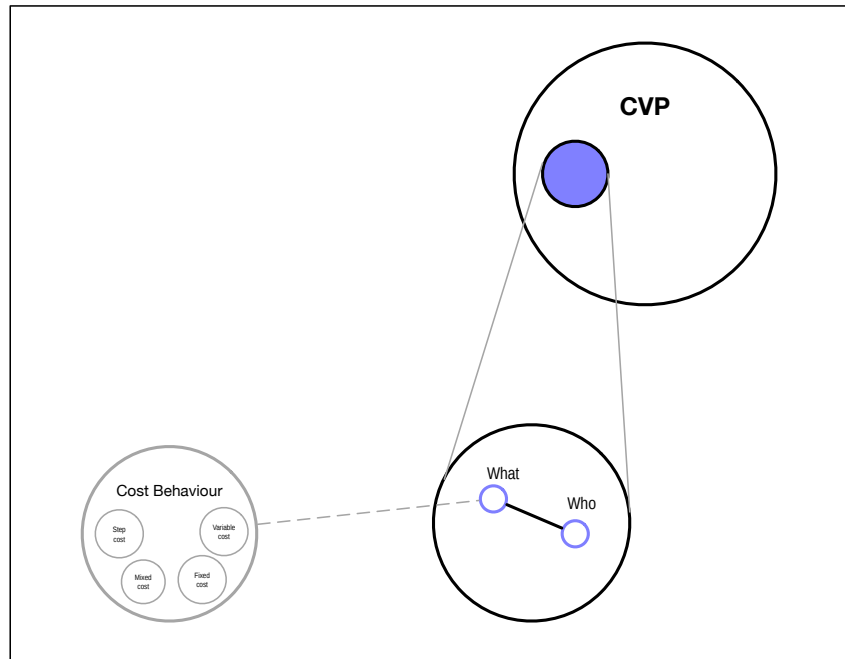


Figure 6.2: CVP Constellation (Part 1)

Starting from the bottom of Figure 6.2, the explanation on *what* CVP is used for and *who* will use the information are two nodes (circles with purple outline), both providing theoretical knowledge (meaning) of CVP. As the *what* and *who* nodes come together, a cluster (purple filled circle), focussed on principled knowledge is formed. This purple circle, in the top CVP circle indicates the position of the principled-knowledge-focused cluster, within the CVP constellation.

Synopsis 6.1 then goes on to explain that the principled cluster which has been created (consisting of the *who* and *what* components of CVP) involves the concepts of ‘variable cost’ and ‘fixed cost’ (two elements of ‘cost behaviour’). Given that cost behaviour was introduced in the first semester of the students’ first year, the synopsis is in effect creating a link to prior knowledge (represented with a dotted line). Cost behaviour, with the different kinds of costs, is indicated in grey in Figure 6.3.



*Figure 6.3: CVP Constellation (Part 2)*

Once this relation is established, the synopsis furthers the explanation by referring to ‘total revenue’, ‘total cost’, and ‘income’. As these concepts are more general accounting concepts, links are established to Financial Accounting as well as the prior CFM modules. Concepts relevant to prior CFM modules and other modules are indicated in yellow as seen in Figure 6.4. This shows the importance of prior knowledge as well as the hierarchical structure of accounting knowledge. In doing so, CVP is linked to other modules (i.e., Financial Accounting) within the Diploma in Accounting. The link to ‘total revenue’, ‘total cost’, and ‘income’ are illustrated as yellow circles in Figure 6.4.

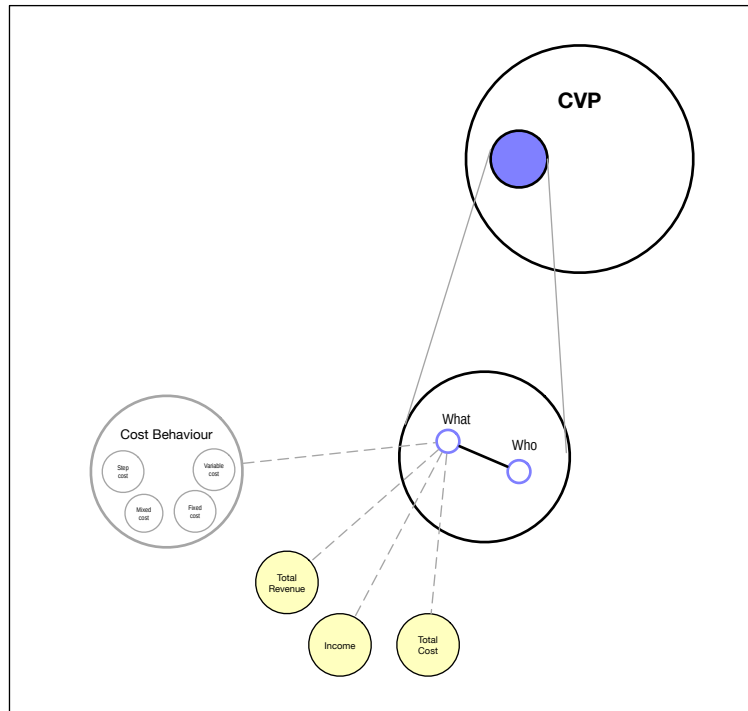


Figure 6.4: CVP Constellation (Part 3)

In the second paragraph (Synopsis 6.1) the summary explains that CVP can be done as both a ‘single product’ and ‘multi-product’ calculation. Although this module focusses only on multi-product CVP, single-product CVP (done in the second year) is included here because multi-product CVP builds on single-product CVP. An understanding of single-product CVP is therefore important and forms part of the constellation. Single- and multi-product CVP are now included in the CVP constellation as illustrated in Figure 6.5.

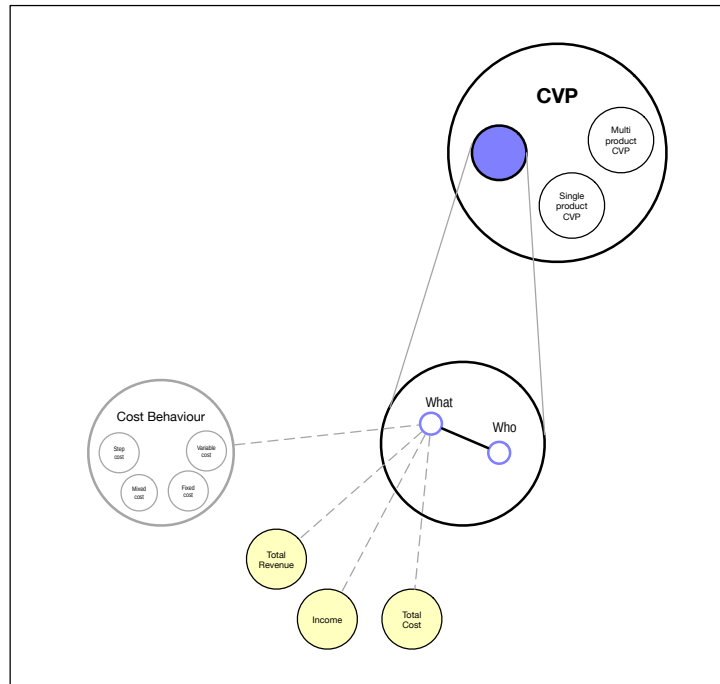


Figure 6.5: CVP Constellation (Part 4)

In Figure 6.5, single- and multi-product CVP are indicated as circles within the constellation for CVP. At this point there is not much information (meaning) regarding single product and multi-product CVP, however, these circles (clusters) will be expanded as the text moves on.

This constellation mapping enables a more explicit visualisation of the links within a topic (in this case, CVP), as well as to concepts or parts that are not directly part of the topic (indicated in yellow in Figure 6.4). In doing so, the relationship between CVP, cost behaviour, total revenue, total cost, and income is revealed. The constellation is also able to reveal how CVP is related to cost behaviour, thus showing the importance of prior knowledge. By making these connections clear, the constellation analysis is able to show the intricacy of the knowledge structure that emerges in just two short paragraphs. It also emphasises the role of prior learning and the need to transfer knowledge across contexts (in this case, across modules and years of study). If students are unable to see this ‘bigger picture’ and transfer prior learning as required by the content of the module, access to powerful knowledge will be constrained.

After the initial theoretical introduction to CVP (Synopsis 6.1, as described above), the explanation moves to the calculations relevant to single-product CVP (Synopsis 6.2). The first calculation is that of ‘contribution margin’. Information is provided as to *how* contribution margin helps a business (to explain changes in operation income); and *what* contribution

margin is (the difference between total revenue and total variables). By adding this further information, the meanings form a new theoretical knowledge cluster for ‘contribution margin’ including meanings about the *what* and the *how* of contribution margin.

The calculations for CVP include contribution margin, target net income, breakeven, margin of safety and target operating income. The contribution margin helps to explain why operating income increases or decreases, and it is the difference between total revenue and total variables.

Contribution margin can be calculated, in total, per unit or as a percentage, by using the following formulas:

Contribution margin = Total revenues – total variable cost

Contribution margin per unit = Selling price per unit – variable cost per unit

Contribution margin percentage = Contribution margin / Revenues x 100

*Synopsis 6.2: Contribution margin*

Further to the initial explanation of contribution margin, the students were introduced to the relevant calculations for contribution margin. Here we see that contribution margin can be calculated in total, per unit, or as a percentage. Each calculation has its own formula, for example, to calculate the contribution margin per unit, one would deduct the variable cost per unit from the selling price per unit. The information regarding calculations can be characterised as practical knowledge, as it refers to the process or the ‘doing’. As such, the calculations presented in the synopsis form a second cluster.

When the explanation of contribution margin is considered in relation to the broader CVP constellation, the following expanded CVP constellation is revealed (see Figure 6.6).

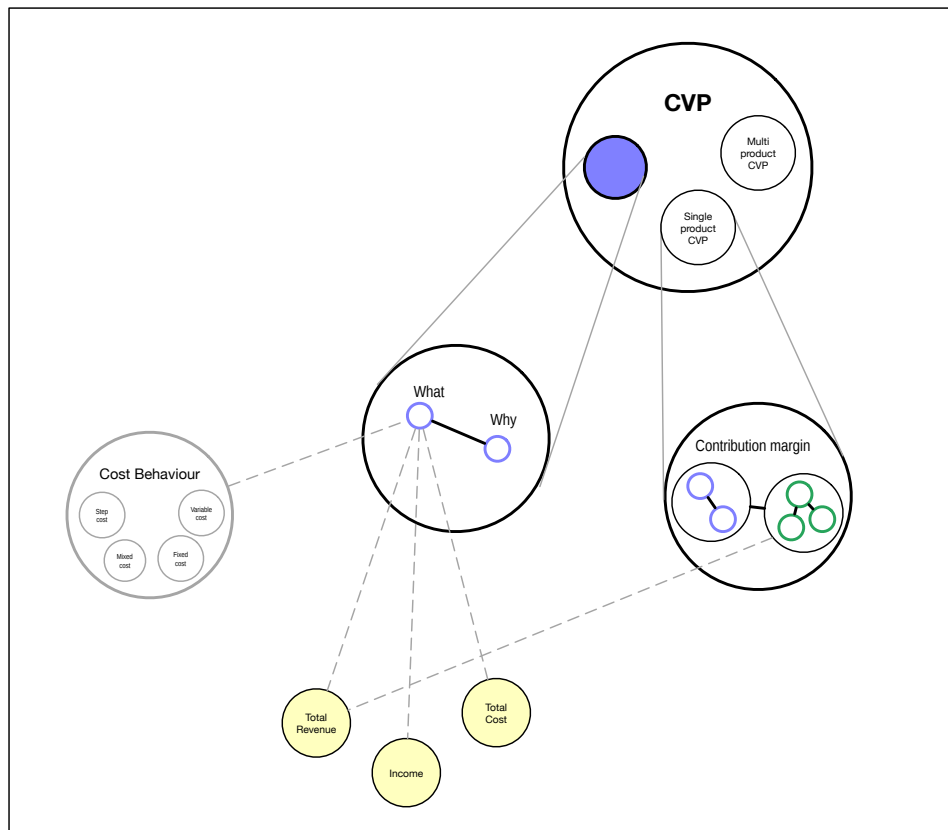


Figure 6.6: CVP with Contribution margin

Through the explanation of contribution margin in (Synopsis 6.2), meaning was added to single product CVP. In this explanation, contribution margin was offered as one of the calculations. In addition, the theoretical knowledge (the *how* and *what*) of contribution margin and the relevant formulas for contribution margin were explained. The meanings related to contribution margin are represented in Figure 6.6 as a principled knowledge cluster (purple), and a procedural knowledge cluster (green), specifically related to contribution margin. Furthermore, as total revenue is required for the contribution margin calculations, the relation between CVP and total revenue is not only between the initial theory cluster and total revenue. A relation is also established between total revenue and the calculation of contribution margin.

The next concept in the explanation of CVP is 'Breakeven point':

The contribution margin per unit is then used to calculate the breakeven point. The breakeven point indicates how many units should be sold to avoid a loss. It is thus the point where total revenue is equal to total cost, or where the operation income is zero. The formula to calculate breakeven units, for a single product is total fixed cost / contribution margin per unit. Breakeven revenue can then be calculated by multiplying the breakeven units with the selling price per unit or by dividing the total fixed cost with the contribution ration.

*Synopsis 6.3: Breakeven*

As with CVP and contribution margin, a principled knowledge cluster is formed as ‘breakeven point’ is explained in terms of *what* it is used for (units to sell to avoid a loss), and *what* breakeven point is (total revenue is equal to total cost). By including a theoretical explanation of breakeven, more meanings are added to single product CVP. This in turn acts to further expand the constellation, as a principled knowledge cluster for breakeven is incorporated (see Figure 6.7). Once the principled knowledge cluster of breakeven has been constructed, the explanation moves to the calculation of the breakeven point and ‘breakeven revenue’. In doing so, procedural knowledge related to breakeven calculations is added and a procedural knowledge cluster is formed. Furthermore, this new cluster creates a relation between ‘contribution margin’ and ‘cost behaviour’ as this information is required to calculate breakeven point. This is illustrated in Figure 6.7 below.

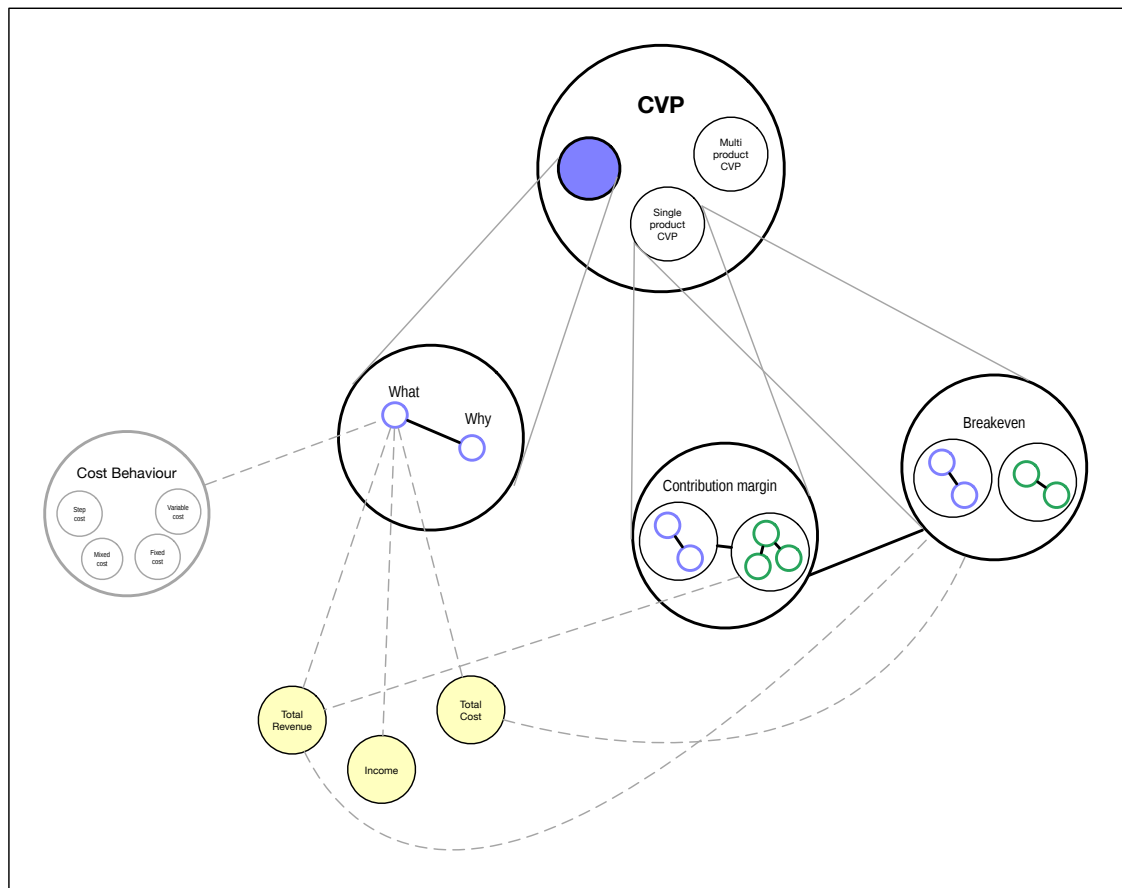


Figure 6.7: CVP with Breakeven

So far, we have seen that the CVP constellation is becoming more condensed with meanings, with every new concept that is introduced: as the synopsis unfolds, more clusters, either focussing on principled or procedural knowledges, are added and relationships between different clusters are established. Furthermore, links to prior knowledge (such as single-product CVP) are created. As a result, a concept such as single-product CVP is included in the constellation, as it forms part of the structure of the knowledge in the module. In other words, to access the full constellation students have to first understand cost behaviour in the first year, transfer that knowledge to their learning of single-product CVP in the second year, and then cumulatively carry that knowledge into third-year, in order to fully understand multi-product CVP. Given this hierarchical knowledge structure (with new knowledge building directly onto previous knowledge), one could assume that by third-year students already understand and know the various concepts and calculations that have come before, on which the new learning depends.

After the introduction of CVP and single product CVP, the synopsis moves onto ‘multi-product CVP’. With multi-product CVP, the theoretical knowledge of CVP does not change; the new information comes into the calculations which now include the concepts of ‘sales mix’ and ‘sales ratio’. With this added procedural information, the calculation of breakeven units is slightly different between single-products and multiple-products. The calculation of breakeven for multiple products is explained in Synopsis 6.4:

The calculation of breakeven units where there are multiple products is slightly different. In the case of multiple products, the sales mix (also called sales ratio) forms part of the calculations. With multiple products, one will first calculate the contribution margin for the bundle (all products). The breakeven for the bundle is calculated (total fixed costs / contribution margin for the bundle), whereafter, the breakeven per product can be calculated.

*Synopsis 6.4: Multiple-products CVP (Breakeven)*

In Figure 6.8 below, the single-product CVP constellation is extended to include multi-product CVP. Here, multi-product CVP appears to be less intricate than single-product CVP in that it consists of fewer parts. However, as multi-product CVP builds on single-product CVP, the principled knowledge clusters of single-product CVP are linked to multi-product CVP. Therefore, a clear understanding of single-product CVP is important, as one might struggle with multi-product CVP without the relevant foundational knowledge. The main difference is that as the sales ratio is now part of the calculations, additional steps are required for the multi-product CVP calculations. The relationship between single product CVP and multi-product CVP is indicated in Figure 6.8 as well as the more intricate calculations.

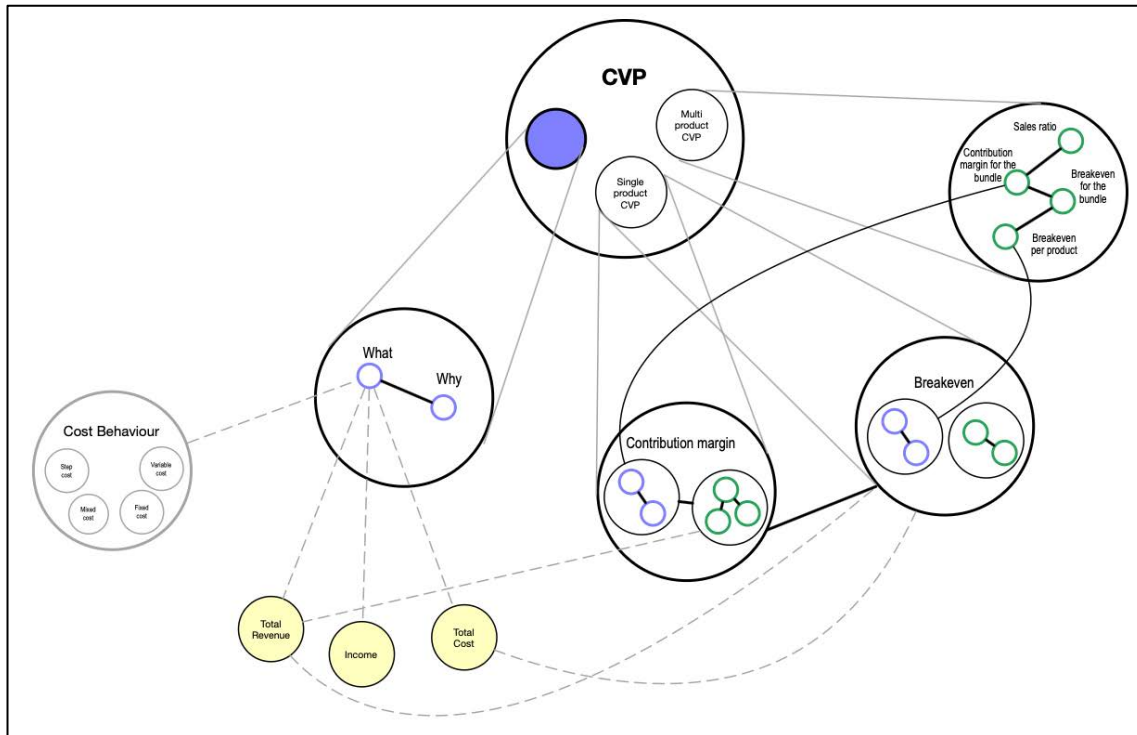


Figure 6.8: CVP with multiple products

In the analyses presented above, I illustrate how constellations are formed in a part of the first unit of CFM3A, which is focussed on multi-product CVP. The building of constellations and clusters is a lengthy process that often involves repetition. The focus of the analysis was not on how the constellations are built, but rather on an overall understanding of the module, particularly in terms of the structure, relations, and kinds of knowledges that students need access to, to succeed. This was a vital first step before I could move on to consider the pedagogies that were used, and whether these enabled access to the constellation (which forms the focus of the next chapter).

It is beyond the scope of this study to show how all the detailed constellations are built step-by-step. With this in mind, the final constellation presented in Figure 6.9 below is a summarised illustration of the full CFM3A module, which consisted of three units. As with the previous figures, principled knowledge clusters are indicated using a purple circle, while the calculations or procedural knowledge clusters are indicated in green. The yellow dotted lines indicate the connection between prior knowledge from the first and second year and the various units in the third year, whereas the red dotted lines indicate connections between units within the third year. The yellow circles indicate connections to other modules like Financial Accounting or the CFM modules studied in prior years



Figure 6.9 shows that within each of the three units, there are principled and procedural knowledge clusters. The constellations also illustrate the importance of links between clusters and prior knowledge (for example, cost classification and cost behaviour are linked to all the units in CFM3A as well as to the relevant foundational knowledge of the second year). The importance of prior knowledge further points to a hierarchical knowledge structure where new knowledge builds on and extends prior learning.

Through the use of constellations, I was able to visualise and make explicit the knowledge structure that students require access to, in order to succeed academically in CFM3A. The next chapter will consider the extent to which access to this knowledge structure was achieved through pedagogy. Before turning to pedagogy, however, I will first consider the knowledge structure of AIC3A through a constellation analysis to show the nuances between different accounting modules.

### **6.3 Knowledge in Auditing (AIC)**

Auditing, like Cost and Management Accounting, is a subfield of accounting. Unlike other accounting sub-disciplines, Auditing is not focussed on doing calculations but is rather about mitigating risks and giving assurance that financial reports are correct and a fair representation of a company's financial position. As Adams et al. (2019, pp. 1–2) explain, “Auditors of all types provide assurance pertaining to information prepared or presented by one party to another party with the intention of inspiring confidence in the ‘fairness’ of the information which is being prepared or presented”.

Before characterising the nature of auditing knowledge, it is important to point out that the focus of the Diploma in Accountancy is not to prepare students to become professional auditors, but rather to give them an introduction to a broad overview of auditing as a sub-discipline. In this diploma, students start with Auditing and Internal Control (AIC) in the first semester of their second year. For this study, I am looking at the third-year AIC module that students take in the first semester (that is, AIC3A). This module builds on the two AIC modules taken in the second year. The content that is covered in the first semester of the third year is similar to that of the second semester of the second year. In the second year, students are

introduced to key aspects like ‘assertions’, ‘tests of controls’ and ‘substantive procedures’. Students are required to learn the various concepts in order to answer ‘define and identify’ questions. In AIC3A (third-year, first semester), the focus remains on aspects like ‘assertions’, ‘tests of controls’ and ‘substantive procedures’; however in AIC3A students are required to have an in-depth understanding of the various concepts to apply them within short case studies. Therefore, as *all* the key concepts (aspects) in AIC3A are also prior knowledge, prior knowledge has not been indicated in the clusters and constellations as was done for CFM3A.

### 6.3.1 *The nature of knowledge in AIC3A*

The purpose statement for AIC3A, as illustrated in Figure 6.10, indicates that the focus of the module was on providing students with the basic principles of internal control and testing in general terms, and that students should be able to apply these principles to various business cycles.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>PURPOSE</b></p> <p>The purpose of this module is to provide students with the basic principles of internal control and testing, in general, and as applied to some business cycles.</p> <p><b>OUTCOMES</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• describe the principles that determine the choosing of items for testing to gather audit evidence;</li> <li>• perform audit planning by incorporating the preliminary evaluation of business risk, internal control and audit risk;</li> <li>• apply the audit plan into action for the revenue and receipts cycle, for the acquisition and payment cycle and the inventory and production cycle; and</li> <li>• apply the audit plan into action for finance and investment cycles.</li> </ul> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

*Figure 6.10: AIC3 purpose statement and learning outcomes*

As with CFM3A, the learning outcomes are condensed statements of what the students must be able to do. For example, learning outcome three states that ‘students should be able to apply the audit plan into action for the revenue and receipts cycle, the acquisition and payment cycle as well as the inventory and production cycle’. Reading the learning outcome in isolation, one could assume that the learning outcome is only about the audit plan within the three cycles mentioned. However, even though not explicitly mentioned here, ‘assertions’, ‘test of controls’ and ‘substantive procedures’ are part of the audit plan, and therefore part of the specific learning outcome. The same applies for learning outcome four that refers to the application of the audit plan in the finance and investment cycle. What is not explicit here is that the

application of the audit plan refers to the ability to decide if one should use ‘tests of controls’, ‘substantive procedures’, or a combination of both.

What this shows is that there is more knowledge embedded within the learning outcomes than can be read at face-value. As a result, it is not clear what is required to be successful in the module. As a first step in this process of making this explicit, constellations are used to map the knowledge structure of the AIC3 module to gain a deeper understanding of the composition of the module.

