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EDITED BY Elsabé Loots & Johan Oberholster

RETHINKING COMMERCE EDUCATION IN SOUTH AFRICA

The case for change to develop future-fit business leaders

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Peer-review Declaration

The publisher (AOSIS) endorses the South African 'National Scholarly Book Publishers Forum Best Practice for Peer-Review of Scholarly Books'. The book proposal form was evaluated by our Social Sciences, Humanities, Education and Business Management editorial board. The manuscript underwent an evaluation to compare the level of originality with other published works and was subjected to rigorous two-step peer-review before publication by two technical expert reviewers who did not include the volume editors and were independent of the volume editors, with the identities of the reviewers not revealed to the editors or authors. The reviewers were independent of the publisher, editors and authors. The publisher shared feedback on the similarity report and the reviewers' inputs with the manuscript's volume editors to improve the manuscript. Where the reviewers recommended revisions and improvements, the volume editors and authors responded adequately to such recommendations. The reviewers commented positively on the scholarly merits of the manuscript and recommended that the book be published.

Research justification

This book intends to advance and enhance knowledge on the future of commerce education in South Africa and to allow relevant scholars from South African commerce faculties the opportunity to share their original scholarly research on how to best position commerce education in South Africa. The aim is to share the relevant research as widely as possible to optimally serve the interests of both academics and students, as well as to address the dynamic changes taking place in the world of work.

Since 2010, the global business environment has changed significantly, a trend that has accelerated since the outbreak of the coronavirus disease 2019 (COVID-19) pandemic and beyond. Internationally, business schools have already rethought or are in the process of rethinking and restructuring their programme offerings, curricula, modes of delivery and research foci to adapt to the changing global business environment. Even though international research on this subject field has accelerated over the past two to three years, very limited research has been carried out on the topic of how and where South African commerce faculties should position themselves. Despite individual and more narrowly focused research by South African scholars on management, accounting and economic education, comprehensive research on how we as a collective should strengthen and position our programmes in this rapidly changing global and business environment is still in short supply. Although South African commerce faculties have gradually started to adapt to these changes, the progress has been slow, ad hoc and uncoordinated. This book aims to fill this gap by sharing original scholarly research on relevant topics from a range of institutions with a wider audience.

This book's contribution lies in covering a wide range of innovative topics under several broad themes. These broad themes include the rationale on why it is important to embrace change based on the changing global business landscape, as well as experiences of international business schools, rethinking student support and preparedness, rethinking the role of the academic, and, finally, rethinking the curriculum and modes of delivery.

South African commerce faculties face unique challenges considering the ubiquitous large class groups (particularly at the undergraduate level), the lack of student preparedness, the challenges with respect to digital transformation and the use of artificial intelligence in the classroom. These themes are addressed in the text, as well as the importance of facilitating student success, incorporating responsible management education, creating and strengthening ethical competence in future business leaders and unlocking micro-credentials. This book recognises that, although South Africa has a unique set of circumstances, the responsibility of commerce faculties remains to optimally prepare students to adapt to the national and global future world of work.

This edited book is based on original scholarly research of scholars from a range of South African commerce faculties. The target audience is predominantly scholars, researchers and academics in the commerce field in South Africa, but it may also interest scholars in Africa and globally.

The authors confirm that no part of the book has been published elsewhere or plagiarised.

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Rethinking the curriculum and classroom

Abbreviations and acronyms, figures and tables appearing in the text and notes

List of abbreviations and acronyms

AAAWE	Association for the Advancement of African Women Economists
AABS	The Association of African Business Schools
AACE	Association for the Advancement of Computing in Education
AACSB	Association to Advance Collegiate Schools of Business
ACA	ICAEW-Chartered Accountant
ACCA	Association of Chartered Certified Accountants
ACCOM	accreditation committee
AGI	artificial general intelligence
AI	artificial intelligence
AICPA	American Institute of Certified Public Accountants
AIS	Association for Information Systems
AMBA	The Association of MBAs
APB	Auckland Park Bunting
APC	Accounting Practices Committee
APS	Admission Point Score
AR	augmented reality
ASSAf	Academy of Science of South Africa
BDO	Binder Dijker Otte
BIS	business information systems
BMB	British Medical Bulletin
BRICS	Brazil, Russia, India, China and South Africa
CA	chartered accountant
CAs	chartered accountants
CANRAD	Centre for the Advancement of Non-Racialism and Democracy
CEO	chief executive officer
CHE	Council on Higher Education
CIMA	Chartered Institute of Management Accountants
CoPs	communities of practice