### **6.3.2 *Making the knowledge in AIC3A visible***

Auditing and Internal Control (AIC) is not a ‘normal’ accounting sub-discipline in the sense that the focus is typically not on doing calculations, but rather on verifying financial transactions. As explained in section 6.3, AIC3A is about verifying financial statements and providing assurance that the statements are free of material misstatements. In this module, there are four units, each focussing on a different cycle. The same principles and procedures (‘assertions’, ‘tests of controls’ and ‘substantive procedures’) are applied in each of these cycles. For this reason, the analysis first considers the constellations and clusters for assertions, tests of controls, and substantive procedures before illustrating how these link to the various cycles. As with CFM3A, the analysis draws on short summaries from the prescribed textbook to illustrate the various constellations.

In the first summary (Synopsis 6.5) ‘assertions’ are introduced by explaining *what* it is (i.e., it is the claim regarding the assets, equity, and liabilities); and *who* (directors) is making the assertions. As this initial explanation is focussed on *what* and *who*, principled knowledge regarding assertions is foregrounded. Furthermore, by bringing the *what* and the *who* together, a principled cluster is formed (see Figure 6.11), comprising two categories. Assertions are then linked to ‘ISA 315’ (ISA stands for International Standards on Auditing, while 315 indicates the number of the standard). Assertions are laid down in ISA 315, and this standard deals with the auditor’s responsibility to identify and assess risks of material misstatement in the financial statements as well as ‘financial statements’.

Every year the directors, (or to simplify, the managers) of a company issue a set of financial statements to the shareholders and other stakeholders. The content in the financial statements is covered by the Companies Act and financial reporting standards. Embodied in the financial statements are the assertions of the directors or then their statements or claims of the company's assets, equity, liabilities, transactions and events and disclosures. Assertions are presented in ISA<sup>14</sup> 315 (revised) – in two categories, the first is *Assertions about classes of transactions and events and related disclosures*. This includes assertions regarding occurrence, completeness, accuracy, cut-off, classification and presentation. The second category is *Assertions about account balances and related disclosures at the period end*. The second category includes assertions regarding existence, rights, completeness, accuracy, valuation and allocation, classification and presentation.

*Synopsis 6.5: Assertions*

The synopsis briefly alludes to the fact that financial statements comprise many different parts, each with its own function ('a set of financial statements'). For this reason, financial statements are represented as a separate constellation, consisting of its own clusters and nodes (a single unit of meaning). The detail of the financial statement constellation does not form part of this module, and for this reason it is not included here. What is important here, is the relationship between 'assertions' and 'financial statements', as well as 'ISA 315' (revised) (the International Standards on Auditing that deal with identifying and accessing risks of material misstatements). Following the same constellation analysis process explained in detail in section 6.2.2, the following constellation for assertions emerges (see Figure 6.11).

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<sup>14</sup> International Standards in Auditing

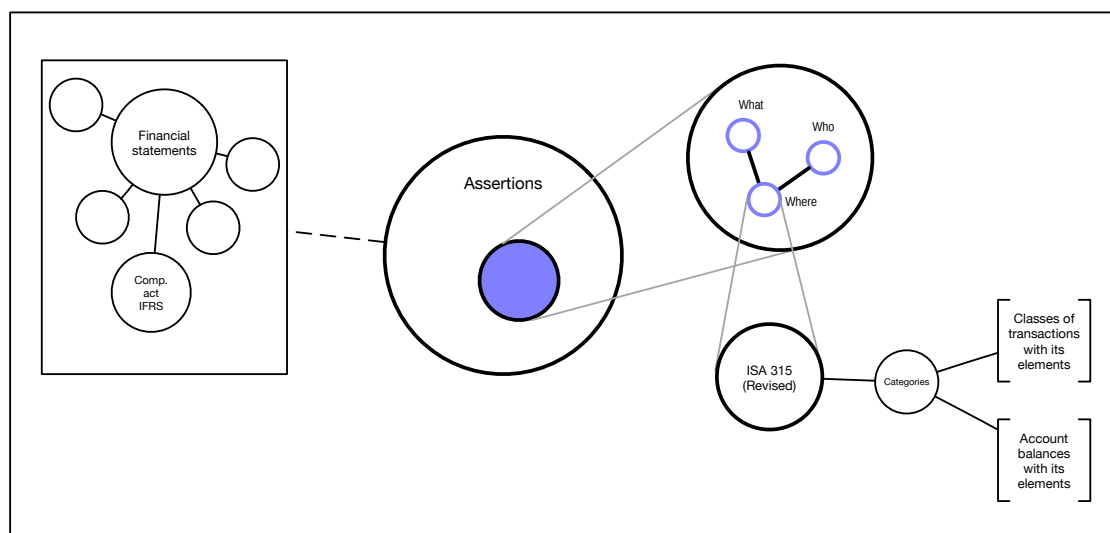


Figure 6.11: Assertions cluster

In CFM3A, the constellations and clusters were built around the units and topics, whereas in AIC3A the constellations and clusters are built around key concepts like ‘assertions’, and ‘test of controls’. As such, ‘assertions’ are indicated as a bigger, more prominent circle as it is the main idea or the focus of the cluster in Figure 6.11. Through the explanation of assertions in Synopsis 6.5, meaning was added regarding *what* assertions are, *who* the users are, and *where* they are used, as such a principled knowledge cluster was formed. As assertions are presented in ISA315, the *where* is linked to ISA315, consisting of two different categories (classes of transactions and account balances).

The synopsis then moves on to explain the role of the auditor (see Synopsis 6.6). This explanation not only helps to clarify the role of the auditor but also helps to establish the ‘bigger picture’ of auditing. As can be seen in Synopsis 6.6, the summary includes information on *what* the auditor must do (audit financial statements and issue an opinion); *why* it is necessary (statements must be free from material misstatements and fairly presented); and *how* to do it (through risk assessments and further audit procedures applicable to each assertion).

The role of the auditor is to audit the financial statements and to issue an opinion to the shareholders on whether the statements are correct and free from material misstatements. The auditor will perform risk assessment procedures to consider the risk of material misstatement applicable to each assertion. The auditor will conduct further audit procedures (tests of controls and substantive procedures) to gather

sufficient and appropriate evidence to determine whether the financial statements are fairly presented. The extent of the procedures performed depends on how high the risk of material misstatement attached to the respective assertion is. The evidence is then used to form an audit opinion. To do this work, auditors need to have an attitude of professional scepticism and professional judgement.

There are seven procedures that the auditor can use as ‘tools’ to gather evidence. The auditor will use these tools as he deems fit. The seven procedures are: inspection, observation, external confirmation, recalculation, reperformance, analytical procedures, and inquiry. Any of these procedures, or a combination of them can be used to assess risk, and conduct tests of controls or substantive procedures. However, as analytical procedures cannot provide evidence that a control is effective, it cannot be used as a test of control.

*Synopsis 6.6: Role of the auditor*

By including this explanation, meaning is added to the role of the auditor, and a cluster is formed. This cluster is represented as a principled knowledge cluster, as the focus is on the *what* (financial statements); the *why* (to issue an opinion on correctness and if the statements are free from material misstatements); and the *how* (risk assessments, tests of controls and substantive procedures). Here, the *how* is principled knowledge, as the focus is on what needs to be done, and not on performing the various procedures or then doing the audit. Performing the various procedures would be characterised as procedural knowledge.

We further see that the role of an auditor is linked to financial statements and that an auditor needs to have certain attitudes (professional scepticism and professional judgement), thus indicating specialised ways of being.

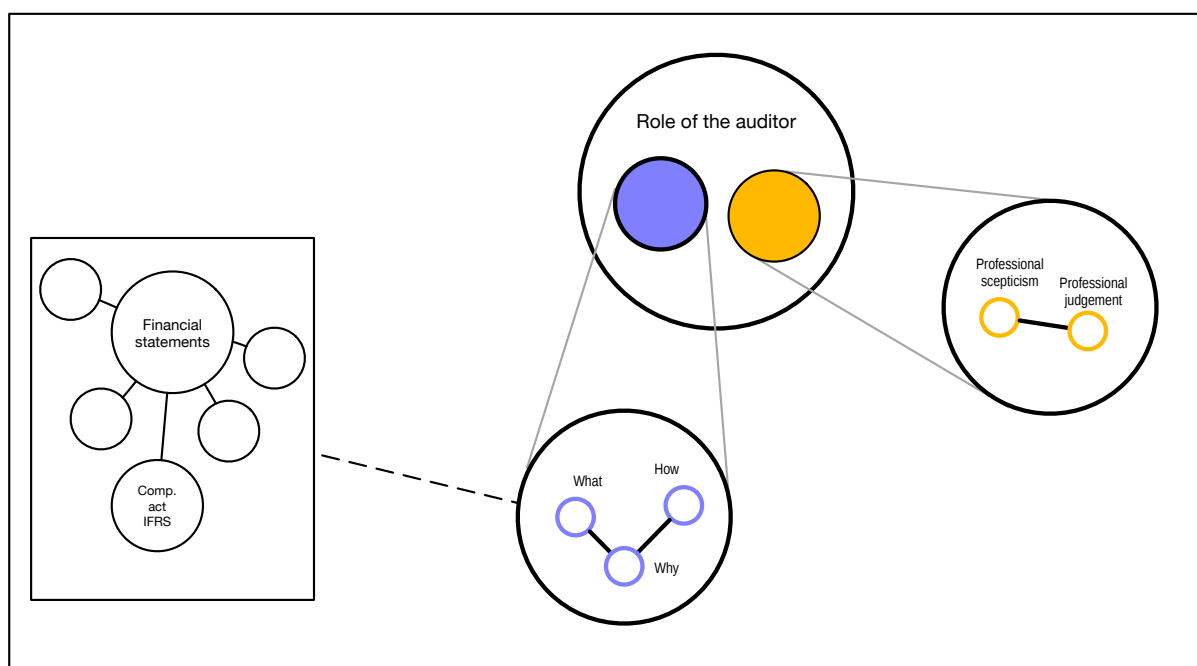


Figure 6.12: Role of the auditor (Part 1)

Based on the first paragraph of Synopsis 6.6 and through the use of constellations, the role of the auditor is illustrated in Figure 6.12. In this constellation we see the development of the principled knowledge cluster, consisting of the *what*, *how* and *why* of an auditors role. Given that auditors are auditing financial statements, the *what* is linked to the financial statement constellation. In this extract and constellation, there is, for the first time, an indication of the specialised ways of being (indicated in orange) that an auditor needs to develop.

In the second paragraph of Synopsis 6.6, we further see that there are seven procedures (inspection, observation, external confirmation, recalculation, reperformance, analytical procedures, and inquiry) that auditors can use as tools to gather the evidence that will enable them to form an audit opinion. As the role of an auditor is to form an audit opinion, a relation is formed between the seven procedures and the principled knowledge cluster under the role of an auditor. The same seven procedures are also linked to ‘risk assessment’, ‘tests of controls’, as well as ‘substantive procedures’ (that form the *how* in the principled knowledge cluster); as the seven procedures can be used to gather evidence for all of these (assessments, tests of controls, and substantive procedures). These links are illustrated with dotted lines in Figure 6.13 below.

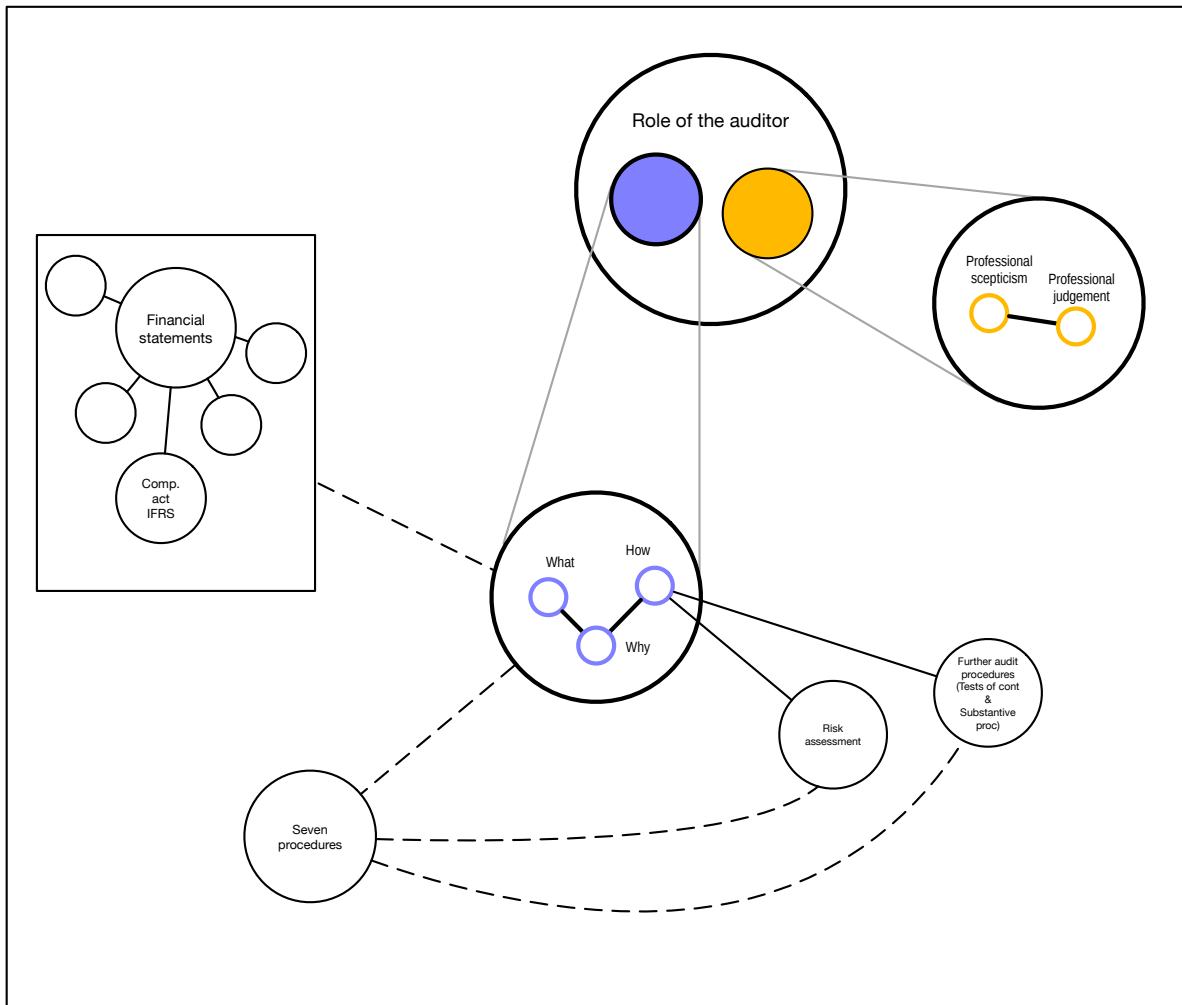


Figure 6.13: Role of the auditor

By using constellations (Figure 6.13) the relations between the principled knowledge cluster (role of an auditor) and the various audit procedures are clearly visible.

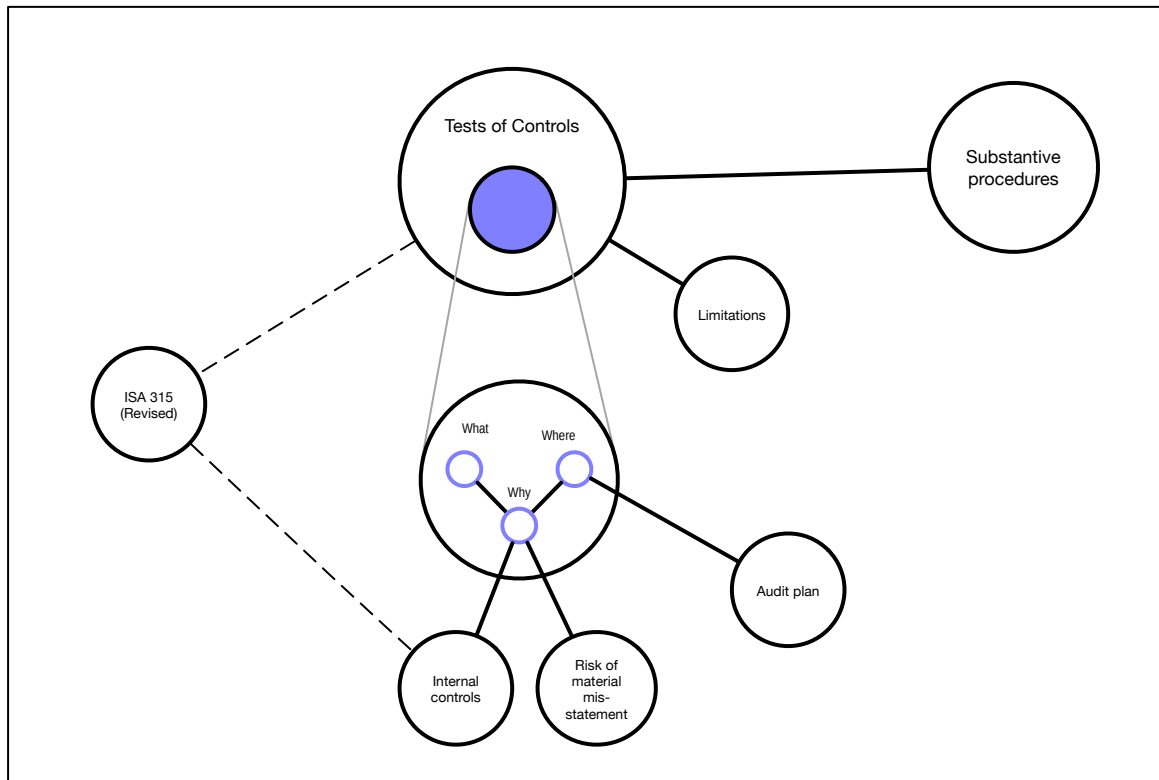
Once the role of the auditor is explained, the synopsis moves on to discuss ‘tests of controls’. This explanation includes details about *what* it is (i.e., a test to determine if the balances and totals are reliable). A requirement of ‘ISA 315 (revised)’ is for the auditor to understand the internal controls as this will help to identify types of potential misstatements. Expanding on this, the synopsis provides information on *why* tests of controls are performed. It furthermore explains how the auditor will use the information regarding the internal controls to plan the audit, indicating *where* tests of controls are used.

The auditor will perform tests to determine if the accounting system and related control activities produce reliable balances and totals; these are called tests of controls. A requirement of ISA 315 (revised) is for the auditor, to get an understanding of the business internal control, as they identify and assess the risk. An understanding of the internal controls will help the auditor to identify types of potential misstatements as well as factors that affect the risks of material misstatements. Should the auditor find, that based on his understanding, the internal controls are sound, he will build the necessary tests of controls into the audit plan. This is to test whether the controls are operating effectively and actually implemented. Should the tests of controls provide sufficient appropriate evidence regarding the effectiveness of the controls, the auditor will have more confidence in the validity, accuracy, and completeness of the balances and totals produced by the system. Therefore, less time will be required for conducting substantive procedures.

There are limitations to tests of controls as for example, the auditor cannot confirm that controls were operating on those days throughout the year when it was not tested. Therefore, evidence of controls operating effectively cannot eliminate the need to perform substantive procedures, it can only reduce the extent and possibly change the nature of substantive procedures. With this, not all transactions are routine and therefore not subject to internal controls and tests of controls, in cases like this, only substantive procedures will be performed.

*Synopsis 6.7: Tests of controls*

In explaining the *what*, *why* and *where* of tests of controls, a principled knowledge cluster is formed. Linked to this cluster is ‘substantive procedures’. As there are limitations to tests of controls, the auditor will still have to perform substantive procedures. The extent of the substantive procedures is influenced by the evidence gathered through the testing of the controls. These links are illustrated in Figure 6.14 below.



*Figure 6.14: Tests of controls*

The above constellation indicates the connections between different concepts introduced in the synopsis as well as makes explicit how the different knowledge clusters work together in forming the knowledge constellation of the module. It also shows how different kinds of knowledges are being introduced: in this case, the focus (so far) favours theoretical, thus principled knowledge, as well as knowledge relating to the dispositions of the auditor (shown in orange in Figure 6.12 and Figure 6.13), rather than procedural knowledge such as calculations.

‘Substantive procedures’ follows after ‘test of controls’. As can be seen below, Synopsis 6.8 provides a reminder that the role of the auditor is to express an opinion regarding the fair representation of the annual financial statements. Furthermore, it highlights that because tests of controls on their own are not sufficient to do this work, substantive procedures are required.

Financial statements consist of balances in the statement of financial position, totals in the statement of comprehensive income and notes. The auditor is required to express an opinion regarding the fair presentation of the annual financial statements. As tests of controls on their own cannot provide sufficient appropriate evidence regarding the balances, totals and notes, the auditor further needs to perform substantive procedures. Substantive procedures consist of tests of details and analytical procedures.

Tests of details are when the auditor conducts a procedure on the specific detail of a transaction, account balance, or disclosure. For example, the auditor can take a sample of purchase invoices and by looking at the date, confirm whether the purchases were recorded in the correct accounting period.

The focus of analytical procedures is to evaluate the financial statements by analysing possible relationships between financial and non-financial data. For example, to determine if the sales for the current period are 'plausible', the auditor could do a comparison of sales between months, years, regions, or products. The auditor will then attempt to find reasons for any fluctuations. In this example, the analytical procedures could help the auditor to establish whether sales were overstated (occurrence assertion); and if accounts receivable were overstated (existence assertion).

In summary, substantive procedures are performed to provide evidence that will support the financial statement assertions.

*Synopsis 6.8: Substantive procedures*

By giving this reminder, the synopsis is creating a link between financial statements, the role of the auditor, tests of controls, and substantive procedures. Substantive procedures are further explained as consisting of 'tests of details' and 'analytical procedures'.

'Tests of details' are explained in terms of the *what* (i.e., what it is - a procedure done on a specific transaction); with an example of *how* it could be done. Information is then provided on *why* 'analytical procedures' are performed (to evaluate financial statements by analysing

possible relationships); and by using an example we see *how* (comparison of sales) it could help the auditor to test various accounts (sales and accounts receivable).

In the explanation of ‘tests of details’ and ‘analytical procedures’, principled knowledge is provided (*what* ‘tests of details’ are and *why* ‘analytical procedures’ are performed). As the explanation consists of single units of meaning (*what* ‘tests of details’ are and *why* ‘analytical procedures’ are performed), and there are not more parts (i.e., when or who) we see theoretical nodes instead of clusters. By providing an example of tests of controls and information about what the auditor needs to look at, meaning is added to ‘tests of controls’. Similarly, by providing an example of how a comparison of sales between months could help an auditor, meaning is added to ‘analytical procedures’. As the examples are an explanation of how tests of controls and analytical procedures can be operationalised, there is a shift towards performing an audit, thus procedural knowledge. In the illustration of substantive procedures in Figure 6.15, the purple outline indicates a principled knowledge node, whereas the green outline indicates a procedural knowledge node.

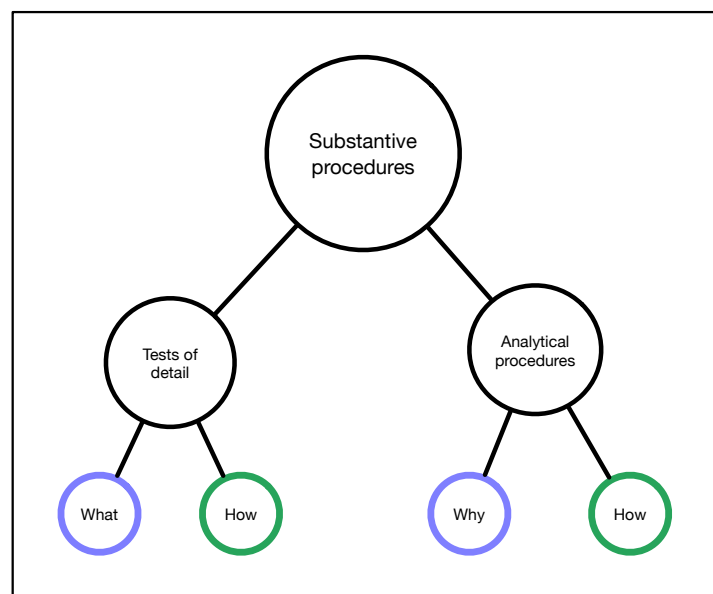


Figure 6.15: Substantive procedures

The analysis of the concepts of ‘assertions’ (Figure 6.11), ‘test of controls’ (Figure 6.14) and ‘substantive procedures’ (Figure 6.15), as well as the role of the auditor (Figure 6.12 and Figure 6.13) are now combined into one constellation to visualise how the parts (concepts) come together to form a joined-up and connected whole. As with CFM3A, the principled knowledge

is indicated with purple, and procedural knowledge is indicated with green. Clusters are filled to show that there is more than one node coming together to add meaning, with no description or indication of the parts, while a node only has a purple outline to show that there are no further parts adding meaning to the concept.

By bringing the various parts together in a constellation, we are now able to see how assertions, tests of controls, and substantive procedures are all linked together. Other links, like those between tests of controls, substantive procedures, and the role of the auditor are also made visible. By making these relations explicit and visible, one is also able to see how, unlike CFM3, the emphasis in this module is on the principled knowledge for each of the key concepts. So far, procedural knowledge is only evident as it relates to substantive procedures.

The focus on theoretical knowledge is not surprising because in auditing there are fundamental principles and procedures that must be learned and understood before these can be operationalised in an audit. For example, as a first consideration, a student needs to know what assertions, tests of controls, and substantive procedures are, as well as where and how these are used. This would encompass the principled or theoretical aspect of these concepts (as illustrated in Figures 6.11 to 6.15). The second consideration would be to operationalise the principles and procedures in the planning and conducting of an audit, including forming an opinion regarding the risk of material misstatement. This would encompass the procedural knowledge, which becomes visible through the audit process. The analysis now turns to this consideration by focussing on the ‘revenue and receipts cycle’.

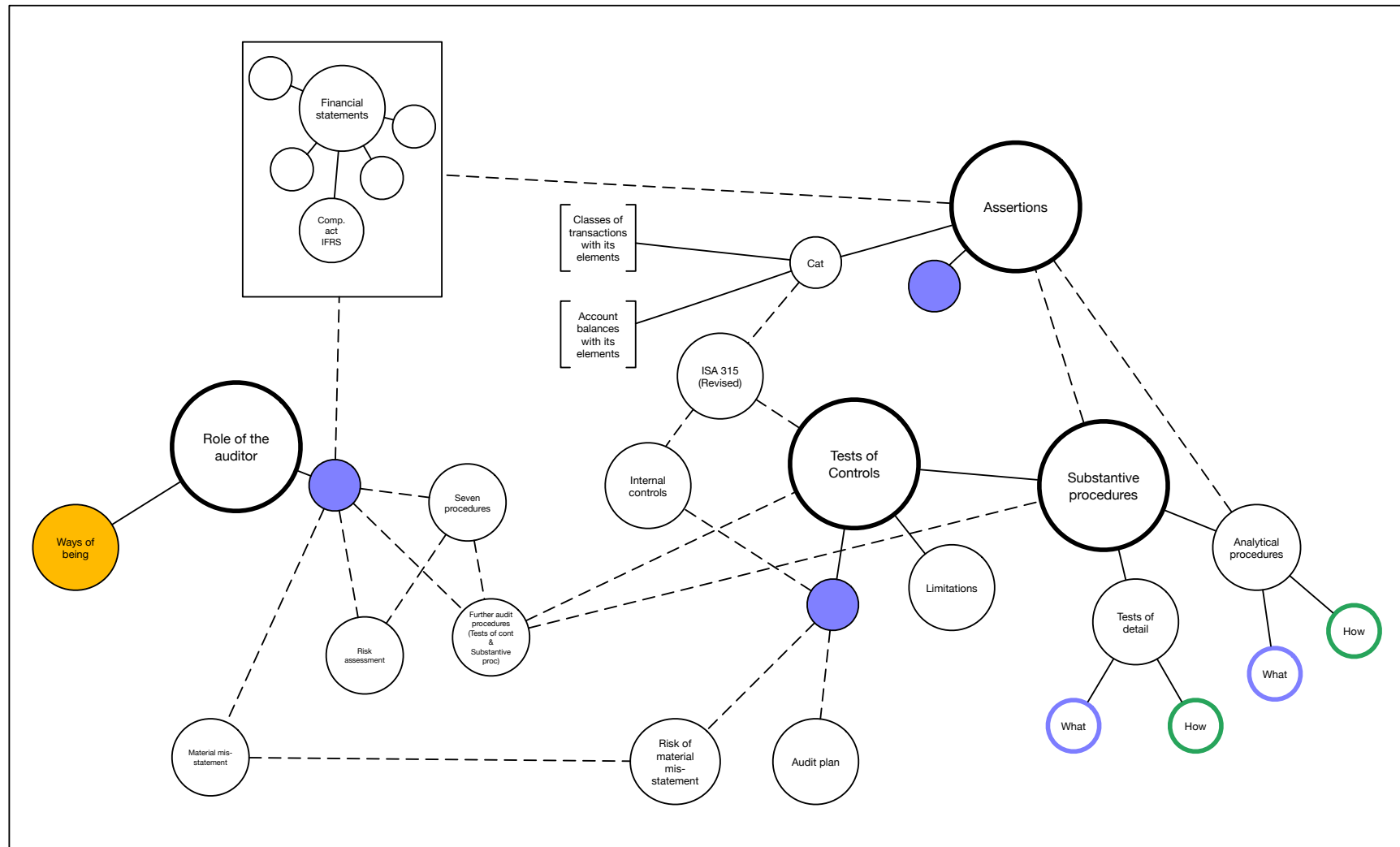


Figure 6.16: Constellation of key concepts

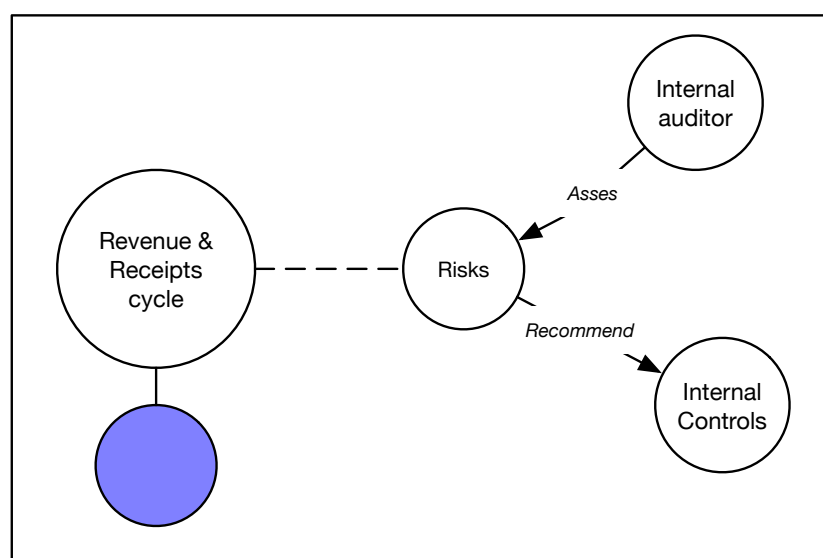
In the introduction summary of revenue and receipt cycles (Synopsis 6.9), a basic explanation is provided of what the cycle does, as well as the functions and documents that are used.

The Revenue and receipts cycle deals with sales and the collection thereof through cash or credit payments. The basic functions of the revenue and receipts cycle includes the order department, warehouse/despatch, invoicing, recording sales and raising the debtor, receiving and recording payment from debtors and credit management. There are various documents that are used in this cycle including documents like customer order, invoice, delivery note, receipt, and credit note.

In every cycle, there are risks, and the internal auditor will assess these and recommend internal controls to manage the various risks. By mitigating the risks, the business will be in a better position to achieve their objectives.

*Synopsis 6.9: Revenue & Receipts cycle*

Given the focus on the *what*, a principled knowledge cluster is created. The synopsis goes on to describe how the internal auditor is responsible to assess risks and recommend internal controls to mitigate these risks. Through this explanation, the role of the internal auditor is linked to risks and internal controls. This initial explanation is illustrated in Figure 6.17.



*Figure 6.17: Revenue & receipt cycle*

By visualising the revenue and receipts cycle (Figure 6.17), the role of the internal auditor is linked to the assessment of risks and the recommendation of internal controls. This forms a principled knowledge cluster, indicated with the purple circle in Figure 6.17. Included in the principled knowledge is *what* the revenue and receipts cycle, its basic functions (*where* it happens in the business), as well as the documents related to this cycle.

Following this explanation, the synopsis then elaborates on how the external auditor is required to audit the revenue and receipts cycle to form an audit opinion. It describes how the auditor is required to follow the audit process as stipulated in ISA 315 (revised) (see Synopsis 6.10 below). This includes assessing the risk of material misstatement at the financial statement, account balance, and transaction level; planning the various audit procedures, and conducting the further audit procedures (tests of controls and substantive procedures).

When auditing the cycle, the (external) auditor needs to consider a number of aspects: for example, whether the sales have been appropriately recognised in terms of the relevant accounting statement; whether all cash sales have been recorded; and whether the trade receivables balance; and if the financial statement is fairly valued. The process to follow is stipulated in ISA 315 (Revised). In planning the various audit procedures, the auditor will assess the risk of material misstatement at financial statement level (account balances and related disclosures); and assertion level (classes of transactions and events and related disclosures). This means that the auditor needs to evaluate if there are any risks related to trade receivables or sales.

The next step is for the auditor to conduct further audit procedures. These include an overall response to the risks of material misstatement at financial statement level, thus, tests of controls and substantive procedures. Tests of controls are done to determine if the controls were effective in achieving the objective for which they were implemented. This can be done through inspection, inquiry, and/or observation. Substantive procedures consist of substantive testing and analytical procedures that are done on classes of transactions and account balances.

*Synopsis 6.10: Revenue & Receipts cycle (Part 2)*

In explaining what the auditor must do (assess, plan, conduct), the synopsis is emphasising procedural knowledge, relating to how the external auditor would conduct the audit to determine whether the financial statements are free of material misstatements. This is indicated with green in Figure 6.18 below.

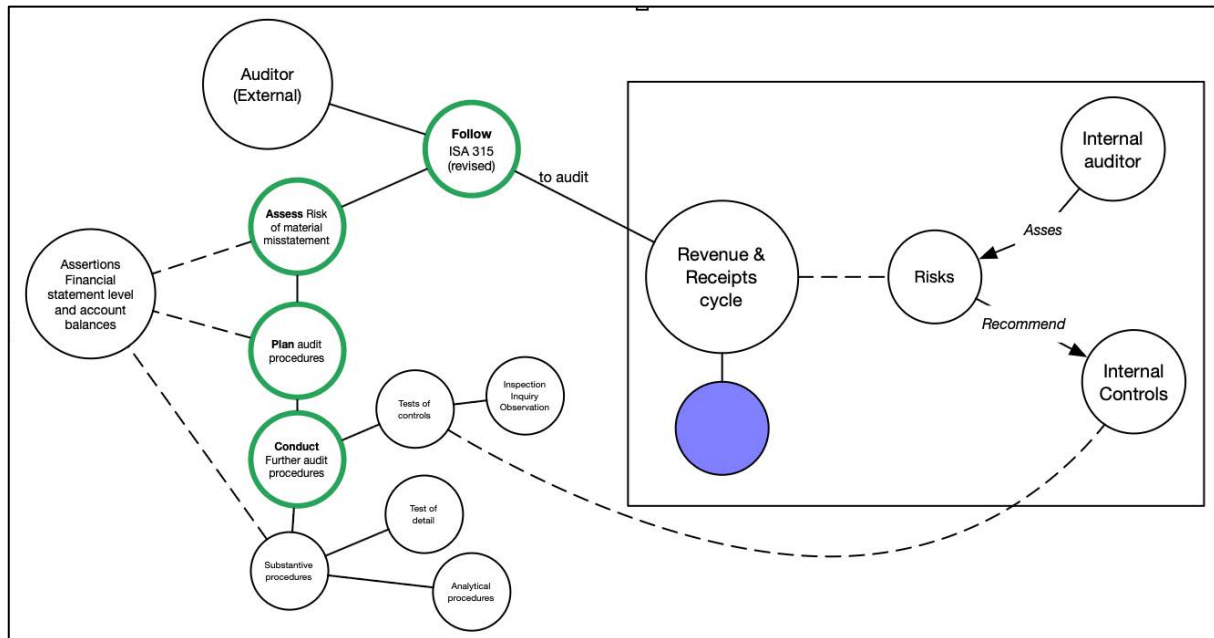


Figure 6.18: Auditing the Revenue & receipt cycle

As mentioned earlier, the explanation of revenue and receipt cycle in Synopsis 6.10 was used to illustrate how a cycle will be audited. Doing so helped to make (a part of) the procedural knowledge within AIC3A more visible. While the audit principles and processes for all the cycles are similar, the application of the principles and procedures within the various business cycles, differ slightly. This is because the purpose of the cycles, the functions within the various cycles, as well as the relevant documents, are different. By simplifying the key concepts first (as illustrated in Figure 6.16), followed by the audit process (as illustrated in Figure 6.18), the overall relations within the module can be visualised.

The full knowledge constellation for AIC3A is illustrated in Figure 6.19. In this constellation, it is difficult to clearly indicate the principled and procedural knowledges, as most parts are made up of both principled and procedural knowledges. For example, in ‘tests of controls’ one needs to know *what* tests of controls are, *where* they will be used, and *when* they will be used. These requirements all denote principled knowledge. However, when an audit needs to be planned or conducted, the tests of controls should be *planned* and *performed* (procedural knowledges) in such a way that the objectives of the audit will be met.

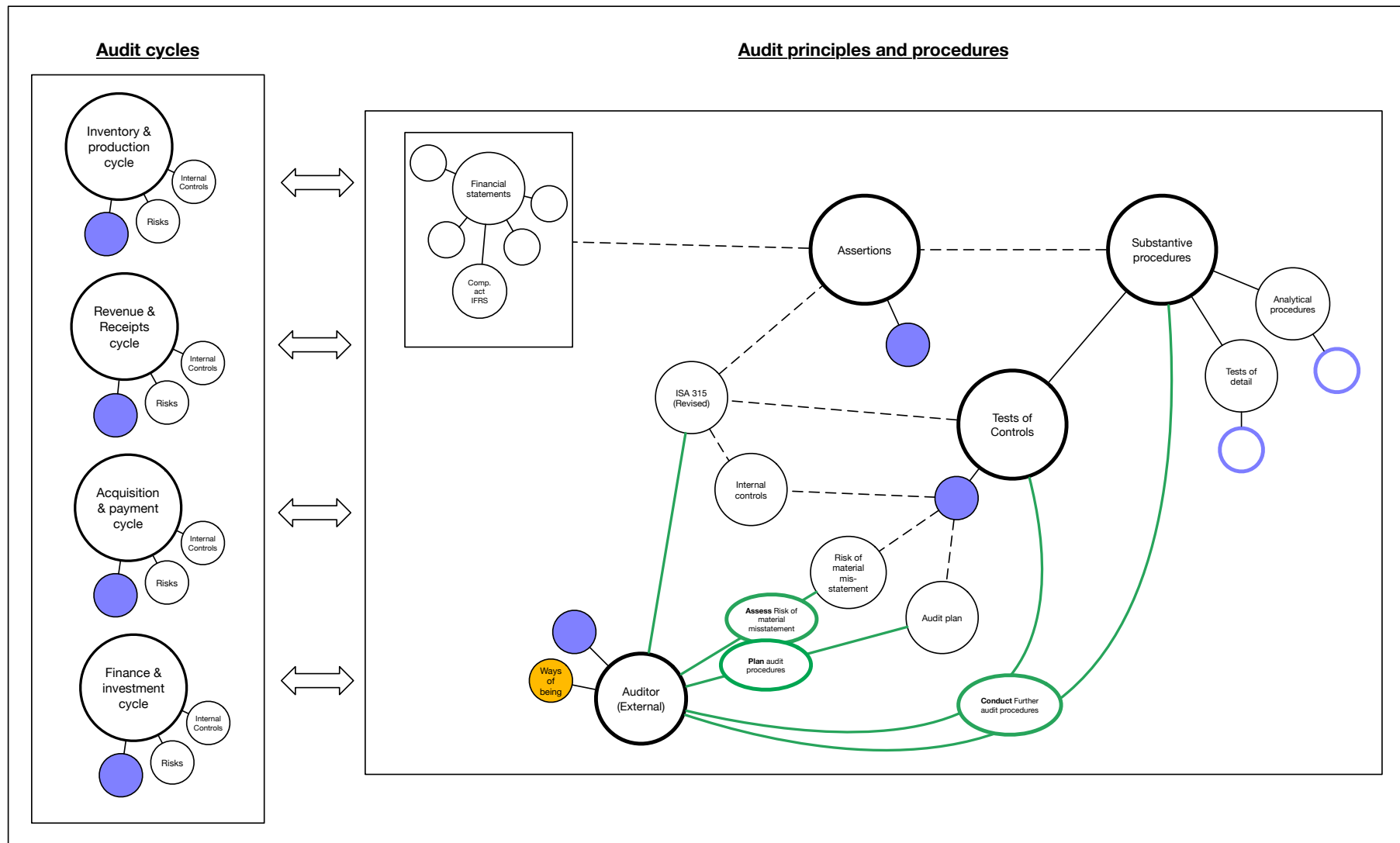


Figure 6.19: AIC3A as a constellation

The key principles and procedures (assertions, tests of controls, and substantive procedures), with their parts, are visible in the block on the right. This block is linked to the various audit cycles, indicated on the left. The intention with this illustration is to show that, related to the block on the right, the key principles and procedures are the same for the various audit cycles. This does not, however, mean that every audit will be exactly the same: the auditor will have to plan the audit, based on the specific company being audited and in relation to the functions and available documents within the cycle. Due to the nature of this application of concepts, students will require a good understanding of the audit process as assessment questions cannot be answered generically. Instead, students need to consider the specific information provided in assessment questions and then apply the relevant principles and procedures (assertions, tests of controls, and substantive procedures) appropriately.

Through the visualisation of the various concepts in both CFM3A and AIC3A, the constellation analysis was able to show how the different kinds of knowledges come together in clusters to form the constellations. In both modules, the focus is notably on the knowledge that students are required to learn and what they must be able to do with the knowledge, while the ways of being (attributes and dispositions) that one requires to become an accounting professional were not overtly stated in the synopses. The strong emphasis on knowledge (epistemic relations), makes sense, given that accounting is a knowledge code (see Chapter 4). However, to enable students to become accounting professionals, they should also develop the specialised ways of being of an accountant. Despite not being overtly stated in the synopses, these attributes and dispositions are, in fact, set out in the standards and competency frameworks of the International Federation of Accountants (IFAC) as well as various professional bodies. Such attributes and dispositions include skills like communication, teamwork, problem-solving, critical thinking, and decision-making, as well as an understanding of the internal and external business environment. Chapters 7 and 8 consider the extent to which the building of these attributes and dispositions was achieved through the pedagogies used in these two modules, respectively.

## 6.4 Conclusion

In this chapter I used constellations to visualise the knowledge composition of both CFM3A and AIC3A. By mapping the various concepts/procedures as explained in the various synopses as constellations, I have made the knowledge composition of CFM3A and AIC3A visible, revealing the structure of the knowledge and the relations within, and to other modules. To enable lifelong learning, students require access to both principled and procedural knowledges. Furthermore, epistemological access to powerful knowledge requires that principled and procedural knowledges come together to form a consolidated whole. The visualisation of the kinds of knowledges presented in this chapter was able to show how the consolidated ‘whole’ emerges in a module, and it revealed the importance of prior knowledge. Furthermore, links to knowledge of other modules are made explicit in the constellations.

Building on this analysis, Chapters 7 and 8 consider the pedagogies used in CFM3A and AIC3A respectively. Moving to semantic gravity as an analytical tool, these chapters explore the extent to which the pedagogies used provided access to powerful knowledge.

## **CHAPTER 7:     ENABLING ACCESS TO POWERFUL KNOWLEDGE THROUGH THE PEDAGOGIES USED IN CFM3A**

### **7.1   Introduction**

Knowledge-building is at the heart of education. In Chapter 3, I explained the importance of a transformative relationship with knowledge and how this relationship is enabled through epistemological access to ‘powerful knowledge’. Chapter 6 provided a constellations analysis which rendered the knowledge composition of the two modules within the Diploma of Accounting visible, providing an important first step in understanding the modules. Through the visualisations, I demonstrated that there are significant differences between the knowledge composition of the two modules. Making these knowledge compositions explicit can help lecturers better support the academic success of students (Rusznyak, 2020). The second important step, however, is to understand how students get access to these complex knowledge compositions through the pedagogical approaches, to which this chapter now turns.

This chapter starts by looking at the aims and purposes of CFM3A, as explained by the CFM3A lecturing team. It then considers the intended and enacted pedagogies used in CFM3A, drawing on interview data, CFM3A lecture observations, and assessments, highlighting the successes and challenges the team faced in the module with regard to enabling access to powerful knowledge. Semantic gravity is used as an analytical tool to determine how access to powerful knowledge was enabled or constrained. In the last part of the chapter, the development of a specialised knower, or potential lack thereof, is considered.

### **7.2   Aims and purpose of CFM3A**

Working in a vocational education context, the CFM3A module had an explicit aim to prepare students for the workplace as well as for further studies. This aim speaks to vocational education’s purpose to equip students with both disciplinary knowledge and practical or applied, work-related knowledge (R. Barnett, 2009). The disciplinary knowledge should help to prepare students for further studies, while knowledge linked to the workplace should help students to be work ready. However, I have argued that the educational purpose of higher education is not only about being work ready, but is crucially about bringing students into a

transformative relationship with the specialised knowledge of the discipline (see Chapter 3). Therefore, to enable students to develop a transformative relationship with knowledge, and to prepare them to apply their knowledge and be adaptable in constantly shifting work environments, it is important to provide access to the principles underpinning the knowledge (i.e., to provide access to powerful knowledge). Furthermore, in the disciplines focused on in this study, students need to develop specialised ways of being to develop the professional identity of an accountant.

These understandings of the purpose of the accounting qualification under study were reflected in the accounts of the CFM3A team regarding the aim of the module. In particular, Tommy referred to the need to cultivate particular ‘knower’ attributes, or aspects of professional identity, such as critical thinking, so graduates would be ready for the workplace. This is evident in the following extract:

Our main aim is to make them work ready and to apply critical thinking skills etc. That's our main aim, is to make them work ready. So, in work ready what we mean by that is to be able to apply their knowledge, is to be able to work independently, is to be able to execute instructions, etc.

(Tommy, CFM3 Team Interview)

Here, Tommy linked the application of knowledge to students being work ready as an important aim of the module, and highlighted the importance of developing attributes like critical thinking. Tommy further explained that the CFM3A lecturers aimed to prepare students for further study, and for ‘themselves’ in terms of their own life goals. He explained this as follows:

Because it could equip them both for themselves and for when they go into the workplace and for when they want to study further.

(Tommy, CFM3 Team Interview)

From this statement, we see that the aim of CFM3A is three-fold: the goal is to equip students for the workplace; to prepare them for further studies; and to help them develop personally (i.e. learn skills and knowledge to use in their own lives beyond university). Based on this explanation, it is reasonable to claim that the CFM3A curriculum was underpinned by (a) what students need to know (academic knowledge for further studies); (b) how to use the knowledge

(practical application for the workplace); and (c) how they need to act as professionals in the world of work (dispositions).

To understand the extent to which the CFM3A lecturers achieved their aims for the module, this chapter considers the pedagogies used in CFM3A. Before I discuss the pedagogies used in CFM3A however, I will briefly revisit the pedagogical requirements for epistemological access to powerful knowledge.

### **7.3 Gaining epistemological access to powerful knowledge: A reminder**

The educational purpose of higher education, as discussed in Chapter 3, is to enable students to have a transformative relationship with specialised knowledge, enabled through what Morrow (2009) referred to as epistemological access. This means that students need opportunities to engage with the specialised knowledge of the discipline in a way that will help them to develop different ways of understanding, seeing and interacting with the world (Ashwin, 2020). Enabling a transformative higher education involves four key pedagogical requirements: (i) students require access to structured, powerful bodies of knowledge, that come together as a coherent whole; (ii) the lecturers need a deep understanding of why the knowledge is powerful and what students should be able to do with the knowledge in the world; (iii) the assessments used should be designed to test whether students have a deep understanding of the structured bodies of knowledge; and (iv) lecturers need an understanding of who the students in the class are, their background, lived experiences, as well as their current level of understanding of the disciplinary knowledge.

This specialised disciplinary knowledge consists of principled knowledge (what, why, where); and procedural knowledge (how), and it requires the parts (topics, concepts, and modules) to be connected into a complex whole. In a changing world where technological developments continue to impact on the way we work, access to powerful knowledge could help students to be more adaptable to changes in the workplace.

Powerful knowledge-building in accounting can be enabled through pedagogies that focus on principled (context-independent) and procedural (context-dependent) knowledges; while making the links between the doing of the calculations or procedures, and the ‘why’ or what’ of these processes more explicit. Therefore, pedagogies need to exhibit a continuous movement

or traversing between context-dependent knowledge and context-independent knowledge. The following section enacts semantic gravity as an analytical tool to show how, when students are given access to the full range of context-dependency of knowledge – or what will be referred to as the ‘semantic range’ (Maton, 2014) – through pedagogies that also draw on meaningful and contextual examples that they can relate to, access to powerful knowledge can be enabled.

#### 7.4 Lecturer’s intentions

The CFM3A module consisted of three units. Unit 1 and Unit 3 each focussed on one topic, while Unit 2 focussed on three topics. The team followed a blended approach in this module, in the year of study. Lecturing sessions consisted of online lectures as well as different face-to-face sessions for each of the topics. The team had a clear objective for each of the sessions. The objective of the online sessions was to ensure that students understood the theory<sup>15</sup> and to illustrate and explain the various calculations by doing a question (short scenario with relevant calculations) (Alex, CFM Team Interview). The theory consisted of the various concepts, the meaning of the concepts, *why* the topic and concepts are important, *who* would use them, and *where* and *how* they would be used. In this study, the *why*, *where*, *who* and *how* is referred to as ‘principled knowledge’, while the *doing* of the calculation is referred to as ‘procedural knowledge’. The focus of the online sessions was therefore on teaching the principled and procedural knowledge.

Following on from the online sessions, the students were required to complete a number of questions for the face-to-face sessions. The questions were selected by the lecturers to ensure that they “cover all concepts” (Tommy, CFM Team Interview). The face-to-face sessions refer specifically to the classes that were facilitated by the lecturers in lecture venues. The purpose of the face-to-face sessions was to instil the relevant disciplinary principles through the integration of theory (principled knowledge); calculations (procedural knowledge); and interpretation (principled knowledge). As such the intention from the lecturers was to focus on the integration of principled and procedural knowledge.

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<sup>15</sup> In a module like Management Accounting, ‘theory’ is the text that provides more meaning to the various calculations.

As principled knowledges are often more general and context-independent (e.g., breakeven is the point where total revenue is equal to total cost, it is the number of units that an entity needs to sell to not make a loss); while the doing of the questions are more specific to a context (e.g., calculate the breakeven units for a food stall at a market); we can see that the lecturers intended to move between weaker semantic gravity (context-independent meanings), and stronger semantic gravity (context specific meanings). As such, the overall *intended* movement for the online as well as the face-to-face lectures is illustrated in Figure 7.1 using a semantic gravity plane.

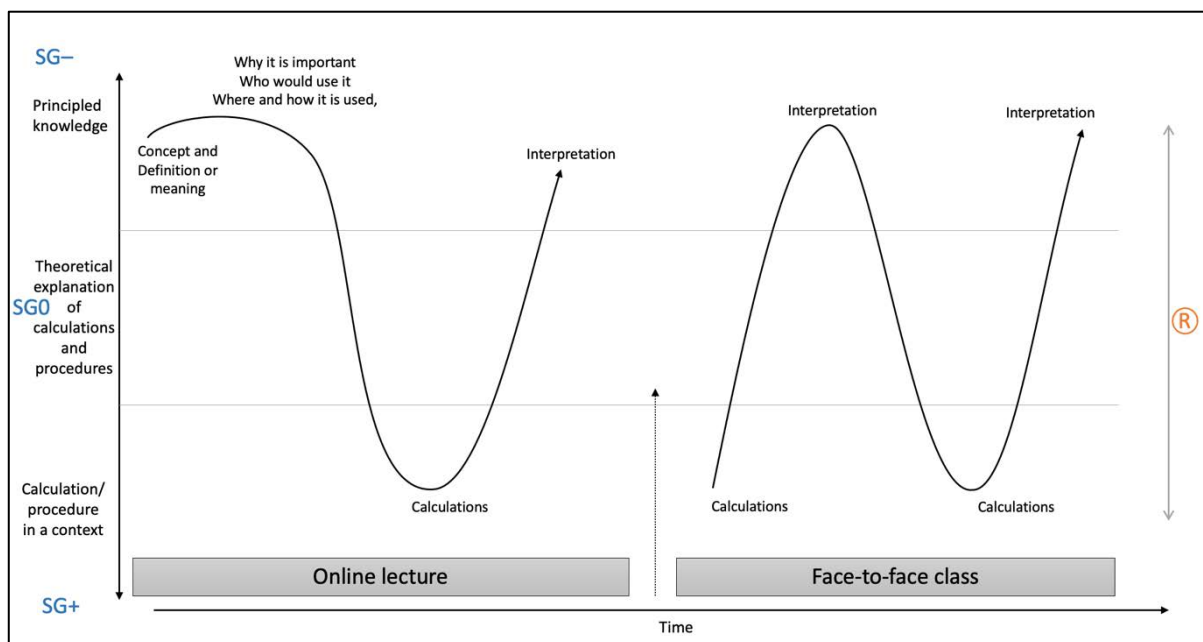


Figure 7.1: Intended curriculum for CFM3A

Figure 7.1 shows how the lecturers (in the online lectures) intended to make the links between the various knowledge parts clear to the students by integrating the meaning of the concepts with (a) why they are important (weaker semantic gravity); (b) where and how they will be used (weaker semantic gravity); (c) how to do the calculations (stronger semantic gravity); and finally (d) how to interpret the answer (weaker semantic gravity). The intended approach for the face-to-face sessions was similar, although in these sessions, the focus was more on the calculations (stronger semantic gravity) and the interpretation thereof (weaker semantic gravity). As such, it would appear that CFM3A was designed in a way that would create the steps needed to establish and traverse the full semantic range (indicated as R in Figure 7.1) required to facilitate access to powerful knowledge in this module. I will now turn to the

enacted pedagogies used in CFM3A to explore how these enabled or constrained access to powerful knowledge.

## 7.5 Enacted pedagogies

There is a significant amount of data that could be drawn on to analyse the pedagogies used in CFM3A. It is beyond the scope of a thesis to consider all the data in detail. For this reason, I have selected one example, Unit 2: Operational Budgets, to analyse in detail. Unit 2 consisted of three topics: Operational Budgets, Cash Budgets and Flexible Budgets. The unit was taught over several weeks. Alex was responsible for Operational Budgets while Sasha was responsible for Cash Budgets and Flexible Budgets. Alex started the online session for Operational Budgets with an introduction to budgets, which covered the principled knowledge relevant to all three of the topics within Unit 2. Hereafter, Alex focussed specifically on Operational Budgets. The following section provides a detailed analysis of the series of lectures on Operational Budgets.

### 7.5.1 *Online lecture: Introduction to theoretical concepts*

The online lecture for Operational Budgets was the first lecture for Unit 2. The first part of the lecture was focused on the theory of budgets, whereafter the focus shifted to the theory specific to Operational Budgets, followed by examples of the relevant calculations. In this lecture, Alex started with the concept ‘budgets’ and explained to students that a budget is “a quantitative expression of a proposed plan”. This definition is relatively general and therefore a context-independent explanation of what a budget is. The knowledge being expressed at this point in the lecture can therefore be characterised as exhibiting weaker semantic gravity (SG–) in the semantic gravity profile in Figure 7.2. Alex then expanded on what a budget is, and the importance of budgets within a business:

... it's a **future financial plan**. So budgets helped **managers** to **communicate** direction and goals. ... It also helps managers to **judge performance** so we can look back after a certain period or midway through a period and see, are we heading towards our goal... **Functions of a budget**, firstly to **plan** like I just explained, then to **coordinate**. So we can say OK, let's make sure we have let's say a 2% increase by March for example and then 5% by June for example of sales volume. **Communicate** like I just explained and then to **motivate** staff like

the bonus I mentioned and then **control** if we see halfway into the period that we not reaching that goal or we're not growing quick enough, we can make a plan and try and accelerate it or make it better or change our strategy. And then **evaluate** so after that period we can look at the budget and see did we actually reach our budget goals.

(Alex, CFM3A, Online lecture 2 – bold emphasis added)

As emphasised through the use of bold in this extract, in this explanation of budgets, Alex indicated *who* uses a budget (managers); *when* it is used (future planning); and *what* budgets are used for (communication, motivation, coordination, control and evaluation). In this case, Alex added more meaning or ‘nodes’ (see Chapter 6) to the concept of ‘budgets’, through adding principled knowledge. Despite these added details, Alex was still building principled knowledge at this point, which remained relatively context-independent. As such, the explanation of budgets remained in the weaker semantic gravity (SG–) range, resulting in a flatline, as illustrated at Point A in Figure 7.2. The continuation of the explanation of budgets is indicated as a solid line, as there was a clear link from the concept and definition to what a budget is and its importance in a business.

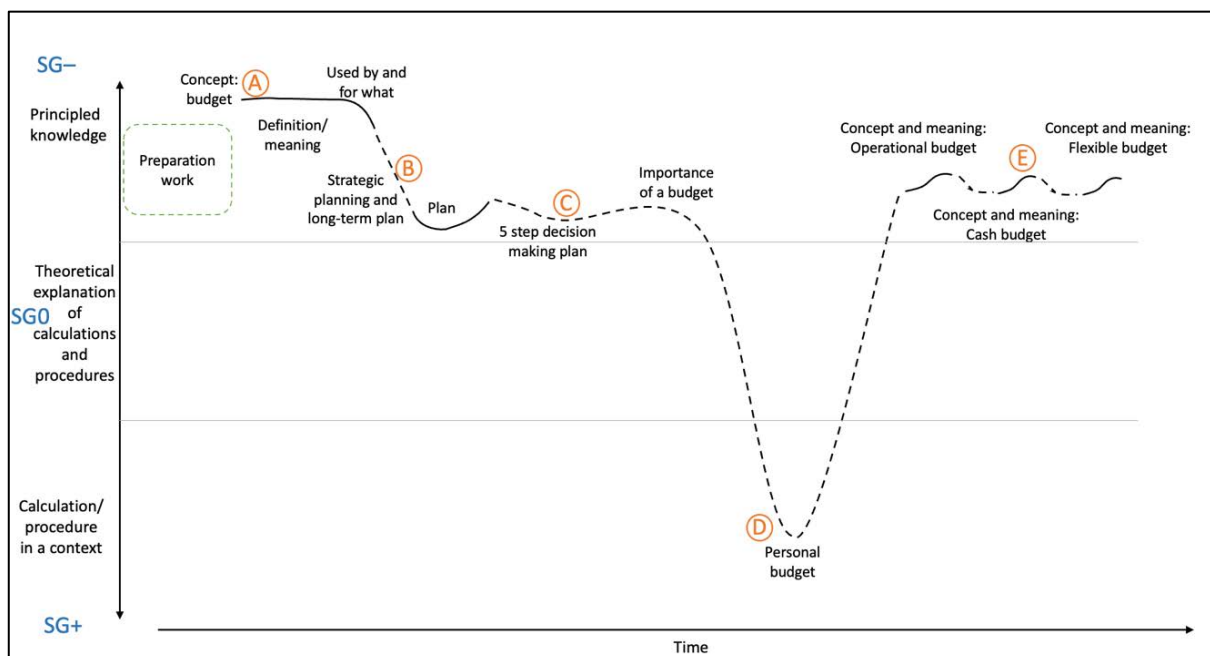


Figure 7.2: Semantic gravity profile (CFM3A Theory)

Hereafter, Alex briefly mentioned that budgets are part of the strategic planning process. Although the theoretical knowledge of the strategic planning process is context-independent, Alex did not elaborate on what the strategic planning process is or how it relates to the various budgets. As such, there is only a slight strengthening of semantic gravity ( $SG\uparrow$ ). This strengthening is indicated with a dotted line on the profile at Point B in Figure 7.2, as the connection between the strategic planning process and various budgets was not made clear.

Alex continued to explain that budgets are used for planning, that there is a five-step decision making plan, and that budgets are powerful and crucial for every business. Here the explanations remained general and context-independent with almost no impact on the strength of semantic gravity, as indicated at Point C in Figure 7.2. Additionally, there were several instances where the connections between the parts were not made explicit to the students (dotted lines). For example, Alex mentioned that the strategic planning process starts with objectives and strategies from which long term and annual budgets are developed. He then briefly reemphasised that a budget is a plan which can be used to evaluate performance, and how it could do this. Thereafter, he briefly discussed a ‘five step decision-making plan’, before mentioning that a budget is important for every business. Here, Alex did not explicitly explain that the five step decision-making plan is part of the budget process as it helps with decision-making and evaluation of performance. As such, students had to make the links for themselves. Because the links between the parts (i.e. the strategic planning process, the various budgets, and the five-step decision-making plan) were not made explicit to the students, they may have seen these as three, unconnected parts, perhaps as a list, and may have struggled to connect the parts into a constellation. This could impact on students’ ability to build their own constellations of disciplinary knowledge – their ‘wholes’ of understanding.

Following this explanation, Alex briefly mentioned that budgets can be used in students’ personal lives, as he said “I know some of you do little budgets for yourself, which is amazing. It's good to start early”. In moving from the general, context-independent explanations of budgets to a more concrete example, the semantic gravity of the knowledge being transferred was briefly strengthened ( $SG\uparrow$ ) as illustrated at Point D in Figure 7.2. It then weakened again when Alex continued with the more general explanation of the various budgets. At this stage, Alex introduced the students to the three different budgets (operational, cash, and flexible) and briefly explained what the focus of each one is.

The first main one we're going to cover **operational budgets** where we talk about income and cost of business activities. The second one is **cash budgets**, where we talk about the timing of cash in versus cash out and then **flexible budgets** is where we try and compare apples with apples. So these three main budgets is what we're going to cover in the next few weeks. Today I'm focusing on operational budgets.

(Alex, CFM3A, Online lecture 2 – bold emphasis added)

As the three types of budgets are abstract concepts that are context-independent, the semantic gravity of the knowledge is relatively weak at this point in the lecture (SG–). Although Alex provided simplified explanations of each of the budgets, these explanations remained relatively abstract and were not explained in relation to a concrete example (which, if used, would have strengthened the semantic gravity). At this point, because there was almost no strengthening or weakening of the range of semantic gravity in the explanation of the three types of budgets, the lecture remains at a flatline (see Point E, Figure 7.2). Furthermore, as Alex did not elaborate on how the budgets come together within a business, for example, how the budgets are used within the strategic planning process, the links were only implied. As such, the *potential* connections between the three budgets are illustrated with dotted lines in Figure 7.2.

The semantic gravity profile illustrated in Figure 7.2 helps us to see how the lecturer weakened and strengthened the semantic gravity during the first part of the lecture. It also shows how the various concepts and explanations were explicitly connected, and where these connections were implied. In the first part, the connection between what a budget is, and where, when, and by whom it would be used, was made explicit (solid line). However, following this, the connections between the parts were often implied (dotted lines). For example, students were told about the three different budgets and the meaning of each, but no information was given on the differences between the various budgets or how the budgets could be used together. Additionally, the connections between the various topics were not made explicit to the students. This was also evident in the lectures on Cash and Flexible budgets. Although the introduction of budgets illustrated in Figure 7.2 was also relevant to Cash and Flexible budgets, Sasha did not explicitly refer to this part of the work in the lectures on Cash and Flexible budgets.

The risk of not explicitly creating connections between the knowledge parts is that the different parts of the lecture could sound like lists of unrelated topics to students, which could in turn lead to segmented learning. In such a scenario, students might memorise this knowledge, but may find it hard to connect the parts together to understand how the constellation of knowledge works. Given that the abstraction of concepts and the relations between them are important for access to powerful knowledge, the implied links could hinder access to powerful knowledge for the students. Furthermore, by using semantic gravity to visualise the movement across the semantic range in the lectures (between SG– and SG+), it is evident that there was limited strengthening of semantic gravity. By not including context-dependent (SG+) knowledge, there were limited opportunities to link the theory to concrete examples. Such linking would have helped to facilitate students' understandings of the concepts, and relatable examples in particular, could have further help students to make sense of the knowledge, aiding access to powerful knowledge.

The analysis further showed that, although the CFM3A team indicated that the students had to prepare for the various online sessions by working through the textbook and additional material (as mentioned by Tommy during the team interview, and indicated in the CFM3A Learner guide), the preparation work was not explicitly integrated into the sessions. Often the lecturer would only mention the relevant chapter from the textbook before continuing with the theory discussion. For example, in the lecture on Flexible Budgets, Sasha started by saying “in this session we are going to do flexible budget and its Chapter 7”, yet she did not refer to specific content, explanations or examples in the textbook. These brief mentions of the textbook (if mentioned at all) were typical in all the lectures observed.

If students had done the preparatory textbook work, they would be introduced to the textbook's explanation of new concepts and why the concept was important, who would use it and when, as well as how it was used within calculations. The textbook often included an explanation of how concepts would be used in a business, thus moving between context-independent (theory) and context-dependent (practical) knowledge. These explanations and examples (which mainly comprised principled knowledge and how it is used within a specific business) were designed to help students gain an understanding of why the concept is important and how the calculation can be used in the world of work. Given the nature of this knowledge, using the textbook became a critical teaching and learning resource as it provided more detailed explanations of the principled knowledge (context-independent knowledge, thus weaker semantic gravity),

than the online lectures. Furthermore, by using examples of how the concepts are used within businesses (stronger semantic gravity), there was a significant amount of traversing between weaker semantic gravity and stronger semantic gravity in the textbook explanations.

Without referring to this knowledge, however, and checking that students had done the expected preparation, lecturers missed an opportunity to ascertain whether students had indeed understood the principled knowledge that the module required them to grasp. If students had not sufficiently prepared or understood the textbook there was a chance that it could result in ‘disconnected bits’ or gaps in the ‘whole’ of the constellation that students needed to construct for this module. Furthermore, as the textbook is published in the USA, and all the examples are based on US companies or products, the students (located in a South African context) may have found it hard to relate to the content and examples. Relatability to examples used is key for creating access to powerful knowledge (Blackie & Luckett, 2024). By not discussing the preparation work with the students or providing an opportunity for students to seek clarification from the lecturer during the class, access to powerful knowledge could have been constrained for the CFM3A students.

For the lecturers, the links between the preparation work and the theory discussion during the online class might be assumed as tacit knowledge. Given that the lecturers are disciplinary experts who have been lecturing for several years, the links and connections between the various parts has quite likely become second nature to them (Clarence, 2021). This would make it harder for lecturers to see how a student, as a novice in the field, could struggle to connect the various parts, unless they were deliberately reflecting on this. Furthermore, a student’s learning is influenced by their home and school background – i.e., their academic and literacy practices (see Chapter 3, Section 3.3.1). Therefore, lecturers need to be conscious of how they make the links between the various parts visible to the students through their pedagogies.

### **7.5.2 *Online lecture: Introduction to calculations***

After the initial theory discussion, the lecturer continued with an explanation of the calculations of Operational Budgets before moving on to an example. In this specific lecture, Alex first explained Operational Budgets and the various smaller budgets (parts) that come together to form the master budget. In doing so, Alex mentioned the specific budget (part) and the meaning or how the calculation is done, before moving to the next budget.

The first operational budget that we start with is the sales budget or the revenue budget. Now you'll see in CVP I spoke a lot about sales. How important it is to actually sell your product in order to get money. So the same thing here with operational budget. I need to know how many units or how many products I want to sell. And that will guide all the other budgets. So sales, crucial.

(Alex, CFM3A, Online lecture 2)

Here, Alex started with the 'sales budget' (a general, context-independent concept, thus weaker semantic gravity). He explained that sales are important, and that the sales budget is about the number of units that the business needs to, or wants to, sell. In this explanation of the sales budget, Alex briefly indicated a link to the prior unit on Cost-volume-profit (CVP) analysis, as the units sold are important for CVP calculations. In doing so, Alex was essentially adding more meaning to the concept of a sales budget by explicitly establishing a connection to CVP. Alex did not provide information on how the sales budget would be used or why it is important. As such, the explanation remained relatively context-independent (SG–) hence resulting in a pedagogical flatline at the start of this part of the lecture, as indicated at Point F in Figure 7.3.

Alex then moved to an explanation of the Production Budget. In the introduction of the Production Budget, he briefly stated that “there's no use in producing 50,000 laptops, but then we only sell like 200 a month for example”. By using a more specific explanation that is tied to a context, there is a brief strengthening of semantic gravity (SG↑). Hereafter, Alex continued to introduce the material, labour, and overhead budgets, in a similar way as he did for the sales budget. Overall, the explanations in this part of the lecture stayed relatively context-independent (i.e., relatively weaker semantic gravity, SG–). When an example was used, such as the laptop sales, the knowledge briefly became more contextualised (i.e., the semantic gravity is strengthened, SG↑); however, because little to no information was provided on why the specific budget is calculated, where it would be used, why it is important and so forth, this opportunity for strengthening the semantic gravity further (to the strongest point on the range) was not realised. As such, the semantic gravity remained at a relatively general level (in the middle of the range), representing a flatline on the semantic profile as illustrated at Point G in Figure 7.3.

After the theoretical explanation, Alex illustrated the various calculations by doing an example. In doing the example, Alex mentioned the specific budget (part) and illustrated how the calculation is done, before moving to the next budget.

We start with the sales or the revenue budget like I explained. Now I usually use the same columns, the number of units sold, the selling price and then the total revenue. Remember our whole point of the sales or revenue budget is to see what how much money, ok, I will get from sales or revenue. Now remember what do we sell? We sell bags. Our product is bags. Don't get confused and put things about material or other things in here. The sales and revenue budget is for my product, in this case a bag. Now Siphwe said that he's planning on selling 60 units and that the selling price is R500. So if I multiply 60 units with R500, it'll give me R30,000 total revenue or sales revenue.

(Alex, CFM3A, Online lecture 2)

In this extract, Alex told students he always uses the same format (same columns); however, he does not provide an explanation to students as to why they were required to do the same. Although management accounting reports are not regulated, the use of tables is considered 'good practice' as it makes the 'reading' of the information easier. By not making this explicit, the lecturer missed an opportunity to guide students on how the use of tables in a discipline like Management Accounting could help with effective communication, which is part of developing as a professional accountant.

Hereafter, Alex reminded the students that the purpose of the Sales Budget is to determine how much money the business will get. To do this, Alex provided principled, context-independent information about the sales budget, saying, "Remember our whole point of the sales or revenue budget is to see what how much money, ok, I will get from sales or revenue". In doing so, he effectively weakened the semantic gravity (SG↓) at Point H in Figure 7.3. Alex then reminded students about the importance of the correct unit of measure, in this case bags, before he moved on to do the calculation ( $60 \text{ units} \times \text{R}500 = \text{R}300\,000$ ). In doing the calculations, the semantic gravity was strengthened (SG↑) as the calculation was relevant to the specific example he referred to, thus exhibiting context-dependence. Through this explanation, Alex linked the purpose of the Sales Budget with the calculation of the sales budget as he moved between an abstract concept (SG−) and a specific calculation (SG+). These kinds of links should help

students to connect the principled and procedural knowledge together, thus enabling greater access to powerful knowledge.

Following this, Alex explained the calculation of the Production Budget in a similar way: he first reminded students about the purpose of the Production Budget (to determine the number of units to produce), before he showed them the calculations. Therefore, as with the sales budget, there was an initial weakening of semantic gravity (as the purpose explanation was relatively context-independent), before strengthening the semantic gravity by using a context-specific calculation. Hereafter, the focus of the lecture was mainly on the calculation of the material, labour, and overhead budgets, with little to no explanation of why the specific budget was being calculated or how it formed part of the overall Operational Budget being demonstrated. As a result, the knowledge being taught remained at a relatively stronger range of semantic gravity (SG+), resulting in a relatively stronger semantic gravity flatline, as indicated at Point I in Figure 7.3.

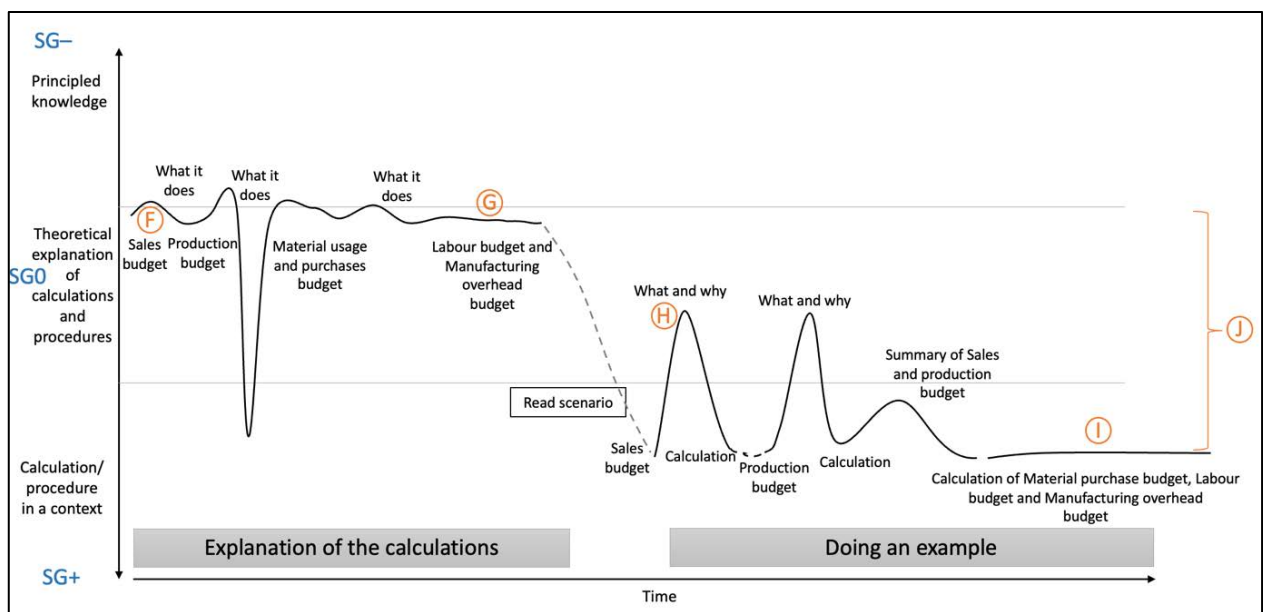


Figure 7.3: Semantic gravity profile (CFM3A Calculations)

In the semantic gravity profile of the lecture, as illustrated in Figure 7.3, there is a strengthening of semantic gravity over time, as Alex moved from the introduction of budgets (weaker semantic gravity as seen in Figure 7.2), to the explanation of the Operational Budget with the relevant calculations (slight strengthening of semantic gravity) and from there to an example (stronger semantic gravity) as seen in Figure 7.3. Through this illustration it is evident that

although Alex moved between the concepts and some theoretical explanation, he seldom referred to the principled knowledge discussed in the first part of the lecture, or to the preparation work in the textbook. As a result, the traversing of the semantic range (from the weakest possible point to the strongest possible point of the range) was relatively limited (see Point J on Figure 7.3).

The potential problem with a narrow or limited semantic range is that the knowledge being taught through the teaching remains specific to a particular context (i.e., to the ‘doing’ of specific calculations) and can easily become disconnected from the principled knowledge. This disconnect may constrain students’ ability to tackle future problems in new contexts (Boughey & McKenna, 2021). It could also constrain students’ ability to build on prior learning (Clarence, 2021; Maton, 2013). If the principled knowledge (what, why, when) is not explicitly integrated with the procedural knowledge (the doing of the calculation), the risk is that the learning could become segmented as a student might not see the link between the principled knowledge and the doing of the calculations. This means that students may get access to the ‘parts’ of the knowledge composition but are not able to successfully or appropriately connect the parts to form the ‘whole’. As a result, access to powerful knowledge could be constrained.

Furthermore, in explaining the concepts, Alex seldom made connections to concrete examples. The use of concrete examples would help to strengthen the semantic gravity, resulting in a wider semantic range (more movement between SG– and SG+). Importantly, the use of concrete examples that students can relate to, could help students ‘see’ how the calculations themselves (procedural knowledge) and the importance of the calculations in relation to a specific business problem or scenario (principled knowledge) are connected. By making these kinds of connections visible to the students through the use of examples that are relatable, students are guided in their understanding and are more likely to come to embody the knowledge. Through the embodiment of the knowledge, the knowledge becomes powerful (Blackie & Lockett, 2024).

### **7.5.3 *Face-to-face lectures in CFM3A***

The online lecture was followed by a face-to-face session, led by the lecturer responsible for the unit. For this session, students had to complete several homework questions. The questions consisted of a short scenario, providing information about a business followed by the brief of

what to do. Example 7.1 below is an illustration of a homework question, in this case on Cash Budgets<sup>16</sup>. As can be seen in this extract, the emphasis of these questions was on calculations (procedural knowledge), for example, to calculate the breakeven value or to prepare a specific budget. In some instances, the homework questions included a more theoretical question. In Example 7.1, the information is given to students in paragraphs, as opposed to a table format (a format that is often used in accounting modules). Abstracting the relevant information from written text can be harder as it requires more careful reading to identify the relevant information, compared to a table that provides the relevant information. In this question students were required to prepare a cash budget and explain the purpose (why) of the cash budget to the managers.

Assume the following: Animal Gear (AG) does not make any sales on credit. AG sells only to the public and accepts cash and credit cards; 90% of its sales are to customers using credit cards, for which AG gets the cash right away, less a 2% transaction fee.

Purchases of materials are on account. AG pays for half the purchases in the period of the purchase and the other half in the following period. At the end of March, AG owes suppliers \$8,000.

AG plans to replace a machine in April at a net cash cost of \$13,000.

Labor, other manufacturing costs, and operating (nonmanufacturing) costs are paid in cash in the month incurred except of course depreciation, which is not a cash flow. Depreciation is \$25,000 of the manufacturing cost and \$10,000 of the operating (nonmanufacturing) cost for April.

AG currently has a \$2,000 loan at an annual interest rate of 12%. The interest is paid at the end of each month. If AG has more than \$7,000 cash at the end of April, it will pay back the loan. AG owes \$5,000 in income taxes that need to be remitted in April. AG has cash of \$5,900 on hand at the end of March.

1. Prepare a cash budget for April for Animal Gear.
2. Why do Animal Gear's managers prepare a cash budget in addition to the revenue, expenses, and operating income budget?

*Example 7.1: Question on Cash Budget (Textbook)*

Sasha started the face-to-face session for Cash Budgets by briefly reminding students that a Cash Budget is about cash inflow and cash outflow, and she mentioned that the format is important. Hereafter Sasha read the scenario of the first homework question to the students and took the students step-by-step through the relevant calculations of the cash budgets. The focus was on explaining specific parts of the calculations, for example the calculation of cash and credit sales, based on the information provided for Animal Gear in the first paragraph in Example 7.1.

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<sup>16</sup> Here I am drawing on an example of Cash Budgets for the face-to-face class as there were no ace-to-face classes for Operational Budgets. Instead, video recordings of the homework questions on Operational Budgets were available for students on the LMS.

Given the foregrounding of the calculations in the face-to-face sessions, there was very little, if any, discussion on the relevant principles informing the calculations (for example, why the calculation is important, where and when it would be used etc.) or how the specific calculations formed part of the whole of the module as it was designed. Consequently, procedural knowledge (stronger semantic gravity) was foregrounded with almost no explicit integration of the principled knowledges (weaker semantic gravity). As a result, the lecturer flatlined at a stronger semantic gravity (SG+) range during the face-to-face lectures, as indicated at Point K in Figure 7.3 below.

Although the CFM3A team indicated during the team interview that the intended focus of the face-to-face session was to instil the relevant principles through the integration of the theory, calculations, and interpretation (see Section 7.4), this practice was not evident in analysis of the pedagogies enacted in the face-to-face sessions. A reason for this may be due to the fact that, when asked if they had completed the home questions, many of the students indicated that they had not. This meant that the lecturers had to go over all the questions in full and did not have time to focus on the principles, as originally planned (Sasha, CFM3A Team Interview).

Using semantic gravity to analyse the pedagogies used in the face-to-face session, I would argue that the semantic range narrowed to a stronger semantic gravity flatline, as illustrated in Figure 7.4.

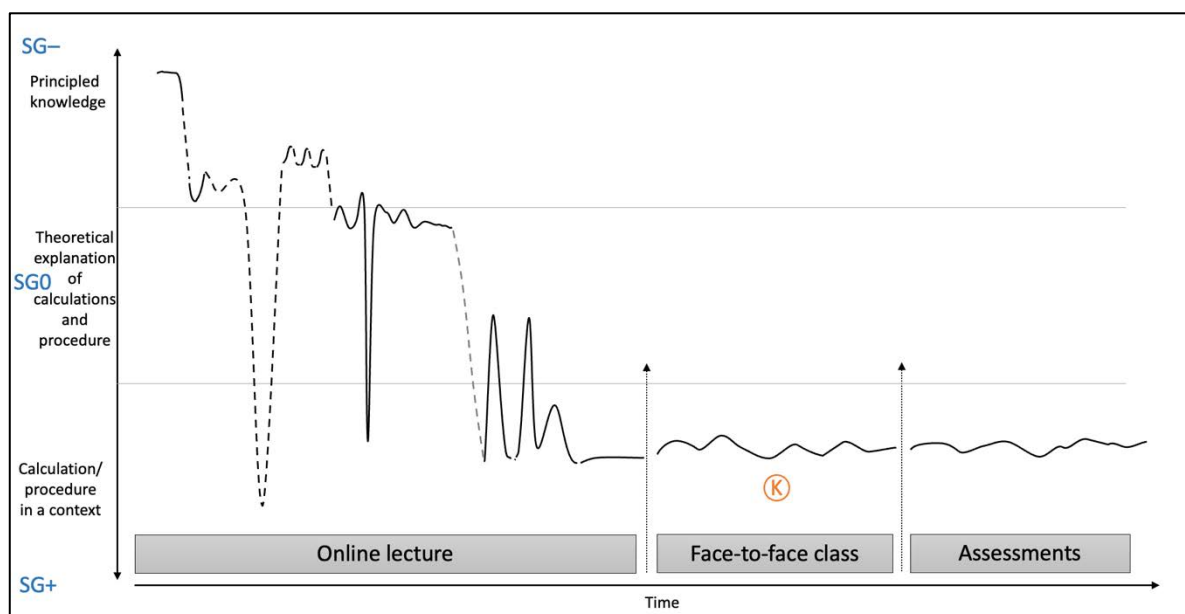


Figure 7.4: Semantic gravity profile for CFM3A

The semantic gravity profile illuminates the strong emphasis of the online lectures on principled knowledge (weaker semantic gravity), while the focus of the face-to-face sessions was more on the doing of calculations, thus procedural knowledge (stronger semantic gravity). As a result, the online lectures were more of a high semantic gravity flatline, while the face-to-face sessions resulted in a low semantic gravity flatline. This visualisation shows that there was limited traversing between abstract concepts (SG−) and examples of how the concepts could be in different applications, i.e., the doing of calculations (SG+). As mentioned previously, the concern with flatlines is that students could potentially see the ‘bits’ of knowledge as unrelated concepts or calculations, as opposed to connected pieces of a coherent whole, thus leading to segmented learning and hindering access to powerful knowledge. This narrow range or flatline was also visible in the assessments, to which the analysis now turns.

#### **7.5.4 Assessments in CFM3A**

The assessments for the semester consisted of five summative tests and three formative online quizzes, one for each unit. The best four tests of a student contributed 88% of their final mark while the online quizzes contributed the remaining 12%. Each of the summative tests covered two topics. As such, each topic was tested twice during the semester. An example of a test is provided in Example 7.2.

Shadow Mate Ltd manufactures and sells two different umbrellas, in various colours, to the public. The company is known for their exceptional quality of products. The stick umbrella is more popular than the collapsible umbrella, and the company has the largest market share for both products. The projected sales volumes for September are 950 for stick and 700 for collapsible umbrellas, respectively. The projected selling price, for each product, for September is calculated at 40% on the variable production cost.

The umbrellas are manufactured by machine and then assembled by semi-skilled workers. Two separate departments exist, machine and assembly. Shadow Mate uses steel to manufacture the shaft, ribs and stretchers of the umbrellas and nylon is used for the canopy.

**Information available for September:**

|                           | Required per stick umbrella | Required per collapsible umbrella | Cost             |
|---------------------------|-----------------------------|-----------------------------------|------------------|
| <b>Direct material</b>    |                             |                                   |                  |
| Steel (1 000g = 1 kg)     | 200 grams                   | 250 grams                         | R20 per kilogram |
| Nylon                     | 1 meter                     | 1¼ meter                          | R16 per meter    |
| <b>Labour</b>             |                             |                                   |                  |
| Machine department        | 3 machine hours             | 3 machine hours and 30 minutes    | R40 per hour     |
| Assembly department       | 1 labour hour               | 1 labour hour and 45 minutes      | R50 per hour     |
| <b>Variable overheads</b> |                             |                                   |                  |
| Based on machine hours    |                             |                                   | R20 per hour     |
| <b>Fixed overheads</b>    |                             |                                   |                  |
| Total manufacturing       |                             |                                   | R28 000          |

The purchase price of the material is not expected to change in September.

**Inventories:**

|                      | August      | Target September |
|----------------------|-------------|------------------|
| Stick umbrella       | 220 units   | 240 units        |
| Collapsible umbrella | 130 units   | 110 units        |
| Steel                | 12 kilogram | 9 kilogram       |
| Nylon                | 8 meter     | 6 meter          |

*Example 7.2: CFM3A Assessment question (Operational Budgets)*

As evident in Example 7.2 above, Test 4 consisted of two questions. The first question was on Operational Budgets, while the second question was on Cash Budgets. In Question 1, students had to prepare the Production Budget, Material Purchase Budget, Direct Labour Budget, Manufacturing Overhead Budget as well as the Sales Budget, based on the scenario and information provided.

The focus of these questions was on the calculations that were required to prepare the various budgets. As such, procedural knowledge (stronger semantic gravity) was foregrounded. The focus on calculations and the preparation of a budget was also visible in Question 2 of this test as well as in other tests administered during the module. Thus, similarly to the face-to-face

sessions, the focus was on procedural knowledge (i.e., knowledge exhibiting stronger semantic gravity).

The strong emphasis on procedural knowledge in the face-to-face sessions and the assessments could have led these students to form a segmented understanding of the configuration of knowledge, as the integration and linking of the principled knowledge with the procedural knowledge was not consistently modelled in the teaching. Furthermore, the fact that students were not required to demonstrate an integrated understanding in assessments may have led to them not seeing this as a valuable or necessary part of their learning. As such, a key pedagogical requirement for enabling access to powerful knowledge (i.e., the integration of principled and procedural knowledge) may have been constrained in the pedagogic approaches used by the lecturers in this study.

Additionally, different tasks and assessments can help to strengthen the relationship between the knowledge and the world of work. These relationships are important for effective vocational education (M. Barnett, 2006; Shay & Steyn, 2016). Shay and Steyn (2016) further explain that the relationship between professional and academic knowledge and the world of work can be improved through the use of general, simulated, or authentic tasks. General tasks are tasks that are decontextualised and well-defined; authentic tasks are ill-defined, open-ended, and could have more than one solution; and simulated tasks are in-between general and authentic tasks, and are, as such, more contextual and not as well-defined. All three kinds of task are important and should be present in the pedagogy of vocational qualifications. Within the homework questions and assessments used in CFM3A assessments, the tasks were all well-defined and decontextualised, thus general tasks. The absence of simulated and authentic tasks could further constrain students' development as future accountants.

### **7.5.5 *The hidden curriculum in CFM3A***

Through the analysis of lecture observations, field notes, and the assessment tasks, it was evident that to be a successful student required more than just access to the specialised knowledge of the discipline. In a module like Cost and Management Accounting, students are required to read a scenario and understand what is required of them. This includes determining what must be done in the task, drawing from the principles taught in lectures, and identifying the relevant information from the scenario. Students are then required to use the relevant

formula and format to do the calculations and compile the specific management accounting report (where applicable). As such, in this module, students had to be able to read the scenario in a specific way to identify the relevant information. To do this, students required a certain level of mathematical understanding to apply the various formulas correctly. To illustrate the importance of this specific kind of close reading and mathematical understanding required, I refer to the previous Example 7.1 on Cash Budgets. The first paragraph of the question provides information on the sales of Animal Gear:

Animal Gear (AG) does not make any sales on credit. AG sells only to the public and accepts cash and credit cards; 90% of its sales are to customers using credit cards, for which AG gets the cash right away, less a 2% transaction fee.

In reading this paragraph, students were required to know that credit sales are not the same as credit *card* sales. Additionally, students needed to understand that credit card sales are seen as *cash* sales. They also needed to understand that there was a 2% transaction fee that had to be deducted from the *credit card* sales, not the *total* sales. When calculating the credit card sales, students were expected to know that they should first calculate the credit card sales (90% x total sales) before they could deduct the 2% transaction fee. These details emphasise the close reading that was required to successfully complete this task.

During the class it was clear that students struggled with the calculations as many thought they could calculate the income from the credit card sales as 88% (90% - 2%) x total sales. The last paragraph in the example (‘... *loan at an annual interest rate of 12%. The interest is paid at the end of each month.*’) further emphasised the close reading required and pointed to a need for students to draw on prior knowledge, specifically an understanding of percentages. Here, students had to identify that the interest of 12% is an annual rate, even though the interest is paid monthly. Therefore, when calculating the interest payable, students had to divide the annual rate of 12% by 12 to get the monthly interest rate of 1%. This is just one such example where the importance of understanding percentages was highlighted in CFM3A.

In the example above, we see that students were required to read the information in the scenario and to know how to use the information in the calculations. Throughout the semester, the lecturers referred to the importance of reading; however, the kind of close reading required in the module was seldom demonstrated or explained to the students. Likewise, students were

expected to know how to apply mathematical principles, ranging from percentages to ratios and various conversions, as this was assumed to be prior knowledge, both from secondary school and from their first two years of the diploma. The importance of conversions was evident in the various tests, as students often had to do a conversion as part of the calculations. One such example was in Question 1 of Test 4 (return to Example 7.2 above). Here the labour time required for a collapsible umbrella is given as 1 hour and 45 minutes. To calculate the cost, the minutes must first be converted to a decimal number, by dividing the minutes by 60 (45 minutes / 60 minutes). Therefore, the correct calculation for the labour cost is  $1.75 \times \text{R}50$  per hour. In the same question, students were also required to convert between grams and kilograms, as the steel required for an umbrella was given in grams (200g and 250g), while the cost of steel was given in kilograms (R20/kg). As the briefs students are required to read and respond to are often the same, for example 'Prepare the Production Budget' or 'Prepare the Cash Budget', complexity is added in the way that the contextual information is provided to students.

Based on these examples, it is evident that students required a specific form of close reading as well as an understanding of mathematical principles to be successful in Cost and Management Accounting. These more implicit practices can be described as the literacy practices of the module (see Chapter 3). Therefore, to enable epistemological access to powerful knowledge, pedagogy needs to attend to the practice of close reading as well as the required mathematical principles. Given that a field's literacy practices often become so normalised that they appear as 'common-sense' to disciplinary experts (Clarence, 2021), it was unsurprising that Alex mentioned in the team interview that the required mathematical practices were '*basic maths things*' that did not require explicit attention in this module.

Explicit attention to the academic literacies of the discipline may not necessarily result in the weakening or strengthening of semantic gravity of the learning through the pedagogies enacted; however, it is worth noting here as it has significant implications for students' access to specialised knowledge. For example, if a student gets stuck on the close reading or if they are unable to identify key information or draw on assumed mathematical principles, they may not be able to traverse the semantic gravity profile with the lecturer in class. As such, the hidden curriculum – the assumed prior knowledge and literacy practices students are assumed to be proficient in – may constrain access to powerful knowledge.

### 7.5.6 Overall semantic gravity profile for CFM3A

Looking at the teaching of Operational Budgets within the face-to-face session of Cash Budgets from a macro perspective, the semantic gravity profile for Operational Budgets (as illustrated in Figure 7.4), indicated that over time, the lecturers followed a downward path from weaker semantic gravity (SG–) to stronger semantic gravity (SG+). As such, over time this appeared to be a kind of ‘down escalator’ (Maton, 2013) with few attempts to weave between the principled and procedural knowledges which would have modelled to students how to traverse the full semantic gravity range. As such, the focus was more on the doing of the calculations (procedural knowledge), rather than moving between calculations and the principled (theoretical) knowledge informing such calculations. At times, implicit connections were made between parts or concepts (indicated by the dotted line on the profile in Figure 7.4). Based on the data presented here, it is evident that there were limited structured opportunities for students to create explicit connections between the different *semantic gravity* levels. This has implications for the extent to which the pedagogies used facilitated access to powerful knowledge.

## 7.6 Implications of the enacted pedagogies for learning

The intention of the CFM3A team, as discussed in Section 7.4, was to traverse the full semantic gravity range required for enabling access to powerful knowledge in this module. Furthermore, the team intended to support and guide students in the ‘ways of being’ of an accountant (such as becoming critical thinkers and problem solvers).

Through the semantic gravity analysis, I have argued that the enacted pedagogies did, to some extent, traverse the full semantic gravity range. In the analysis of the online lectures, the face-to-face sessions, and the assessments, it is evident that the semantic gravity profile started with principled knowledge (weaker semantic gravity), and ended with procedural knowledge (stronger semantic gravity). As the lecturer traversed in one direction, the semantic profile represents a kind of ‘down escalator’, from weaker semantic gravity to stronger semantic gravity (Clarence, 2016, 2021; Maton, 2013). Thus, although the full semantic gravity range was covered, there was limited traversing between the various semantic gravity levels, which would have modelled to students how the different kinds of knowledges (i.e., principled and procedural) in this module – visualised as the constellations in Figure 7.5 – were intended to

be connected. Rather, the enacted pedagogies appeared to prioritise a focus on the doing of the calculations, thus foregrounding procedural knowledge (stronger semantic gravity). Although the team indicated that they would focus on the interpretation of the calculations (which would have indicated a weakening of semantic gravity after doing the calculations), in the analysis of the pedagogies in both the online lectures and the face-to-face sessions, this was not evident. The limited traversing and connecting of abstract concepts with everyday examples raise concerns about the extent to which students gained epistemological access to the relevant powerful knowledge in this module and its units of study, as well as how students were or were not able to ‘see’ and comprehend the constellations of meaning designed into the module by their lecturers.

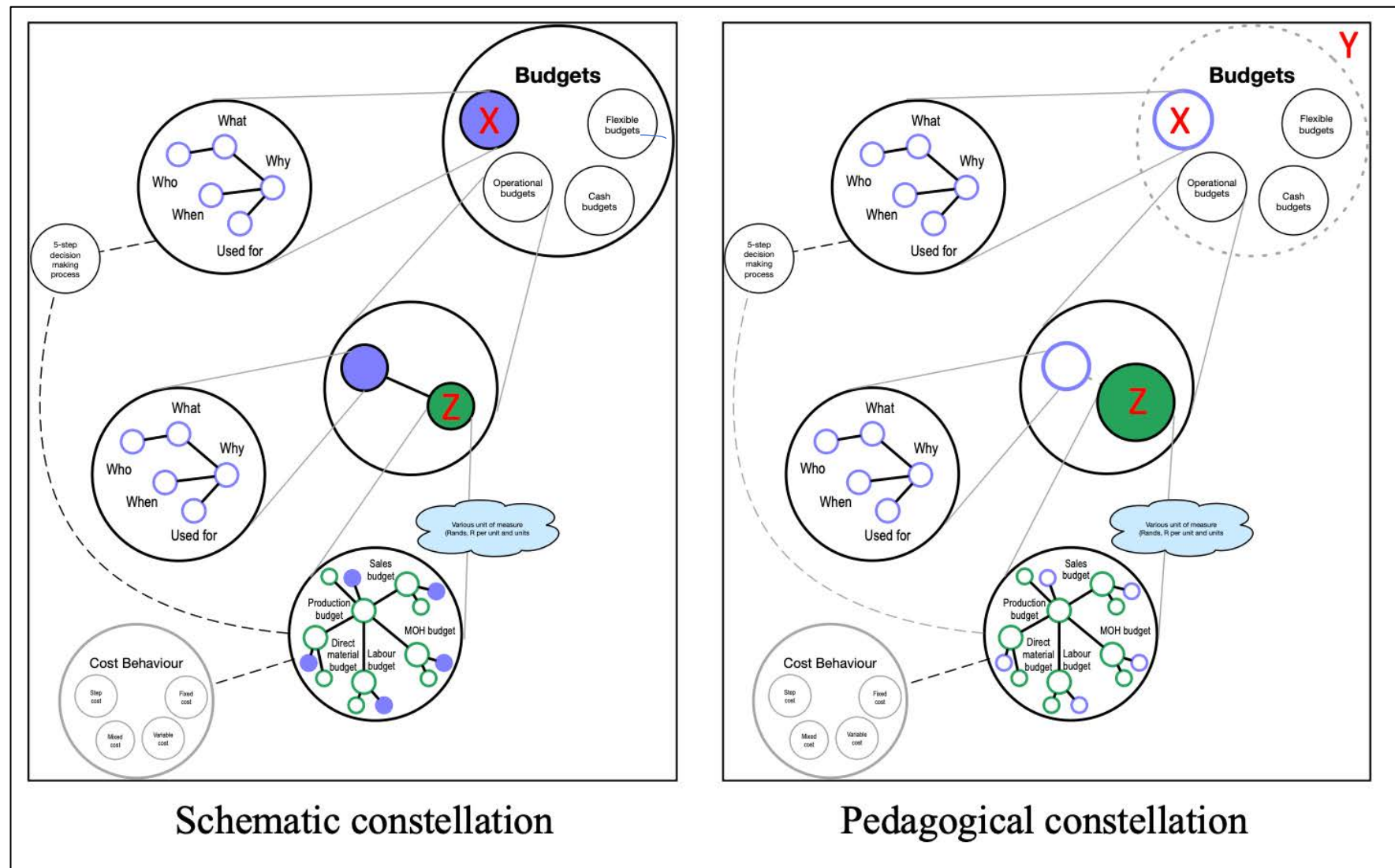


Figure 7.5: Schematic and pedagogical constellations for CFM3A

In Figure 7.5 we see that the principled knowledge (shown by the two bigger purple circles, each with a X) changed from filled circles to blank circles. This is a result of the limited integration of the preparation work in the online lectures. Additionally, as a result of the lecturers not consistently moving between principled and procedural knowledge, the links between the theory of budgets and the different kinds of budgets were not well integrated. The implicit or partial linking that was potentially made is indicated with a Y on the pedagogical constellation for budgets in Figure 7.5 (pedagogical constellation). The implicit or partial linking could result in students being unable to ‘see’ how the theory on budgets and the three different types of budgets are linked together in a whole. Students could therefore have disconnected bits in their own joined-up ‘wholes’. Furthermore, throughout the semester, the emphasis was on the procedural knowledge, thus the importance of principled knowledge (theory) was backgrounded. This could lead to a perception by the students that procedural knowledges are what matter, which could have further implications for how students construct the joined-up whole. The foregrounding of procedural knowledge in the pedagogies is visualised with a larger green circle in the pedagogical constellation, as compared with the schematic constellation in Figure 7.5, indicated with a Z in both green circles.

Another important pedagogical consideration for access to powerful knowledge is the extent to which students can relate to the examples used. Through the use of relatable examples and by completing exercises, students can improve their understanding of the principled and procedural knowledge and they can begin to see how they can use it in the world (Blackie & Luckett, 2024). As this study does not include feedback from the students, we do not know the extent to which students could relate to the examples used. What my observations did reveal, however, is that when the lecturers did include examples in the discussion of the principled knowledge during the online lectures – albeit infrequently – they did not always use the opportunity to make the connections explicit. Furthermore, given that the prescribed textbook is North American, many of the companies and names of products (i.e., ‘faucet’ as opposed to ‘taps’) might be unfamiliar to the students and may hinder the relatability of the examples offered and the questions used.

Together with the implications of the pedagogies used, one should also consider the implication of the assessment practices. We know from research that students are strategic in their learning, and often align their learning to the assessment (Gibbs, 2006). Consequently, if students are aware that the focus of the assessments is mainly on the calculations (i.e., procedural

knowledge), their focus will likely be on mastering the procedural knowledge, and not the principled knowledge. Access to mostly procedural knowledge not only impacts on how the students build the ‘whole’, but it also impacts on a student’s ability to transfer knowledge to a different context, and lifelong learning (Wheelahan, 2015). This raises concerns about whether students are adequately prepared for the world of work in a fast-changing world. Furthermore, for education to be transformative, the assessment should test if students have a deep understanding of the relevant knowledge (Ashwin, 2020).

Effective vocational education requires a relationship between the knowledge and the context of where the knowledge will be used in the world of work (M. Barnett, 2006; Shay & Steyn, 2016). The relationship between the knowledge and the world of work can be improved through the use of general, simulated, or authentic tasks, as discussed in Section 7.5.4. However, students’ development as future accountants in a changing business world may have been further hindered as the homework questions and assessments used in CFM3A were all general tasks.

As discussed in Chapter 2, accounting education has been criticised for its strong emphasis on technical knowledge, passive teaching methods, and exam-based assessments. This indicates that there is a greater need for development of the students as professionals and to connect accounting to the people and the planet around us. Based on the pedagogies used as well as the assessment practices in CFM3A, it is evident that these concerns still hold for this module, as there were limited structured opportunities for students to create explicit links and build the ‘whole’ of the constellation. We also see that there was limited pedagogic input on the development of a professional identity or ‘knower-building’. I now consider this aspect in more detail.

## **7.7 Knower-building in CFM3A**

In every discipline there are specialised forms of knowledge (what one needs to know) as well as specialised ways of being (dispositions), that one needs to take on to be successful in the field. Both the knowledge and the ways of being are always present but are seldom both equally important in terms of driving the teaching and assessment (Maton, 2014). Given that the discipline of accounting is characterised as a knowledge code (Mkhize, 2015; Myers, 2016), it follows that the specialised knowledge that you need to have as an accountant drives the

teaching and assessment, while the specialised ways of being and the cultivation of particular dispositions (e.g., ethical awareness, critical thinking etc.) are less emphasised in the teaching and learning. As discussed in Chapter 2, however, there have been several calls for accounting education to focus more overtly on the development of accounting students as ethical, adaptable, critical, professional practitioners in addition to the specialised disciplinary knowledge (McGuigan, 2021; Tan & Laswad, 2018; Tsiligiris & Bowyer, 2021). Furthermore, there is a need for accounting students to understand that the discipline of accounting is connected to the social world around them (Boyce et al., 2019; Tharapos, 2022).

The argument for enabling access to powerful knowledge has already been made in relation to the specialised knowledge students are introduced to in the modules. Access to powerful knowledge, however, also requires the enactment of the knowledge in the world by the person who has acquired the knowledge. Therefore, there is a need for ‘knower awareness’ in the pedagogies used (Blackie & Luckett, 2024). As such, both the knowledge and the development of the knower necessarily needs to be incorporated into the pedagogies.

During the CFM3A interview, the team mentioned several dispositions that they felt were important and, as the module was focussed on preparing students for the workplace, these formed part of the aim of CFM3A. As briefly mentioned in Section 7.2, dispositions included problem solving, critical thinking, and the ability to execute instructions and work independently. While the CFM3A team deemed these dispositions important, they are not expressed in ways that made them specific to accounting as they could apply to most disciplines and professional roles. What was noticeable over the course of the module was that the lecturing team did explain to students how the dispositions related to accounting or how, for example, critical thinking could be applied within the module.

When dispositions were mentioned, they were peripheral to the main focus, which tended to be on the procedural knowledge. For example, in one of the concept videos<sup>17</sup> Tommy explained the calculation of weighted contribution and breakeven units. In the first calculation, the sales mix was 10:6:4, resulting in a weighted contribution of R148 and breakeven units of 2027.03, as indicated in Figure 7.6 below. Tommy then continued to explain that the sales mix could be

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<sup>17</sup> Concept videos were short videos, prepared by one of the lecturers to explain a specific calculation. These videos were available on the LMS for students to watch as they worked through the content.

simplified to 5:3:2, by dividing by 2. Using this ratio, the weighted contribution would be R74 and breakeven units 4054.05.

|                             | Product A | Product B | Product C | Total     |
|-----------------------------|-----------|-----------|-----------|-----------|
| Sales                       |           |           |           |           |
| - VC                        |           |           |           |           |
| = Contribution p/u          | R5.00     | R9.00     | R11.00    |           |
| Sales mix/ratio             | 10        | 6         | 4         |           |
| Weighted contribution       | R50.00    | R54.00    | R44.00    | R148.00   |
| Total FC                    |           |           |           | R300 000  |
| Break-even batches/ for mix |           |           |           | 2 027.03  |
| Break-even units            | 20 270.27 | 12 162.16 | 8 108.11  | 40 540.54 |
| Break-even value            |           |           |           |           |
|                             | Product A | Product B | Product C | Total     |
| Sales                       |           |           |           |           |
| - VC                        |           |           |           |           |
| = Contribution p/u          | R5.00     | R9.00     | R11.00    |           |
| Sales mix/ratio             | 5         | 3         | 2         |           |
| Weighted contribution       | R25.00    | R27.00    | R22.00    | R74.00    |
| Total FC                    |           |           |           | R300 000  |
| Break-even batches/ for mix |           |           |           | 4 054.05  |

Figure 7.6: Concept video 2 - Critical thinking

Hereafter, Tommy mentioned that due to the change in the sales mix the weighted contribution would now be half of what it was while the breakeven units would now double. He then linked the explanation to critical thinking skills as he said, “So that is just how you can apply your critical thinking skills” (Tommy, Unit 1 Concept video 2). There was no further explanation of what critical thinking skills are in general or in the context of Management Accounting, nor was there an explanation as to why they are important or how students should apply them. In this example, we can see that even though Tommy attempted to flag the importance of a key disposition, the fact that he did not elaborate on it suggests that he assumed students would know what critical thinking was at that point in their studies and how to apply it in their work.

In a further example, in the face-to-face session for Unit 5: Standard Costing, Tommy explained to students that with standard costing, the variances can be favourable or unfavourable. Here, the students had to interpret the variances and explain if they were good or bad. This required a level of critical thinking as students had to consider the factors that resulted in, say, a favourable labour variance. A favourable labour variance is not necessarily good, as it could be a result of ‘sloppy’ work. However, in this lecture, Tommy linked the interpretation of variances to ‘common sense’ and not critical thinking as he said: “When interpreting variances, use common sense” (Tommy, Unit 3, Face-to-face lecture). As with the

previous example, there is a sense that Tommy was making an assumption that the students had the relevant critical thinking skills from prior levels of study.

As these are third-year students, to a certain extent it is fair to assume that the students should have an understanding of what critical thinking is (or could be) and how to apply it, in the context of Management Accounting. However, this is the only time that critical thinking was mentioned in the module, thus hindering students' ability to recognise this as an important aspect of their learning to focus on and make sure they understood appropriately in the context of Cost and Management Accounting. Overall, and as discussed in Section 7.5, the focus of CFM3A was on mastering the relevant calculations. As such, knower-building, or the explicit development of a professional identity, was not an evident or explicit focus of the pedagogies or assessment tasks.

## **7.8 Conclusion**

In this chapter I analysed the pedagogies used in CFM3A, a third-year module in the Diploma in Accountancy, to gain an understanding of the extent to which access to powerful knowledge was enabled or constrained. The analysis of the interview data showed that the team aimed to integrate principled knowledge with procedural knowledge and provide opportunities for students to interpret the calculations. This kind of teaching aligned with the teams' aim to prepare students for the world of work, as well as for further studies. Both these purposes seem to imply that they would provide access to the connected 'whole' of the knowledge structure, and that they would develop the necessary dispositions needed to become an accountant. There was thus a sense that the pedagogies used would enable access to powerful knowledge.

However, by using semantic gravity to analyse the pedagogical practices used in CFM3A, this chapter has argued that the intended purpose of the module was not necessarily visible in the enacted pedagogies. Through the analysis, it was evident that the pedagogies used formed a series of 'down escalators', with each topic starting with the principled knowledge (SG-), before moving to the procedural knowledge (SG+), with limited integration of the principled knowledge within the procedural knowledge. As a result, the connections between the various parts were not made explicit. This segmented approach was also evident in the assessments which prioritised a focus on calculations (i.e., procedural knowledge) rather than assessing students' understanding of both principled and procedural knowledge.

Additionally, although the lecturers understood the module to be practical in nature, they did not make sure of many practical, relatable examples in their teaching. Rather, the focus was either on the abstract concepts or the doing of the calculations within the questions. As such, there was an absence of relatable examples that could have aided ‘knower awareness’ in their teaching. Furthermore, we saw that there was an absence of explicit knower-building in the pedagogies, as opportunities to develop dispositions like critical thinking were often not taken up in the teaching moments. Without such ‘knower awareness’, it is possible that epistemological access to powerful knowledge was constrained.

Chapter 8 shifts the focus to AIC3A, to consider how the pedagogies used enabled or constrained access to powerful knowledge. It follows a similar analytical procedure to this chapter, enacting semantic gravity to make sense of the AIC3A teams’ pedagogical approach.

## **CHAPTER 8:     ENABLING ACCESS TO POWERFUL KNOWLEDGE THROUGH THE PEDAGOGIES USED IN AIC3A**

### **8.1   Introduction**

Chapter 7 presented a semantic gravity analysis of the intended and enacted pedagogies used in CFM3A, revealing the implications for providing access to epistemological access to powerful knowledge. It concluded by showing that although lecturers' intentions were to provide access to the 'whole' of the knowledge structure, and to the associated disciplinary ways of knowing – i.e., to powerful knowledge – these intentions were often constrained in the pedagogic approach that was enacted.

This chapter extends the semantic gravity analysis to consider how the pedagogies used in AIC3A enabled or constrained access to powerful knowledge. Even though Cost and Management Accounting and Auditing are sub-disciplines of accounting, there are significant differences in the knowledge compositions (as discussed and illustrated in Chapter 6). In Cost and Management Accounting, it was possible to *analytically* separate the principled and procedural knowledge; however, this is less feasible for AIC because the theory (principled knowledge) is operationalised through the application of the knowledge. As such, the theory (principled knowledge) becomes the procedural knowledge through application. As with CFM3A, this chapter also considers 'knower awareness' and knower-building in AIC3A.

### **8.2   Aims and purpose of AIC3A**

The AIC3A lecturing team spoke in a similar way to the CFM3A team (see Chapter 7, Section 7.2) in that they saw the objectives of AIC3A as preparing students for further studies and for the workplace. In Ashima's explanation of the objectives of AIC3A, she indicated that auditing is a broad discipline that includes various career opportunities:

So, we want to firstly prepare students that wish to go into the workplace immediately after this, you know, and so we seek to prepare them for the workplace. And there's another group of students that want to further their studies, and some of them will venture into internal audit, some of them will go

on and be CAs.<sup>18</sup> So, our course is quite vast or inclusive in that sense in that we focus on many facets of what auditing is about.

(Ashima, AIC3 Team interview)

The dual focus on the workplace and further studies indicates that students should have auditing knowledge and should know how to apply the knowledge in the workplace. With this, Ashima pointed to the different kinds of auditors the discipline prepares, including internal auditors and chartered accountants (which would include external auditors). To accommodate both, the team tried to incorporate aspects relating to both the role of an internal auditor as well as an external auditor. Chris further explained the importance of technical knowledge in the module:

They need the technical knowledge, for example maybe of auditing ... maybe you as an auditor, how can you approach auditing with minimal risk. Where do you start? What is your procedures?

(Chris, AIC3 Team interview)

Here Chris mentioned that students require technical knowledge of auditing. As an auditor, you need to know how to approach an audit, where to start and what the relevant procedures are. Application of this knowledge is then required by an auditor when performing an audit. Similar to the CFM3A team, the AIC3A team pointed to valued dispositions such as problem solving, teamwork, communication, time management, and communication skills during the interview. Like the CFM3A team, the way the AIC3A team referred to these dispositions was generic rather than specific to accounting or auditing. The team further spoke about the 'ways of being' required by an auditor. One such example was when Janja mentioned that an auditor must be able to apply knowledge and look at a business from different viewpoints.

...the aim is to try and get students to understand the risks related to running a business and how you can mitigate those risks with internal control. And give them the viewpoint from or give them two different viewpoints. So from the point of view of the business, here's how you can ensure you meet the business objectives by implementing the necessary internal controls. And then from an

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<sup>18</sup> Abbreviation for a Chartered Accountant. Typically, in South Africa, a CA would be an external auditor, although they can also be an internal auditor.

audit point of view, how can you then provide a service to that business, whether it be an assurance service. And like Ashima said, because it's so vast, it might be internal audit, it might be external audit, computer audit, forensic audit so it's just to try and give the students a taste of from an auditor's point of view, what sort of things do you need to understand the business does and how would you then approach it as a professional

(Janja, AIC3 Team interview, emphasis added)

Here we see that it is important for students to understand the risks related to a business and how these risks can be mitigated. This indicates that students require principled knowledge of internal controls and business risk. Janja further indicated that as lecturers they try to show students how to approach an audit as a professional and that as an auditor one must be able to view these risks and internal controls from inside the business (the point of view of the business) as well as from the outside (an audit point of view). With this, Janja suggests that as an auditor there are certain ways of being that are important. As such, it is reasonable to say that AIC3A, like CFM3A is underpinned by (a) what students need to know (knowledge); (b) how to use the knowledge (application of the knowledge as an auditor); and (c) how they need to act as professionals in the world of work (dispositions).

This chapter considers the pedagogies used in AIC3A to understand the extent to which the AIC3A lecturers achieved their aims for the module

### **8.3 Lecturer's intentions**

Auditing and Internal Control is an abstract module, and not something that students would necessarily 'see' in their day-to-day lives (Ashima, AIC Team Interview). Bearing this in mind, the AIC3A team focussed on making the module as practical as possible for the students. As discussed in Section 8.2, the aim of the AIC3A lecturers was to guide students to access and learn the specialised knowledge of the discipline, as well as to enable students to use the knowledge and to develop the relevant professional identity of an auditor or accountant. The intention of the team was to explain concepts through everyday scenarios and to encourage students to understand the work, as opposed to memorising the textbook (Ashima, AIC Team Interview). The team, based on their own struggles as students, intended to make the module 'real' to the students by connecting auditing principles to everyday examples (Janja, AIC Team

Interview). By emphasising the importance of connecting principles to everyday examples, it was evident that the team intended to move between abstract, context-independent concepts (weaker semantic gravity), to everyday, context-specific examples (stronger semantic gravity). Thus, the team intended to traverse the full range of the semantic gravity profile.

Furthermore, the AIC3A team acknowledged the different backgrounds of the students. For example, in the interview Janja mentioned that the English language, as well as technical words and terminology, may be unfamiliar to some of the students. The AIC3A team further emphasised that students should develop specific skills and competencies to be an auditor in a changing world. To guide students in developing the identity of an auditor, the AIC3A team designed a group assignment where students had to conduct an audit (Ashima, AIC Team Interview). In considering the background of the students as well as the professional skills and competencies, or the professional identity that students are required to develop, there was a sense of knower awareness in the team interview.

The AIC3A team followed more of a traditional approach to lecturing with all the sessions conducted as face-to-face lectures. As such, students had one double lecture (1.5 hours) per week as well as a tutorial session. The module consisted of five units, and each unit was taught over two weeks. The focus of the lectures shifted between the role of an internal auditor and that of an external auditor. As with CFM3A (See Chapter 7, Section 7.4) it appears that through the intended pedagogies for AIC3A, students would gain access to powerful knowledge. The next section analyses the enacted pedagogy using semantic gravity to assess the extent to which this was achieved.

## **8.4 Enacted pedagogies**

The knowledge composition of the AIC3A module consists of auditing knowledge as well as knowledge of four specific business cycles. The structure and sequence of Auditing and Internal control (AIC) in the Diploma is such that students are introduced to the auditing knowledge and the business cycles in their second year. The difference between the second and third year of AIC is that in the second year, the focus is on building the knowledge base, while in the third year the emphasis is on the application of the knowledge. This means that, in AIC3A, students are required to use their prior knowledge (learned in the second-year auditing module) in application-based scenarios and questions.

The AIC3A team understood the importance of the prior learning, with one lecturer describing it as the foundation of the ‘house’ that students are building (Ashima, AIC3A Lecture 1). To ensure that the students had the relevant prior knowledge from the second year, the first lecture of the module was focused on revision of the work done in AIC2. The remaining lectures were focussed on the application of the audit principles within the various business cycles. The overall approach of the first revision-focussed lecture was different to the other lectures that were more focussed on the business cycles. For this reason, I have selected two lectures to analyse in detail: the first AIC3A lecture (Section 8.4.1), and the first lecture on the Revenue and Receipt cycle (Section 8.4.1).

### 8.4.1 The first AIC3A lecture

In this lecture, the important aspects and concepts, such as the role of an auditor, internal controls, the audit process, and business cycles, were revised. Figure 8.1 provides the overall semantic gravity profile of the first lecture for AIC3A.

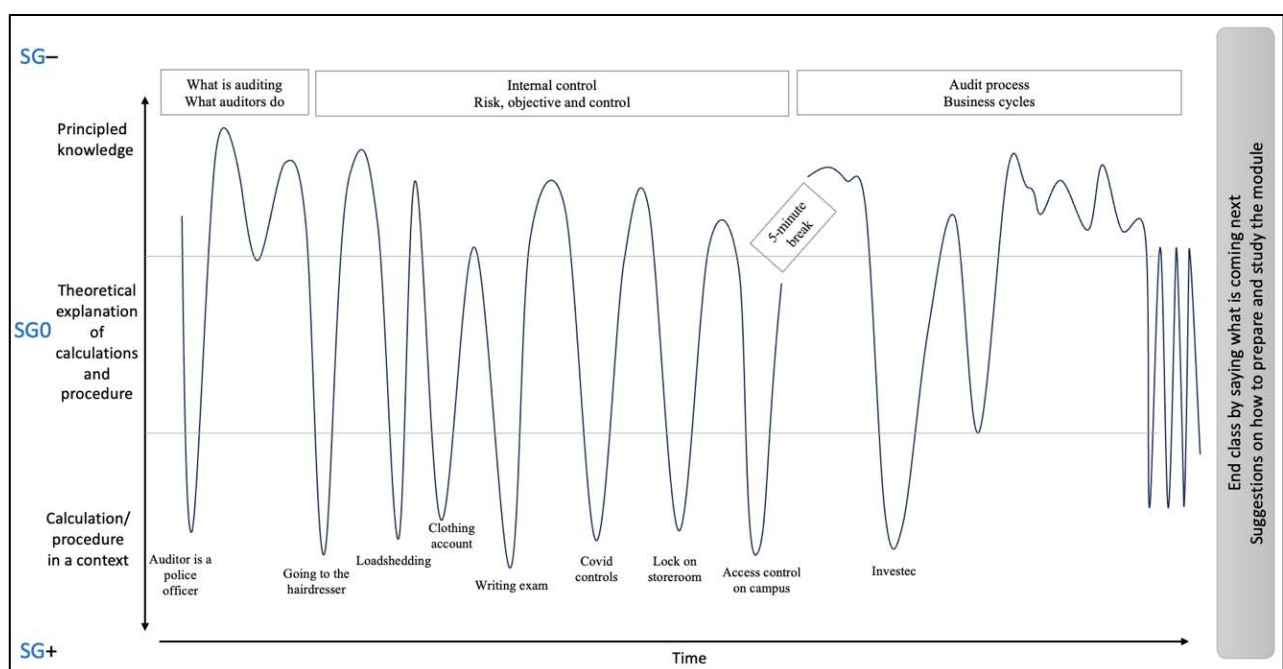


Figure 8.1: Semantic gravity profile for Unit 1: Audit fundamentals

In this semantic gravity profile (Figure 8.1) we see how Ashima moved between the meaning of the various concepts, to where they are used, who would use them, and why they are important (principled knowledge). In doing so, Ashima moved from the abstract, context-

independent knowledge (weaker semantic gravity) to everyday and more context-dependent examples (stronger semantic gravity). For example, Ashima explained that there is always a relationship between *control*, *risk*, and *objectives*. To make this relationship more relevant to students, she explained that load shedding<sup>19</sup> is a risk. As the objective of the business is to continue with their operations, they control the risk by using generators and solar panels. This is just one example of how Ashima used everyday examples of things that students experience to explain abstract, context-independent concepts.

Ashima went on to show her students how the various parts of the auditing process, audit cycle, and business cycles come together to form a connected 'whole'. To provide students with an overview of how the various parts come together, Ashima used a bakery as an example:

We have 5 cycles and all of them are related. One thing always leads to the next. OK, so let's just say, we have our bakery, so let's start at **finance and investment**. We want to build this bakery. We are going to obtain financing on maybe getting the building and then we are going to invest in equipment. We are going to invest in PPE items and I know that I'm not speaking Greek because you've done accounting. All of this happens under the **finance and investment cycle** where we decide to sell shares, so that we can raise funds because we need to either build the bakery or expand you know...You know things like that. You buy equipment and stuff and then before I even buy things. See, I'm already in the **acquisitions and payments cycle**. This is where we start acquiring...Now we move over to the...**inventory and production cycle** where we actually start producing. We start making our goods. We start baking those cakes. We start baking those scones and we work, that's your **inventory and production cycle**. Now we have your finished goods. It's time for them to be sold. We move over to your **revenue and receipt cycle**. This is the part where you make money. Customers come in. They order the cakes. They order the scones, they order them 'magwenas (vetkoek)', everything is nice. This is where you sell. This is where you receive money. OK. And then there's a called the **payroll cycle**. This is where

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<sup>19</sup> Load shedding is scheduled power outages, typically ranging from two to four hours and has been around since 2007 in South Africa. Is used to manage the electricity demand in South Africa, as the demand often exceeds the ability of Eskom (the power utility) to supply electricity.

now, obviously, in every bit of the cycle in every department there's people working in there and they need to be paid... So they are all interrelated...

(Ashima, AIC3A, Lecture 1, bold emphasis added)

In this example, Ashima told a story of a bakery to explain the five business cycles and how they are all related. Ashima mentioned the cycle (i.e. *revenue and receipt cycle*), how it fitted into the business (*selling of items, making money*) and what happened in the cycle (*customers come in, they order cakes and the business sells*). Ashima further established a link with the Financial Accounting module as she mentioned that the finance and investment cycle are about *PPE-items*, which the students dealt with in Financial Accounting. In the story of the bakery, Ashima simplified the various cycles and showed students how all the cycles are connected to one another. The moving or 'waving' between the abstract knowledge and everyday examples is enacted help to facilitate access to powerful knowledge as these links help students gain a better understanding of concepts and their relative meanings in applied scenarios or problems (Macnaught et al., 2013; Maton, 2013).

Given that the objective of the first lecture was to ensure that prior learning could be drawn on, principled knowledge was foregrounded. Furthermore, through the use of various everyday examples like loadshedding and a bakery, Ashima helped facilitate students' understanding of the abstract concepts, and in effect, traversed the full semantic gravity range in her teaching. Over the course of the semester, the focus shifted towards the application of the principled knowledge. To show students how the audit knowledge can be operationalised in each of the different business cycles, the module was structured to have two face-to-face sessions for each of the four business cycles. The focus of the first lecture for a specific business cycle was on the application of internal controls; whereas the second lecture was focussed on substantive procedures. Even though each one of the business cycles was taught by two of the three lecturers in the team, the lecturers followed a similar approach and used the same PowerPoint slides. As such, there was strong continuity and alignment in the teaching approach. Throughout the module, the AIC3A lecturers placed a strong emphasis on the application of knowledge and used concrete examples (e.g., shopping at a supermarket like Shoprite, or access control on campus) as well as current events (e.g., ongoing scandals and non-compliance issues at African bank) as part of the explanations in the lectures.

#### **8.4.2 Revenue and Receipt cycle: the first lecture**

The structure of AIC3A, as mentioned previously, was such that students had to attend a face-to-face lecture every week. This resulted in a significant amount of data that could be included in the analysis; however, it is beyond the scope of this thesis to consider all the data in detail. For this reason, I have selected one example, Unit 3: Revenue and Receipts cycle, to analyse in detail. In the first lecture for the Revenue and Receipt cycle, the focus was on the application of the auditing principles within the revenue and receipt cycle. The overall semantic profile of this lecture is illustrated in Figure 8.2. The portion of the lecture that is discussed in detail, is indicated with an orange frame.

In this lecture, Chris focussed less on abstract context-independent explanations; instead, he moved between the explanations of procedures and their application within a scenario. As a result, there is an overall strengthening of semantic gravity ( $SG\uparrow$ ) due to the focus on application. For example, Chris first explained ‘internal controls’, and that internal controls are important as they help to mitigate risks (indicated in the orange frame in Figure 8.2). Here, Chris provides information on *what* internal controls do. Given that this is context-independent information, semantic gravity is weaker ( $SG-$ ). Thereafter Chris explained internal controls further by showing the students the various documents and scenarios within the specific business cycle. At this point, the discussion was a still quite theoretical as the documents were generic and not related to a specific example. In linking the theoretical discussion on internal controls, risk assessment, and control activities (more context-independent knowledge) with examples of specific documents, Chris strengthened the semantic gravity to the mid-range ( $SG0$ ). Hereafter, Chris linked Covid controls like social distancing and the wearing of a mask to ‘internal controls’, that are in place to reduce the spreading of Covid. Through the use of a concrete example, Chris moved to stronger semantic gravity ( $SG+$ ). Chris was thus able to traverse the full semantic gravity range.

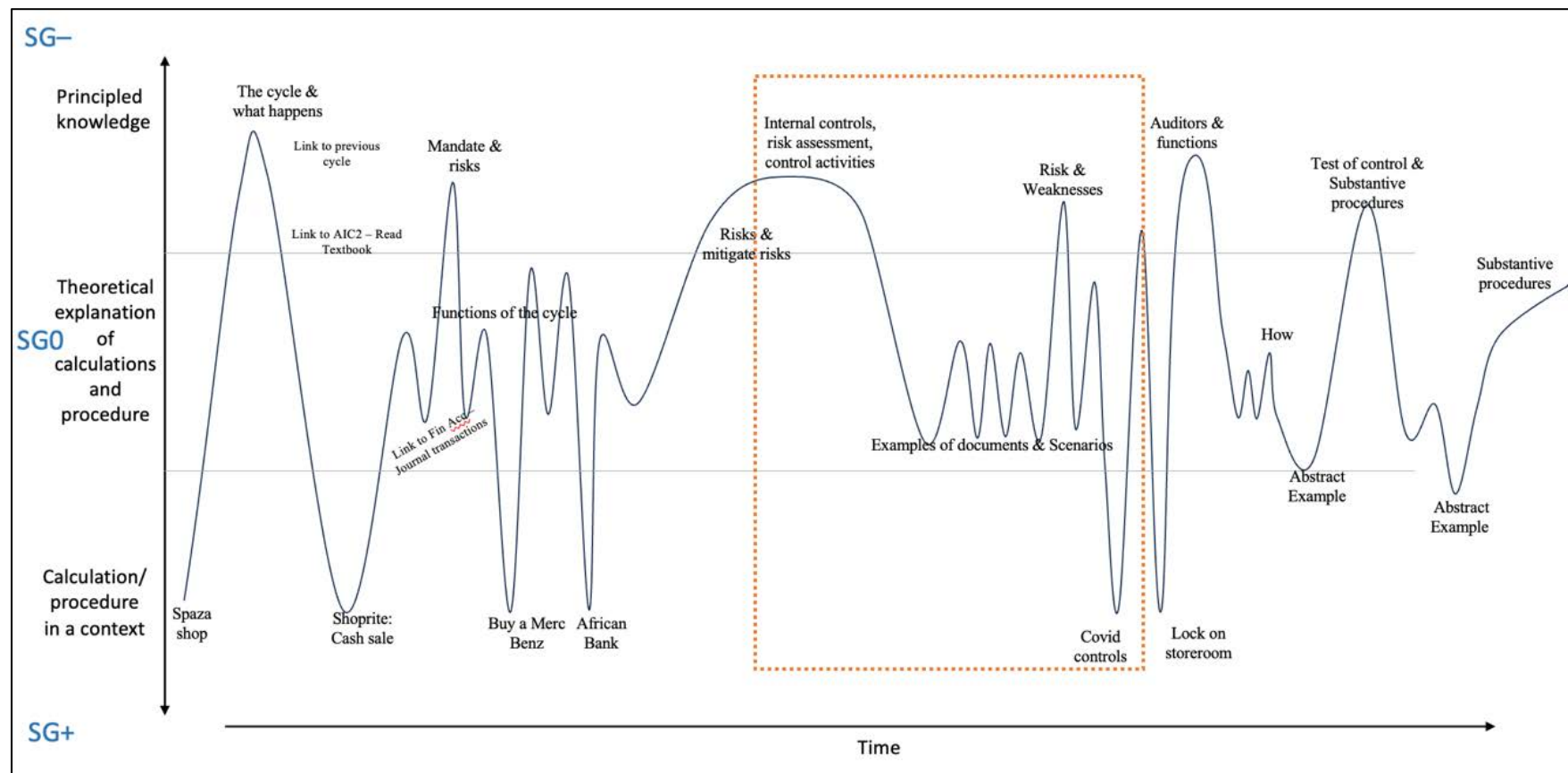


Figure 8.2: Semantic gravity profile for Unit 3: Revenue & Receipt cycle

After this explanation, Chris briefly discussed the homework question with students. In AIC3A, as in CFM3A, students had to prepare homework questions for discussion during the lecture. In this specific question (see Example 8.1), students had to identify the risks relating to Sego Builders, identify and describe weaknesses, and recommend internal control activities:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Class question 1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>(20 marks)</b> |
| <p>Sego Builders (Pty) Ltd sells variety of building material on cash and credit. Customers can place orders in the store or online using Sego Builders (Pty) Ltd website. When customer order is received, the order clerk forward it to the warehouse for the goods to be picked. The warehouse clerk picks the goods based on the order and pack them for delivery. He then calls the driver for delivery to the customer and forward the order to invoicing department for the sale to be raised.</p> |                   |
| <b>REQUIRED:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |
| <ol style="list-style-type: none"><li>1. Identify the risks relating to Sego Builders (Pty) Ltd business process. <b>(4)</b></li><li>2. Identify and describe the weaknesses relating to Sego Builders (Pty) Ltd business process. <b>(8)</b></li><li>3. Advise/Recommend the internal control activities, that Sego Builders (Pty) Ltd should implement in <b>receiving customer orders</b> and <b>picking the goods</b> to be delivered to the customer. <b>(8)</b></li></ol>                           |                   |
| Total marks <b>(20)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |

*Example 8.1: AIC3A Unit 3 homework question*

In the discussion of the homework question in the class, Chris focussed more on the meaning of important concepts, rather than on the solution to the question. By revising the concepts of risk and weaknesses, Chris provided context-independent information, thus weakening the semantic gravity (SG↓), as indicated in the semantic profile in Figure 8.2 (towards the right of the orange block). Hereafter, Chris briefly explained to the students what should happen in a warehouse. In doing so, this part of the discussion became more context-dependent, as Chris mentioned the controls that should be in the warehouse, relevant to the specific audit cycle. Despite moving to a more practical explanation (which would indicate a strengthening of SG), the discussion remains at quite a generalised level, meaning that the pedagogy only shifts to a midpoint in the semantic gravity range (SG0). Chris did not explain the solution of the

homework question in any more detail in this example. As such, there was no further strengthening of semantic gravity. This approach by the lecturer to not discuss the solution of the specific question in detail, was evident in other lectures as well. When considering the knowledge structure of AIC3A (as discussed in Chapter 6, Section 6.3.2), as well as the assessments within AIC3A (Section 8.4.3), we see that the application of the relevant audit principles and procedures within a specific scenario are important. However, here the lecturers missed an opportunity where they could have illustrated the application within a well-defined scenario.

Following on from the homework question, Chris used examples like Covid-19 controls (at the time of the lecture observation, these were still in place) and an open lock on a storeroom to further illustrate and explain internal controls. As the internal controls were applied to the specific context of Covid-19 controls or a lock on a storeroom, there was a further strengthening of semantic gravity (SG↑).

This ‘waving’ from abstract concepts or procedures to an illustration within the relevant business cycle, to an example, was common practice throughout the semester. In making the links between the abstract concepts and the application of the concepts within the various business cycles explicit in the pedagogy, the lecturing team realised their intention to make the module more practical. Furthermore, by using everyday scenarios (for example, going to a Shoprite supermarket) as well as a current event, like Covid-19 controls, the lecturers made it easier for the students to relate to and identify with the examples used. Therefore, through the continuous traversing (up and down) of the semantic gravity range and the use of relatable examples to explain concepts, the pedagogies enacted by the lecturers established building blocks required for access to powerful knowledge.

Furthermore, there was a strong focus in the pedagogy on establishing links between the various business cycles and between AIC3A and the other third-year modules. These links are indicated with a yellow (business cycles) and green star (Third-year modules) in Figure 8.3.

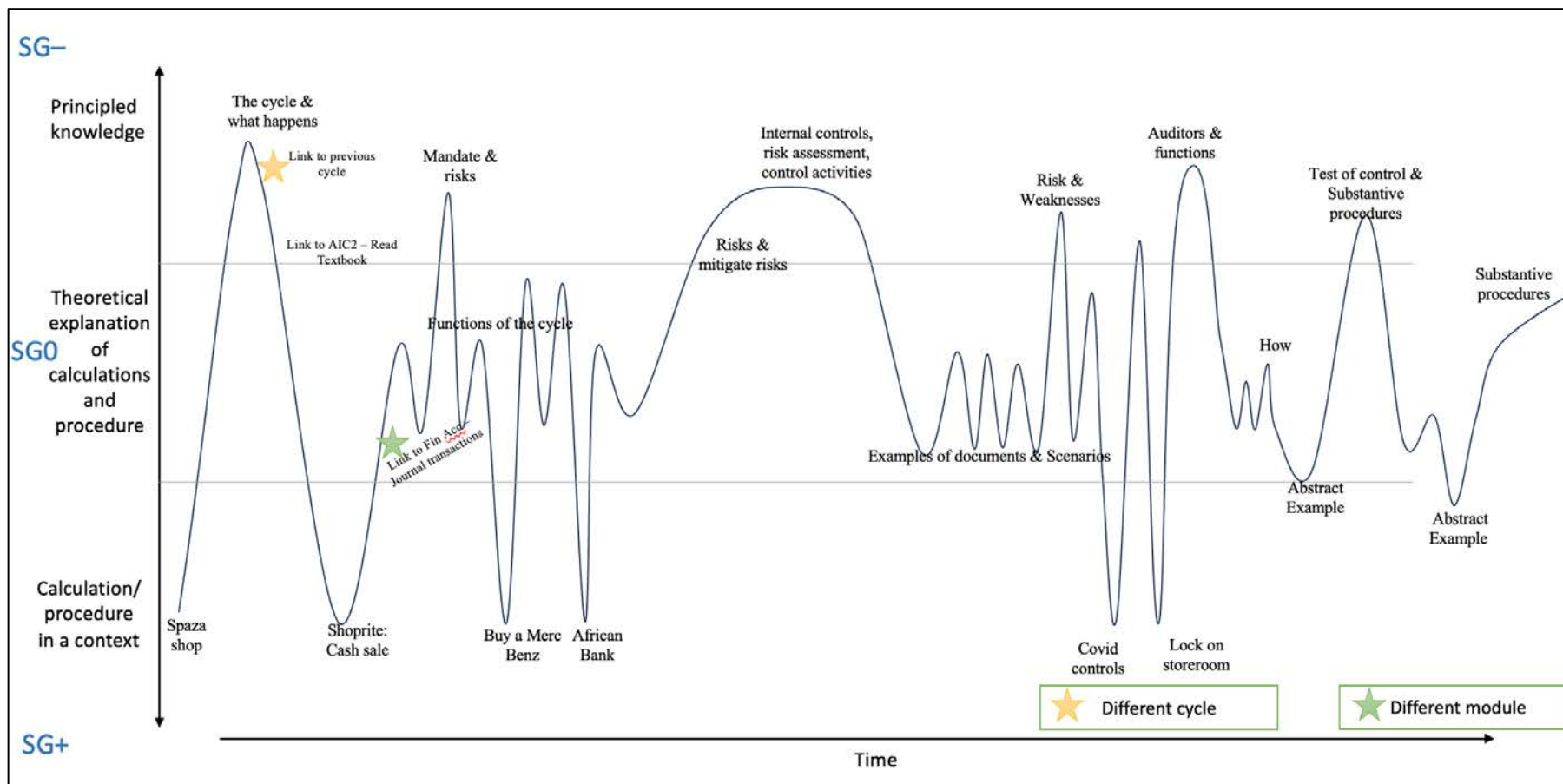


Figure 8.3: Semantic profile for Unit 3: Revenue & Receipt cycle with links

Although the links that the lecturers established between the various business cycles within the module, as well as those between AIC3A and other modules, have no impact on the relative strength of semantic gravity, they do have implications for enabling access to powerful knowledge. By making these links explicit to the students, the lecturers enabled the students to connect the different knowledge parts within AIC3A together into a joined-up whole. Furthermore, by connecting AIC3A explicitly to other modules, students could start to connect the different modules together into the bigger cosmology. For example, the team continuously emphasised that Auditing is not a ‘stand-alone unit’, but is linked to all the other modules (as indicated with the green star in Figure 8.3). Or, as Janja told the students, “We are auditing Financial accounting, Costing and Taxation. If you understand the underlying principles, it is easier as an auditor to assess...” (AIC3A, Lecture 10). These links to the other modules were made explicit throughout the semester as the lecturers often explained aspects from the other modules before they continued with the application of the audit principles and procedures.

The fact that the AIC3A lecturer team created explicit links between the parts suggests that they understood the importance of this for the students’ learning. They managed to create these links successfully in much of the content being taught, for example, the links between parts of the principled knowledge and application thereof, as well as the links between the various business cycles and various modules. One area where these links were not made as explicit involved the various parts of the audit procedures and audit process. For example, apart from the revision covered in the introduction lecture of the module, the links and relations between the audit plan, test of controls, assertions and substantive procedures (as illustrated in the AIC3A constellation in Chapter 6) were not made explicit in the pedagogies used in the rest of the module. This was likely because the focus for the rest of the module was on the application of the various parts. Not making the links between the parts explicit throughout the module could act to constrain some students’ learning and access to powerful knowledge in their third year, particularly if they did not acquire the prerequisite knowledge the year before.

#### **8.4.3 Assessments in AIC3A**

The AIC3A assessments for the module consisted of five online quizzes, a group assignment, two tests and an exam. Students who could not write one of the tests, or those who wanted to improve their marks, had an opportunity to write a replacement test. The online quizzes contributed 5% to the final mark; the group assignment 15%; each of the two tests contributed

20%; and the exam contributed 40%. Test 1 was on Units 1, 2 and 3, and Test 2 was on Units 1, 2, 3 and 4. All five units were covered in the exam. The analysis of the assessments in this study focusses on the tests and exam as these contributed a significant percentage to a student's final mark. Additionally, the group assignment was also included as it is a different, and more interactive form of assessment through which the lecturers wanted to make the module more practical for the students.

The focus of the test and exam questions was on the application of the specialised disciplinary knowledge. For the lecturing team, it was important that students understood the work and could apply the principles. Both Janja and Ashima spoke about the importance of understanding and application during the team interview. Ashima further stated that students who tried to memorise the work would not do well.

The test and exams all consisted of short questions such as true/false and multiple-choice questions, as well as longer scenario-based questions. In the longer, scenario-based questions, students were required to recommend internal controls; formulate substantive procedures; identify risks and weakness; and perform tests of controls based on the given scenario and specific business cycle. As such, students had to draw on their understanding of the specific audit principle (i.e. substantive procedures) in relation to the specific business cycle (i.e. revenue and receipts) and apply it correctly to the scenario in the question.

Example 8.2 below, provides an example of a typical test and exam question.

Bridgeton and Sons (Pty) Ltd (hereafter referred to as Bridgeton) is a newly established catering company. Anthony is the bookkeeper of Bridgeton. He has no accounting background. Thus, the directors of Bridgeton have requested you to assist them improve their system for recording purchases. While you were analysing their current system you noted the following:

Upon receipt of goods from the supplier, Daphne, the goods receiving clerk, sends a copy of the signed delivery note to Anthony. Anthony matches the details of the delivery note to the purchase order. When he is satisfied that the details on the two documents match, he proceeds to record the purchase in the purchases journal. At the end of each month, Anthony collects supplier invoices from Daphne. He calculates the total of the supplier invoice for the month and compares it to purchases he has recorded for the month. If there is a difference between the total on the supplier invoices and what he recorded, he records the difference as a purchase and names it 'unknown creditor'. The invoices are filed in alphabetical order using the name of the supplier.

**REQUIRED:**

Identify risks relating to the recording of purchases and recommend internal controls to mitigate the identified risks.

**LAYOUT:** Use a table to complete your answer. For example:

| No | Risk | Internal control |
|----|------|------------------|
| 1. |      |                  |

Example 8.2: AIC3A Test 2 Question 3

In this question, students had to identify risks and make recommendations regarding internal controls for the recording of purchases. To do this, students had to 'read' what controls were not in place, and identify any risks that were not addressed through the controls that were in place, or as Ashima put it, '*read into the scenario*'. In answering questions like these, students had to have the relevant knowledge and understanding of the processes or controls that should be in place in order to identify risks and recommend appropriate internal controls. This means that students had to draw on their understanding of the principled, context-independent knowledge (weaker semantic gravity), and apply it within the specific scenario. As the scenario is specific to a context, it exhibits stronger semantic gravity. For example, in this scenario, Anthony recorded the purchases before he obtained an invoice. Students had to know that purchases should only be recorded based on an official invoice, and therefore identify Anthony's practice as a risk, as it means that fictitious purchases could be recorded. The recommended internal control is that the recording of a purchase should be based on an invoice.

For this kind of reading, students are required to have an in-depth understanding of the various business cycles as well as the relevant audit principles and procedures. In the analysis of the

lectures (see Section 8.4.2) we have seen that the audit principles and procedures are context-independent (weaker semantic gravity), while the application within a scenario is context-dependent (stronger semantic gravity). Students were therefore required to move between weaker semantic gravity (SG–) (and stronger semantic gravity (SG+) when answering the questions. This movement is illustrated in Figure 8.4.

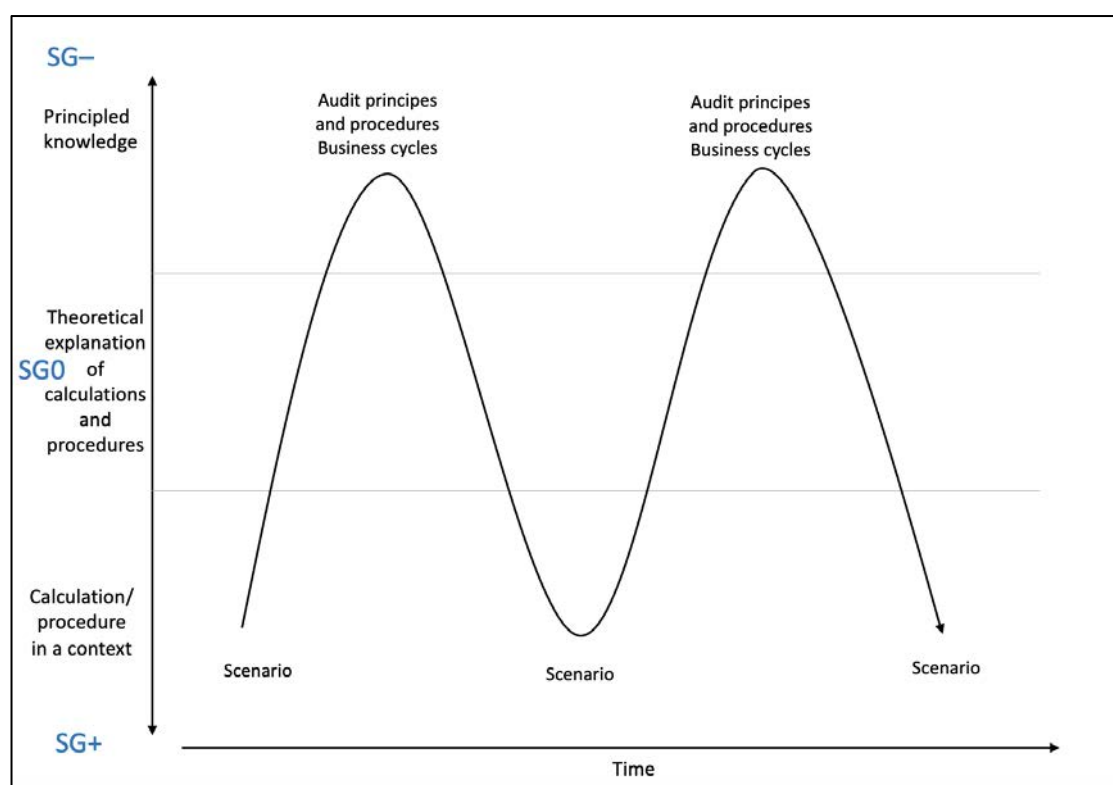


Figure 8.4: Semantic gravity profile (AIC3A Assessment)

Figure 8.4. is a heuristic illustration of the semantic gravity ‘waving’ required within the scenario-based test and exam questions.

In Figure 8.4 we see that students had to start by reading the scenario in the specific question. As the scenario is specific to a context, it is stronger semantic gravity (SG+). Students then had to draw on their knowledge of the relevant audit procedure or principle in relation to the specific business cycle to answer the question. There is then a weakening of semantic gravity (SG↓) as the knowledge students are required to draw on is context-independent (weaker of semantic gravity). By applying the relevant principles within the specific scenario, semantic gravity is strengthened (SG↑). In answering the question, students will continue to move between stronger semantic gravity (SG+) and weaker semantic gravity (SG–). The visualisation of the

scenario-based test question emphasises the importance of the integration of principled (SG) and procedural (SG+) knowledge within AIC3A.

While the focus of the tests and exam was on the application of knowledge, the focus of the group assignment was “to bring the real world to the course” (Ashima, AIC3A Team Interview). The team further explained that the group assignment was developed to give students a sense of performing an audit (i.e., applying their disciplinary knowledge) and to cultivate skills like communication skills, teamwork, time management, and problem solving (i.e., developing key dispositions that would be essential in industry). The development of the specific knower attributes (skills) is discussed in In Section 8.6 as part of knower-building in AIC3A.

Students had two weeks in which to do the group assignment and were required to conduct team meetings on MSTeams. The lecturers provided the students with the overview of the assignment which explained the objective of the assignment, skills that students could develop, as well as how the assignment should be done, key readings, the due date, and the marking rubric. For the assignment there were five different scenarios, each with its own supporting documents and audit requirements, and each team received one of the five scenarios. Therefore, the various teams did not receive the same scenario.

Similar to the scenario-based test and exam questions, students were required to read a scenario of a business (stronger semantic gravity, SG+); draw on the various audit principles and procedures to identify risks/weaknesses; or to make recommendations (weaker semantic gravity, SG–). In addition, students received supporting documents i.e., purchase orders and invoices (SG0) that they had to consider as part of formulating a response to the various tasks. As the tasks were specific to the scenario and business cycle, in responding to the various tasks, semantic gravity was strengthened. Therefore, the semantic gravity profile of the group assignment was similar to the semantic gravity profile of the tests, as illustrated in Figure 8.4.

The difference between the scenario-based test questions and the group assignment was that in the group assignment, students received actual documents to review and audit. Therefore, the group assignment had an element of the world of work that students will soon enter. And required a deeper level of engagement than the various test and exam questions.

#### **8.4.4 *The hidden curriculum in AIC3A***

Through the analysis of lecture observations, field notes, and the assessment tasks, it was evident that to be a successful student requires one to have deep understanding of the various audit principles and procedural as well as a good understanding of how to integrate the audit principles within the various business cycles. It is in the integration of the knowledge of the business cycle and auditing that the students would be able to ‘read’ what is not there. This kind of reading is specific to auditing, as Ashima mentioned to the students that “they have to read the textbook and think out of the box...The context of the business changes, therefore they need to **read into** the scenario, not everything has to come from the textbook...” (AIC3A Lecture 8, emphasis added). As such, students were required to read the scenario, draw on their knowledge of the specific cycle and then formulate a response. Although students could acquire the knowledge of the business cycles through learning the relevant section from the textbook, a ‘real-life’ understanding of the business environment would make the kind of reading that is required easier. Reemphasising the important of a specific kind of reading in AIC3A.

The reading required in AIC3A appeared to be different from that in CFM3A. As discussed in Chapter 7, Section 7.5.5, in CFM3A, students had to read the scenario and identify all the relevant information, whereas in AIC3A, students had to identify what was not written in the text, and then make the necessary recommendations. The practices of ‘reading into the scenario’ can therefore be described as part of the literacy practices of the module (see Chapter 3). Furthermore, the difference in the kind of reading required in AIC3A and CFM3A shows that the literacy practices of modules within the same diploma qualification are not the same. It is thus important that lecturers are aware of the literacy practices of the module as these practices are often seen as ‘common-sense’ to disciplinary experts (Clarence, 2021). As literacy practices are important for access to powerful knowledge, lecturers need to make the literacy practices visible in the pedagogies used.

#### **8.5 Implications of the enacted pedagogies for learning**

In Section 8.2, we saw that the AIC3A lecturers showed an awareness of how abstract the module can be and the difficulties that students could experience as they reflected on their own struggles with the module. To make the module more accessible to the students, the lecturers wanted to make the module practical to the students by linking the discipline specific concepts

to everyday examples. Additionally, the lecturers emphasised the importance of understanding the relevant concepts and principles and being able to connect the various parts together. As such, the intended pedagogies and assessments were designed in a way that would create the steps needed to establish and traverse the full semantic range required for this module.

In using semantic gravity to analyse the enacted pedagogies (see Section 8.4) we saw that through the pedagogies used, the lecturers moved between weaker semantic gravity and stronger semantic gravity, thus leading to a continuous traversing of the full semantic range. Throughout the semester, the AIC3A team used everyday examples in their explanations of the abstract, disciplinary knowledge. Using examples like Covid-19 controls, access control at the campus entrance, and a lock on a storeroom door in their teaching, lecturers provided students with relatable examples which would have helped facilitate access to powerful knowledge.

Furthermore, as the lecturers emphasised the relations between various business cycles, the role of the auditor, as well as the relationship between AIC3A and other modules, we see that the module was presented as a connected whole. The connected whole is made visible on the semantic gravity profile presented in Figure 8.2, as there are no implied connections (which would have been indicated using dotted lines) on this profile. One should however also consider the constellation for Auditing, as presented in Chapter 6. Given that students first need access to the theoretical (principled) knowledge before they can apply the principles (i.e., move to procedural knowledge), the task of the lecturers to make the connections between the various part explicit could be easier as a result of the knowledge composition.

Overall, based on the semantic gravity analysis, the pedagogies used in AIC3A were likely able to provide the necessary steps for enabling epistemological access to powerful knowledge. One concern with AIC3A, however, is the importance of prior knowledge and the extent to which lecturers assumed the mastery of prior knowledge by the students. While it is normal for lecturers to assume that students have mastered the knowledge introduced in previous years of study, given that they have progressed to the next level of their degree, such an assumption could have implications for accessing powerful knowledge. For example, if a student was not able to connect the various knowledge parts into a joined-up whole in the prior year, they would start AIC3A with segmented pieces of knowledge. As a result, a student could then struggle to connect the current learning to prior learning, thus leading to further segmented learning.

Therefore, although AIC3A was presented as a connected whole, the team should be cautious of their assumptions of students' prior knowledge.

When looking at the assessments, we see that the AIC3A team, to some extent, through the use of the group assignment, incorporated a simulated task (Shay & Steyn, 2016). As discussed in Chapter 7 (Section 7.5.4), there is need in vocational education to establish a relationship between the specialised knowledge and the world of work. The use of general, simulated, and authentic tasks could help to improve this relationship (Shay & Steyn, 2016). However, as the majority of the assessment tasks were tests and exam based, the focus remained on general tasks. There is therefore scope for more simulated and authentic tasks to be included in future. Another point to consider, is that each of the test and exam questions were focused on a specific business cycle and a specific audit principle/procedure, as opposed to a more integrated approach that includes more than one business cycle or multiple audit procedures. This kind of separation in the pedagogies and assessments could lead to segmentation of knowledge. As discussed in Chapter 7, Section 7.6, assessment can drive learning, in that it can cause students to become strategic about how and what they focus on in their learning (Gibbs, 2006). The segmented nature of tests and exam questions, and integration between business cycles and audit principles/procedures, could be improved through the use of authentic and simulated tasks.

## **8.6 Knower-building in AIC3A**

In the team interview, the AIC3A lecturers emphasised that their aim was to help students develop as auditors by acquiring the relevant knowledge, skills, and dispositions to become auditors (see Section 8.2). One of the dispositions discussed in Section 8.2 was the ability to view the risks and internal controls from inside the business as well as from outside the business. The AIC3A team designed the lectures to help students develop these different views: the first part of the lectures on a specific business cycle focused on the internal controls from the business point of view, while the later part focussed on the substantive procedures that would be performed by the external auditor. Additionally, throughout the semester the three lecturers continuously reminded students that as an auditor they should have 'professional scepticism' and should not take things at 'face value'. Rather, students were told that as an auditor, they would require evidence obtained through documents and/or observations.

To further help students develop the relevant dispositions and to ‘bridge the gap’ to the real world, the team used a group assignment. While the role of this assignment for developing disciplinary knowledge has already been discussed in Section 8.4.3, the focus now turns to consider the extent to which the assignment concurrently cultivated dispositions. The team designed the group assignment with dispositions in mind, as evident in the following interview extract:

How should the future auditor look like [sic]? What are the skills that the future auditor, should have? I think that’s where now we even introduce the element of group assignment because we’re trying to bridge the gap that we’re seeing in research people saying, you know what, auditors of the future won’t just be auditors. Because remember there is 4IR, there is machine replacing people and everything. So, if auditors, for example, don’t know how to analyse business, they will almost be as redundant as not even having jobs. So that is why now in our curriculum is like OK then it means the students must be able to analyse scenarios and instil in them to say remember every company would be different.

(Chris, AIC3 Team interview, emphasis added)

An opinion such as this suggests that, for this team, the focus was on preparing students for a future that may be quite different to the present. This focus required supporting students to acquire the necessary knowledge and ways of being required in future. As described by the team, the aim of making students perform an audit as a group and prepare the audit report in the assignment was to bring the real-world into the course:

[The] aim of this assignment is to bring the real world to the course. ... We set up real live scenarios like real documents, you know, where they have to perform procedures, and they have to do the actual audit work. Where they look for a certain document, look for a certain purchase order, inspected, look for this one signature. Redo calculations and write down their findings and tell us, are these findings material or not and stuff like that. So we are trying to bring real life audit work, you know, like I think Janja said in the beginning that, you know, most of us, if not all of us started really understanding auditing when we did auditing in practice. So, we’re trying **to bring a little bit of practice into the work** with this assignment. But also, we’re trying to prepare the students for how

future audit looks like, or actually the future is now. So we incorporate things like 4IR, the use of technology. You know, we tell them have communications and meetings and interactions on Teams because that's how the world of work looks like today.

(Ashima, AIC3 Team interview, emphasis added)

Here we see that the team, based on their own struggles with understanding auditing, wanted to help students through engaging them in a more practical, real-world scenario. Students were not only required to perform the duties of an auditor, but they also had to work in teams, hold meetings and communicate with each other. We thus see that the AIC3A team was actively trying to help students to acquire the relevant knowledge and ways of being to become future auditors.

Although the team put a lot of emphasis on the importance of the application of knowledge and becoming a certain kind of person, they seldom articulated *why* this was important or explained the specific dispositions required to the students. For example, students were required to hold meetings as part of the group assignment, but there is no evidence that they were told how to conduct a meeting or why engaging in a particular way would be important. Furthermore, the students were required to write a report, but they did not receive guidance on how to write a report, nor was the importance of accurate or careful report writing explained. Thus, although the AIC3A team emphasised the need for the development of specific skills, dispositions, and values – evident in both the team interviews and the way in which the group assignment was designed – they did not explicitly explain these to the students.

Lastly, in considering the criticism of accounting education, as discussed in Chapter 2, we see that many of these concerns still apply to AIC3A as the teaching methods remain mostly teacher-centred, with the students as passive learners in the class. As such, the focus remained predominantly on the technical knowledge with limited focus on the development of the ways of being or the professional identity of an auditor or accountant. That said, the AIC3A team, through the design and implementation of the group assignment, has started to focus more on active learning and the development of a professional identity.

## 8.7 Conclusion

In this chapter I unpacked and analysed the pedagogies used in AIC3A to gain an understanding of the extent to which access to powerful knowledge was enabled or constrained. As with CFM3A, the AIC3A lecturers saw the purpose of the module as preparing students for the world of work, as well as further studies. They acknowledged that the work of auditors is changing, and as such, pedagogy needs to change as well. The team had a shared goal of making the module as practical as possible.

The semantic gravity analysis of AIC3A showed that the lecturers did indeed put significant emphasis on the use of everyday, relatable examples to explain abstract concepts. Through the use of such examples, the lecturers traversed the semantic range in their teaching. In doing so, different kinds of knowledges were connected throughout the module. In establishing links between parts and moving between abstract concepts and practical examples, the semantic profile for AIC3A showed the continuous waving that is required for building powerful knowledge cumulatively. Overall, the analysis of the pedagogies used in AIC3A showed that for the most part, the pedagogies employed likely provided students with access to powerful knowledge. However, the analysis also showed that knower development, an important part of access to powerful knowledge, was mostly backgrounded in this module. The AIC3A lecturers did, to a certain extent, place a focus on the development of certain dispositions and attributes into the module, however, this was mainly in relation to the group assignment, with limited explanation of why the development of a professional identity was important.

As mentioned throughout Chapters 7 and 8, the findings, based on the case studies presented in this study, have implications for how enacted pedagogies enable or constrain epistemological access to powerful knowledge. Understanding the pedagogical implications is important as it can help lecturers to better prepare students as lifelong learners that are able to adapt to the demands of the changing working environment. The implications of the pedagogical practice of both modules are discussed in more detail in Chapter 9.

## CHAPTER 9: CONCLUSION

### 9.1 Introduction

This thesis has posed and answered important questions regarding pedagogical practices in professional and vocational teaching and learning, using the field of accounting as a specific case of exploration. In particular, the study has questioned the extent to which the pedagogies in two accounting modules enable or constrain students' epistemological access to powerful knowledge. Powerful knowledge is defined in this study as knowledge that gives students access to the concepts, practices, aptitudes, behaviours, values, and procedures valued by a discipline, and in the case of accounting, its related professional field of practice. Drawing on accounting education literature, the study has argued that there is a need for accounting education to equip students to become competent accountancy professionals by enabling access to the specialised knowledge of the discipline as well as acquiring professional skills, values, ethics, and attitudes of the field. However, accounting education has been criticised for many years for not adequately preparing students for employment in the profession. According to the criticisms (detailed in Chapter 2), there is a too-strong focus on technical knowledge; teaching methods are passive and teacher-centred; and the relationship between accounting and the impact of business practices on people and the planet is not emphasised. Furthermore, the development of the student as a whole human being is backgrounded. I have argued that the requirements of the field, as well as the criticisms raised regarding accounting education, could be addressed by turning to the educational purposes of higher education.

The educational purposes of higher education (discussed in Chapter 3) are wider than education for employment. This study, drawing on the work of scholars like Ashwin (2020), has argued that to truly prepare students for working (and living) in a world that is increasingly uncertain (consider, for example, climate change, technological developments like artificial intelligence, political instability, and war), there is a need to focus on the transformative nature of higher education, meaning that students need to engage with specialised, disciplinary forms of knowledge in ways that will help them to develop new and different ways of thinking about, understanding, seeing, and interacting with the world. Lecturers need to guide students on how to *use* the knowledge they are learning, as opposed to just having knowledge, and the assessment tasks they create should facilitate a deeper engagement with the discipline and enable students to use the knowledge the discipline (and related professional field in many

cases) considers to be powerful. Additionally, there is a need for ‘knower awareness’ (Blackie & Luckett, 2024), meaning that the pedagogies should be designed with an understanding of who the students are, their current level of understanding, and what they require from the learning environment to access and use the disciplinary knowledge successfully.

In essence, this study argues that there is a need for more conscious pedagogical efforts to enable epistemological access to powerful knowledge in accounting education. In accounting, this study has shown that epistemological access is enabled when theoretical concepts are explained to students in ways that make sense to them, taking their prior learning and backgrounds into consideration, and in ways that enable students to link theoretical concepts and practical calculations together to create a deeper understanding of how they could be a management accountant, auditor, accounting technician, etc. in practice. As such, through the pedagogies used by lecturers, students should be able to relate to the examples and connect new knowledges to their current knowledge to build increasingly sophisticated ‘wholes’ that they can keep adding to and transforming as they move into and through their careers.

To show how this was done in one accounting diploma course at a South African comprehensive university, a qualitative case-study research approach was followed to gather data from course documents, lecturer observations, and lecturer team interviews. The data gathered were drawn from two third-year, first semester modules. The two modules were core modules in the Diploma of Accountancy, yet they were of different sub-disciplines of accounting, namely Management Accounting, and Auditing. Both the modules were taught by lecturing teams consisting of three lecturers each. The data were analysed by drawing on constellations and semantic gravity, tools offered by Legitimation Code Theory (LCT).

This chapter presents a summary of the key findings in relation to the research questions asked in this study. Following this, the chapter looks at the contributions of the study to the fields in which it is located, through considering implications for accounting education, vocational (and professional) education more broadly, and academic staff development. Potential limitations and suggestions for future research are then considered. The chapter ends with a personal reflection on how the study helped me to see my own pedagogical practices in a different way.

## 9.2 Answering the research questions

The main aim of this study was to gain insight into how the pedagogies in a knowledge-driven vocational field, like accounting, are preparing students to become lifelong learners in a rapidly changing professional world. As such, the study was concerned with how the pedagogies are enabling epistemological access to powerful knowledge. To achieve the aim, this study asked the following central research question:

### **In what ways is access to powerful knowledge enabled and/or constrained in accounting education?**

This overarching research question was addressed through two sub-questions:

- What is powerful knowledge in accounting education?
- How is access to powerful knowledge enabled and/or constrained in accounting education through the pedagogies used?

By addressing these questions, this exploratory study has offered a different way of looking at how the pedagogies used in a knowledge-driven vocational field impact on epistemological access to powerful knowledge that will bring students into a transformative relationship with knowledge. In essence, the study was concerned with *what* students require (knowledge and ways of being) and *how* the access was provided through pedagogy. To do this work, LCT provided the theoretical lenses necessary to explore and question the pedagogies as well as the analytical tools required for the data analysis.

#### **9.2.1 *Understanding the knowledge composition in the curriculum***

In Chapter 6, constellations were used to map the interrelated ‘webs’ of the various knowledge parts, showing how they were brought together into joined-up, connected wholes that represent the knowledge composition of the two modules. Through this theorised visualisation, the kinds of knowledges (principled and procedural knowledge), and the relations between the parts and structure of the knowledges were made visible. The visualisation further helped to show the importance of prior knowledge and how new knowledge builds on prior knowledge (i.e., from first and second year, from secondary school, and general knowledge). As such, the visualisation provided a fine-grained, complex map of the knowledges that students required

access to in these two modules within the discipline of accounting, to become accounting professionals. It thus addressed the first sub-research question, ‘What is the powerful knowledge in accounting education?’

Through the visualisation of the knowledge compositions of the two modules, the study found that there are significant differences between the constellations of different modules within the same discipline. Additionally, the study found that in Cost and Management Accounting there are even differences between the knowledge compositions of the different topics within the module. Furthermore, through the mapping of the different knowledge parts, the complexity of the knowledge that students require access to was made explicit. With this, it was clear that the learning outcomes are indeed complex and condensed statements of what students require access to, and need to be carefully explained and elaborated so that students can see the complexity and understand what is expected in their learning activities and engagement in the module.

Access to powerful knowledge is made possible by enabling students to see and connect the various parts into a joined-up, connected whole. To do this, lecturers need to carefully plan the curriculum, including the teaching activities and assessments. Therefore, lecturers require an understanding of the knowledge that students require access to, as the pedagogical practices should be guided by the specialised knowledge of the modules. The constellations proved to be a useful tool for showing how an understanding of the knowledge is more than just knowing the concepts and how these are used in calculations or in audit practices. Rather, they showed the importance of understanding the composition of the knowledge, which includes different kinds of knowledges – principled and procedural – which need to be brought together into joined-up, connected wholes. When teaching and learning activities are planned without this deeper, finely grained understanding of knowledge, important parts of the wholes could be missed, thus leading to constrained access to powerful knowledge.

The constellation analysis revealed another important aspect of powerful knowledge: an ‘absence’. The constellations were based on summaries created from the textbooks used in the two modules. In visualising the content from the prescribed textbooks, the knowledges that students had to master were emphasised, while the specialised ways of being students were required to develop were backgrounded. In the case of CFM3A, there was no overt indication of the dispositions or attributes students had to develop as accountancy professionals in

training, while in AIC3A there were some references to ways of being in the discussion of the role of an auditor (see Chapter 6, Figure 6.12). Thus, although the development of the professional identity of an accountant is emphasised in the educational standards of IFAC (see Chapter 2, Section 2.4), and accounting education literature calls for the development of students as whole human beings, which includes values, behaviours, aptitudes and so forth (see Chapter 2, Section 2.6.1), this is not evident in the textbooks, and therefore not overt in the constellations. As the required or expected ways of being are not made explicit in the textbooks, the concern is that lecturers might not include learning activities that will enable students to consciously develop the specialised ways of being of an accounting professional.

In undertaking the constellation mapping exercise, and by making the overall knowledge composition (knowledge parts, kinds of knowledges, and links between these) visible, lecturers may, in future, gain a better understanding of the powerful knowledge that students require access to, to succeed in their diploma study. For the purposes of this study, mapping the knowledge composition was a vital first step before considering how the enacted pedagogies enabled or constrained epistemological access to powerful knowledge. The next step, of course, was exploring how the curriculum was enacted through the pedagogies chosen by the lecturers in the two modules under study.

### ***9.2.2 The implications of the pedagogies used for accessing powerful knowledge***

A key goal of pedagogy is to ensure that students gain access to the relevant knowledges in a way that they will be able to understand the knowledge, remember the knowledge, and draw on the knowledge as they continue with their studies and move into the world of work.

In response to the second sub-research question, '*How is access to powerful knowledge enabled and/or constrained in accounting education through the pedagogies used?*', the study found that there are significant differences in the extent to which the pedagogical practices used in the two modules enabled epistemological access to powerful knowledge. The differences were mainly seen in the enacted curriculum, with some similarities in the intended, enacted, and hidden curriculum.

I will begin with the similarities. During the interviews, both teams emphasised the importance of access to specialised knowledges, as well as ways of being. The teams further indicated that

the modules were structured and planned in a way that will result in continuous movement between abstract concepts and everyday examples. For example, in CFM3A the lecturers planned to integrate the theory (principled knowledge) with calculations (procedural knowledge), and to interpret the calculations (principled knowledge). The AIC3A team indicated that they use everyday examples (procedural knowledge) to explain disciplinary concepts (principled knowledge). Overall, there was thus a sense that the teaching and learning activities and assessments of both modules were well thought through to enable students to acquire the relevant knowledge and ways of being. Thus, the intended curriculum of both modules suggests that the modules were planned and structured to provide access to the forms of powerful knowledge the discipline and professional field of practice value.

In considering the hidden curriculum, meaning the curriculum that informs many of the decisions lecturers make but which is assumed rather than overtly explained to students, there were again similarities. For example, both modules required a specific approach to reading. In AIC3A, students were required to *read into* a scenario, meaning that the students needed to read the scenario to identify risks, strengths, weaknesses, and related practices that are required to address these. However, these risks, strengths, and weakness were not specifically mentioned as such in the texts. For example, the text will indicate that the same employee that received material will approve the invoice. Here, students need to know that there should be a segregation of duties. As such, in their response, the students should indicate the risk (same person receive inventory and approve invoice), and then make a recommendation. In CFM3A, students needed to read the scenario carefully to identify the relevant information to do the calculations. Here, details like ‘per month’, or ‘per gram’ are important but not highlighted as such in the texts. Students need to know to look for these details. Additionally, students must be able to apply mathematical principles correctly, which is knowledge lecturers assume they have carried with them from secondary school and prior modules in the diploma. In analysing the pedagogical practices, there was a sense that in both modules lecturers assumed and expected students to already have acquired these reading skills and the necessary mathematical knowledge (in the case of CFM3A); as such, these became part of the hidden curriculum for these modules, and were only briefly signalled in the teaching as skills or knowledge students already had, rather than explained in the context of the new learning students were involved in.

Moving to the enacted curriculum, as mentioned before, both modules used largely passive, teacher-centred approaches to learning. This was evident in the pedagogies as the face-to-face

sessions took place in tiered lecture venues, with the lecturer presenting the content from the front of the class. Similarly, during the online sessions (CFM3A) the lecturer spoke, while the students were requested to remain muted. In both the face-to-face and online sessions, the lecturers provided opportunities for the students to ask questions, but overall participation from the students was low.

Another similarity between the two modules was the way in which tests were structured around specific topics and units. The data evidenced that topics were presented by different lecturers co-teaching a module and then assessed as a topic or unit, with links between prior and new knowledge left assumed or absent. The concern is that the links between the different parts or clusters, to use the term from the constellation analysis, would thus have been weakened. By weakening the links between the parts, students might see the clusters as chunks of ‘content’ or list of concepts or steps to learn, rather than connecting these chunks and lists together into a joined-up connected whole of principled knowledge and related skills and practices. As such, access to powerful knowledge could have been constrained.

The analysis of the assessments further showed that in both modules the focus of the assessments was on the knowledge that students had to master, while the dispositions, values, and attitudes were backgrounded. The only assessment that included some form of knower development was the AIC3A group assignment. Thus, although both teams indicated the importance of knower attributes during the interview, the extent to which these were overtly foregrounded in the pedagogies and assessments was limited. One could argue that these are third-year modules and therefore students should already have a certain understanding of the ways of being required by accountants; however, as Cecilia Jacobs (2007) has argued, the literacy requirements change as the demands made on students become more complex. This means that, even if they had been part of prior levels of study, the skills, knowledge, and practices that are important – powerful – need to be taught and made explicit in relation to the current learning expectations and demands, rather than assumed and left tacit or neglected.

Having summarised the similarities revealed in the analysis of the data, I will move now to consider the differences between the pedagogies in the two modules. The semantic gravity analysis of the pedagogies used in CFM3A showed that the principled and procedural knowledges were dealt with separately, and throughout the module, the use of everyday examples was limited. Thus, over time, the pedagogies used resulted in series of ‘downward

escalators’ (See Chapter 7, Figure 7.4). As a reminder, this means that a lecturer would start with the principled, abstract knowledge and move down the wave towards the procedural, context-specific knowledge (such as exemplar calculations or practical scenarios). This is not a problem in itself; the issue is that if this pattern is repeated without waving up again to create joined-up ‘waves’ of meaning, students may see and learn segmented lists, rather than situating the new knowledge within a constellation of meanings. As such, the integration of principled knowledge with the procedural knowledge was limited, and where there were instances of waves, these connections were not made explicit to the students.

Furthermore, there were several instances where the links between different parts of the lecture were not made explicit to the students, resulting in further segmentation of the constellation into separate ‘bits’ or parts. There were thus limited structured opportunities for students to create connections between the abstract, principled knowledge, and the more practical, procedural knowledge. Throughout the module, the focus of the enacted curriculum was on the procedural knowledge (doing of calculations). In considering the enacted curriculum in CFM3A, there is evidence that indicates that epistemological access to powerful knowledge was constrained.

In considering the semantic gravity analysis of the pedagogical practices used in AIC3A, the evidence indicated that overall, epistemological access to powerful knowledge was successfully enabled. This became apparent as there was a continuous movement between abstract, principled knowledge, and examples of how auditing principles and procedures could be applied in a business. In addition, everyday events and activities such as Covid-19 and access control on campus, recognisable to all the students, were used to further explain the application of the various auditing principles and procedures. Through the use of these various examples, structured opportunities were created to explicitly establish links between the different kinds of knowledges, through the construction of semantic gravity waves. Furthermore, throughout the module, links between the different business cycles as well as links between auditing and other sub-disciplines students would have studied (i.e., Financial Accounting and Taxation) were made overt.

In summary, this study has argued that lecturers need to understand what they are teaching and how the different forms of valued or powerful knowledge come together into a coherent whole. Using this ‘whole’ as a guideline, lecturers need to understand why students need the

knowledges, and how they can demonstrate or evidence their cumulative, rather than segmented, learning and understanding. Further, the findings show that aspects of the ‘hidden’ curriculum, such as the specialised ways of being of a particular kind of knower, need to be made more overt in the teaching as well as in the assessment tasks, so that students see them as valuable and consciously engage with them. These findings have obvious implications for teaching accounting in my own context, but they also enable this study to make broader contributions to vocational and professional education beyond accounting, and they have implications for academic staff development work with lecturers

### ***9.2.3 Enabling epistemological access to powerful knowledge through the pedagogies used***

In response to the main research question ‘*In what ways is access to powerful knowledge enabled and/or constrained in accounting education?*’, this study found that access to powerful knowledge is a multifaceted process that comprises of more than just how the content of the module is taught. Firstly, one needs a clear ‘map’ of the curriculum, referring to the content, and how, through the teaching and assessments, students are guided to develop the relevant professional competency and related professional identity. Part of the curriculum map is an understanding of the composition and complexity of the knowledge being taught: the different kinds of knowledges (principled and procedural knowledge); how the knowledge parts come together into a connected whole; and how the knowledge builds onto prior knowledge or links to other modules.

Secondly, there is a need for knower awareness. Thus, lecturers need an understanding of who the students are, where they come from, and what their prior education experiences are, as well as the literacy practices that they bring with them. Furthermore, lecturers need to know what the requirements of the field are to become accountancy professionals. This includes an understanding of what knowledge students need to acquire, what this knowledge will enable students to do in the world, as well as the ways of being that are legitimated in the field.

Furthermore, an understanding of context is important. This includes the wider context of the university and the country as well as the context of the field, in this case, the world of accounting practice. Here it is important to consider changes within the field of accounting (e.g., changes due to technological developments), as well as new developments (e.g., the need for accounting to consider people and the planet).

These three aspects – knowledge composition, knower awareness, and context – need to come together into a responsive form of pedagogy. Central to the pedagogy is a desire to explicitly create epistemological access, for all students. The pedagogy should enable access to the kinds of knowledge and ways of knowing that the discipline and its professional field of practice, consider ‘powerful’ and therefore value.

### **9.3 Contribution to knowledge**

The findings of this study have implications and make contributions to knowledge in three interrelated areas. The first is a theoretical contribution, as the study adds to the body of research using LCT to critique and improve teaching at university level. Specifically, constellations analysis is a relatively new area of research and there are only a few studies thus far using this theoretical tool to understand curriculum composition. The second is practical and related to advancing our knowledge of pedagogies within the field of vocational education. The third is a contribution to academic staff development, bringing both the theoretical and practical contributions together to consider implications for educating and supporting lecturers teaching in vocational and professional academic programmes.

#### **9.3.1 Theoretical**

Constellation analysis has been part of LCT for more than 10 years. However, the uptake of constellations has been slow, and as such, there are not many studies that draw on constellations. In the few educational studies that have used it, one has focused on visualising ballet movements and the ways of being a ballet dancer (Lambrinos, 2020); another has used constellations to reveal relations among ideas (Maton & Doran, 2021); a third has used the tool to show the importance of prior knowledge when building knowledge in a specific course (Rusznyak, 2020); and it has been used to visualise aptitudes and dispositions on doctoral education (Clarence & van Heerden, 2023). Outside of educational research, constellations has been used to analyse knowledge in parliamentary discussions (Siebörger & Adendorff, 2017). This study makes a theoretical contribution as it is the first study to use constellations to visualise the kinds of knowledges valued in a knowledge code, as well as the relations between the various parts within the knowledge structure, prior knowledge, relations between modules, and the ways of being that are valued. To put it differently, this study has made a theoretical

contribution as it is the first study that has used constellations to visualise the powerful knowledge students require access to. Additionally, the study used semantic gravity alongside constellations to show how, through the pedagogical practices, access to the knowledge constellations can be enabled or constrained.

### ***9.3.2 Pedagogical practices***

By taking the findings of the study back to accounting education and with the understanding of the educational purposes of higher education as transformative, one can begin to redesign the pedagogical approaches for the field of accounting. As discussed in Chapter 2, the role of accountants is shifting from number crunchers to engaged business partners. Accounting is no longer a narrow, technical practice but rather seen as a technical, social and moral practice. The shifts in the field of accounting have implications for accounting educators who need to guide students to obtain the relevant knowledge and develop the professional identity of an accountant. This study provides two ‘tools’ to inform this work. The first is constellations, which can be used to ‘map’ the different kinds of knowledges drawn into and valued within a curriculum, and the relationship(s) between these different knowledges, as well as between the present curriculum and other modules or courses students have studied, and between academic, professional, and general or everyday knowledge. The tool I have presented in Chapter 6 can be adapted for different year levels, different kinds of curriculum, and for different purposes, such as module planning within a teaching team; academic staff development work with lecturers; and within teaching to show students what they are required to learn, how, and why.

The second tool is semantic gravity, which can be used to ‘map’ the movement or waving between principled, abstract knowledge and examples or procedural knowledge. As such, the semantic gravity tool can help lecturers to plan the curriculum, their teaching, what the students need to do, as well as the various assessments tasks. In visualising the various teaching and learning activities, lecturers can ‘see’ the movement between different kinds of knowledges. They could also use it as a diagnostic tool to understand where students are struggling to make connections or to follow the ‘wave’ of the lecture. Furthermore, the tool could help to show where links between parts are not made explicit. In addition to lecturers using this tool for curriculum or lesson planning, academic developers could also use this tool for work with lecturers.

### **9.3.3 *Academic development***

The third contribution, as mentioned above is to academic staff development. The tools developed in this study are not only of value for lecturers, but also for those who work in academic staff development. These tools could help academic developers gain a better understanding of the knowledge composition of sub-disciplines in the field of accounting, and adapt the constellations tool to ‘map’ other disciplines they may be working within. Further, once the curriculum complexity is visualised and ‘mapped’, they may be better placed to think with lecturers about and guide lecturers on the implications of the pedagogies used for students’ access to powerful knowledge. With this deeper understanding, academic developers can then provide more effective guidance to lecturers in the field of accounting as well as other similar fields.

## **9.4 Further research**

This was an exploratory study to gain insight into how the pedagogies in a knowledge-driven field, like accounting, are enabling epistemological access to powerful knowledge. Through the data that was collected and analysed, this study made visible the complexity of the knowledge compositions of different modules within the field of accounting. Furthermore, the study showed the importance of the intended, enacted, and hidden curriculum as well as the implications these could have on enabling access to powerful knowledge. As such, the study has implications for pedagogical practice and could be used to guide pedagogical practices in the field as well as in further research.

As a starting point, there is a need for further research that focusses on the students and their experiences of the pedagogical approaches. Research that includes the students could help to better understand who the students are, what they think about their learning, and their sense of what constitutes powerful knowledge. The knowledge gained from the students could then help to improve the pedagogical practices.

There is also a need for the development of more comprehensive constellations. The constellations developed in this study were based on the prescribed textbooks of the two modules and were a starting point to visualise the knowledge composition and complexity. However, more work is required to ensure that the constellations are complete, and that the

relevant knower attributes are included in the constellations. Furthermore, by developing constellations for all the modules within the diploma, lecturers will be able to gain a better understanding of the differences between the knowledge composition of modules as well as the links between different modules.

Lastly, in this study, it was evident that both lecturing teams relied on tests and exams as the primary form of assessment. Yet, as discussed in Chapter 2, Section 2.6.4, there is a need for accounting educators to move away from exams and look at new ways of assessment like integrated assessments, group work, and case study projects. Shay and Steyn ((2016) further emphasise the importance of general, simulated, or authentic tasks (see Chapter 7, Section 7.5.4). There is thus a need for further research into assessment practices and different kinds of assessments within the field of accounting.

Further research is not limited to the areas mentioned above. As I end my doctoral thesis journey, I still have many questions and ideas for further research in future. Here I have focussed on key areas that could build on this project.

## **9.5 Personal reflection: My own journey**

This study, as discussed in Chapter 1, was motivated by my own questions as a lecturer. I wanted to gain a better understanding of what it means to be a good lecturer and consider critically the kinds of pedagogical practices that could guide students to learn and understand the discipline and practice of accounting in fuller and more relevant ways.

This was not an ethnographic study, but in many ways it could have been. In observing the lecturers, especially the CFM3A lecturers, it was as if I was looking in a mirror, as I could see myself doing the same things that they were doing. After I completed the constellation analysis I was surprised by the complexity of the knowledge constellations, as well as the significant differences between the two modules. In using the conceptual and theoretical frameworks from LCT as my lenses to analyse the data, so many things started to make sense to me. I began to see how I, in my own practices, assume students to have the literacy practices required and valued by the university, and how I do not take the time to make these requirements explicit. I

often assume students know how to read a question, that they know why we use a specific format for the solutions, and the list goes on.

Like the participants in this study, I see Cost and Management Accounting as a practical module. For me, it is 'easy' as I can see the processes. Auditing, on the other hand, feels abstract to me, as I cannot 'see' it in the same way as Cost and Management Accounting. Yet, when I started to map the kinds of knowledges, the structures, and the links, I realised that both modules are complex. Additionally, there are 'hidden' factors that add to the complexity: students' backgrounds, their lived experiences, their prior knowledge, as well as academic literacy practices. All of these influence their access to powerful knowledge.

With my own growth and new 'lenses', my approach to lecturing and assessment will change. As a first step, I want to map the disciplinary knowledge and associated ways of being of the modules I teach, as I want to ensure that I have a clear understanding of *what* students are required to learn. With the knowledge composition in mind, I will plan the pedagogical activities. Furthermore, I want to partner with my colleagues as well as academic staff developers to share my learning with them, and show them how to use these tools, too. My hope is that these collaborations will further develop the constellation and semantic gravity tools. I would like these tools to be accessible to more lecturers, for lecturers to be able to improve their pedagogical practices to enable greater access to powerful knowledge.

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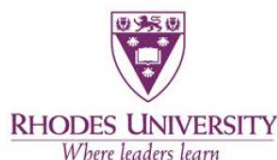
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## **APPENDICES**

### **A. Semi-structured interview questions**

1. What is the aim of the module? What is it that you want students to know and get from the module?
2. How does this filter through in the teaching and assessment of the module?
3. What is influence your teaching or the ways you are teaching? (So why do they teach the way they teach – does the team consider literature, professional bodies and or competency frameworks)
4. How do you determine what to teach?
5. How do you select the textbook?
6. What is your role as a lecturer?
7. What is the role of the student?
8. Talk to me about the assessments – what is your thinking about assessments.

## B. Rhodes University Ethical Clearance



Rhodes University, Education Faculty  
Research Ethics Committee  
PO Box 94, Makhanda, 6140, South Africa  
Tel: +27 (0) 46 603 8393  
Fax: +27 (0) 46 603 8028  
email: [e.rosenberg@ru.ac.za](mailto:e.rosenberg@ru.ac.za)

<https://www.ru.ac.za/researchgateway/ethics/>

07/05/2021

Janet WEST

CHERTL

[g20w9781@campus.ru.ac.za](mailto:g20w9781@campus.ru.ac.za)

Dear Mrs Janet West

**Re:** Enabling personal and professional development in Accounting Education: connecting the knowledge with the knowers

APPLICATION NUMBER: 2021-4877-5999

This letter confirms that your research ethics application has been reviewed and **APPROVED** by the Education Faculty Research Ethics Committee (EF-REC). Your permission letters have been received and you are free to proceed with your study.

Approval is granted for 1 year. An annual progress report is required in order to renew approval for an additional period. You will receive an email notifying you when the progress report is due.

Should any substantive change(s) be made during the research process, that may have ethical implications, you should notify the Education Faculty REC Chair via email. This includes changes in investigators. The REC Chair will advise as to whether a new application is necessary.

Do keep this clearance letter secure and accessible throughout your study and after its completion. It will be needed when a thesis is examined and when publications are submitted to journals.

Please also submit a brief report to the REC Chair on the completion of the research. This can be done via email. The purpose of this report is to indicate whether the research was conducted successfully and whether any ethics-related matters arose that the committee should be aware of, in order to guide future studies.

Sincerely,

**Prof Eureka Rosenberg**

**Chair: Education Faculty Research Ethics Committee**

## C. HOD Approval

March 2021

Mrs L Boyce  
Head of Department  
Department of Commercial Accounting  
University of Johannesburg

Dear Mrs Boyce

As you know, I am a PhD student at Rhodes University in Makhanda, South Africa. I am also a lecturer in the Department of Commercial Accounting, College of Business and Economics on the Soweto Campus. My planned PhD study is titled *Enabling personal and professional development in Accounting Education: connecting the knowledge with the knowers*. This study aims to understand how accounting modules can be designed and taught in a way that enables greater access and success, assisting students to be and become accountants. To do this, I need to establish how the curriculum is currently taught, what knowledge is valued and what kind of person is valued in the Diploma of Accountancy.

The research will include an analysis of study material from some of the core modules within the diploma. Additionally, I would like to conduct interviews with lecturers and students of the Department of Commercial Accounting, should they voluntarily agree to do so. All identities will be fully anonymised.

My PhD proposal was recently approved by the Rhodes Education Higher Degree committee. The project was also preliminary approved by the Ethical Clearance Committee of the Education Department, subject to receiving permission from yourself and Dr Carol Nonkwelo, Executive Director (Research & Innovation). A copy of my proposal, interview questions and informed consent forms are attached.

This letter serves to seek formal consent to approach the Department of Commercial Accounting staff and students as participants for this research and to access the relevant documents such as study guides, online material and student assessments. If you require any further information, please do not hesitate to contact me or one of my supervisors (listed below). If you have any ethical concerns, you can contact Mr Siyanda Manquele ([s.mangele@ru.ac.za](mailto:s.mangele@ru.ac.za)), head of ethics at Rhodes University.

Thank you for your time.  
Yours sincerely



Janét West  
[jwest@uj.ac.za](mailto:jwest@uj.ac.za)  
082 324 8123

Approval granted:   
Mrs L Boyce

Supervisor: Dr S Clarence ([s.clarence@ru.ac.za](mailto:s.clarence@ru.ac.za))      Co-supervisor: Dr K Wilmot ([k.wilmot@ru.ac.za](mailto:k.wilmot@ru.ac.za))

## D. Executive Director: Research and Innovation Approval



3 May 2021

Ms Janet West  
Department of Commercial Accounting  
College of Business and Economics  
University of Johannesburg

Dear Ms West

### PERMISSION TO CONDUCT RESEARCH AT THE UNIVERSITY OF JOHANNESBURG

The request for your doctoral project titled *Enabling personal and professional development in Accounting Education: connecting the knowledge with the knowers* refers. Permission is granted to conduct this study at the University of Johannesburg.

Sincerely

A handwritten signature in black ink, appearing to read "Carol Nonkwelo".

**Dr Carol Nonkwelo**  
**Executive Director: Research and Innovation**  
Email: [cnonkwelo@uj.ac.za](mailto:cnonkwelo@uj.ac.za)

## E. Participant Consent Form

### **Enabling personal and professional development in Accounting Education: connecting the knowledge with the knowers**

#### **PARTICIPANT CONSENT FORM**

I, ..... [Print name}, agree to take part in this research study.

In giving my consent I state that:

- I understand the purpose of the research study and my involvement in it.
- I understand the risks and benefits of participating in this research study.
- I understand my participation in this research study is voluntary.
- I understand that I may withdraw from the research study at any stage, without negative consequences.
- I understand that my decision to be part of the study will not affect my relationship with the researcher or anyone else at UJ now or in the future.
- I understand that while information gained during the study may be published, I will remain anonymous and no reference will be made to me by name or student number or other identifying characteristics.
- I understand that interviews and documents I provide will be used in the research in order to understand the research questions.
- I understand and agree that the interviews will be audio recorded electronically.
- I understand that all data will be stored in a password protected OneDrive folder for the duration of the study and will be retained for five years upon completion.
- I understand that I will be given the opportunity to read and comment on the transcribed interview notes, should I wish to do so.
- I confirm that I am not participating in this study for financial gain.

I would like to receive feedback about the overall results of this study: YES / NO

If you answered YES, please indicate your preferred address: \_\_\_\_\_

.....  
Signature

.....  
PRINT name

.....  
Date

Please feel free to contact me or my supervisors should you have any concerns or questions.

Kind regards

Janét West

[jwest@uj.ac.za](mailto:jwest@uj.ac.za)

Supervisor: Dr S Clarence ([sherranclarence@gmail.com](mailto:sherranclarence@gmail.com))

Co-supervisor: Dr K Wilmot ([k.wilmot@ru.ac.za](mailto:k.wilmot@ru.ac.za))

Head of Ethics at Rhodes University: Mr Siyanda Manqele ([s.manqele@ru.ac.za](mailto:s.manqele@ru.ac.za))