CPD	continuous professional development
CSIR	Council for Scientific and Industrial Research
CUTE	Centre for the Utilisation of Technology in Education
CV	curriculum vitae
DBA	Doctorate in Business Administration
DBE	Department of Basic Education
DDNR	Doctoral Degrees National Report
DHET	Department of Higher Education and Training
DT	digital transformation
EEC	ethic education continuum
EFAL	English First Additional Language
EFMD	European Foundation for Management Development
EHL	English Home Language
EMR	European Management Review
EMS	economic and management sciences
ESG	ethics, sustainability and governance
FCCA	Fellow Chartered and Certified Accountant
FCMA	Fellow Chartered Management Accountant
FEMS	Faculty of Economic and Management Sciences
FoDC	framework for digital competencies
FSAs	faculty student advisors
GDP	gross domestic product
GIBS	Gordon Institute of Business Science
HDI	historically disadvantaged institution
HE	higher education
HEI	higher education institution
HEIs	higher education institutions
HoD	head of department
HPCSA	Health Professions Council of South Africa
HPL	high-performance lecture
HRD	human resources development
HSRC	Human Sciences Research Council
HWI	historically white institution
IAESB	International Accounting Education Standards Board
IBR	*International Business Review*
ICAEW	Institute of Chartered Accountants in England and Wales
ICAS	Institute of Chartered Accountants of Scotland
ICTs	information and communication technologies

IEB	Independent Examinations Board
IEPS	International Education Practice Statement
IES	International Education Standard
IESBA	International Ethics Standards Board for Accountants
IFAC®	International Federation of Accountants®
IFIP	International Federation for Information Processing
IJDRR	*International Journal of Disaster Risk Reduction*
IoT	Internet of Things
IPD	initial professional development
IPCC	Intergovernmental Panel on Climate Change
IRBA	Independent Regulatory Board for Auditors
IRT	item response theory
ISCA	Institute of Singapore Chartered Accountants
ISFAP	Ikusasa Student Financial Aid Programme
IT	information technology
ITSs	intelligent tutoring systems
JIIII	*Journal of Industrial Information Integration*
JTSB	*Journal of the Theory of Social Behaviour*
LA	learning analytics
LCF	Laurillard's Conversational Framework
LMS	learning management system
LMSs	learning management systems
LSE	London School of Economics and Political Science
MBA	Master of Business Administration
MBH	Mamelodi Business Hub
MC	micro-credentials
ML	machine learning
MOOCs	massive open online courses
MUT	Mangosuthu University of Technology
NEPAD	New Partnership for Africa's Development
NHC	National Heritage Council
NIHSS	National Institute for the Humanities and Social Sciences
NQF	National Qualifications Framework
NRF	National Research Foundation
NSFAS	National Student Financial Aid Scheme
NWU	North-West University
OECD	Organization for Economic Co-operation and Development
PAs	professional accountants

PABs	professional accounting bodies
PGCE	Postgraduate Certificate in Education
PGDiP	Postgraduate Diploma in Higher Education
PRME	Principles for Responsible Management Education
PSSA	Psychological Society of South Africa
PYEI	Presidential Youth Employment Initiative
PwC	PricewaterhouseCoopers
RAU	Rand Afrikaans University
RDF	Researcher Development Framework
RPA	robotic process automation
RSA	Republic of South Africa
SAAA	South African Accounting Association
SABPP	South African Board for People Practices
SACDA	South African Commerce Deans Association
SAICA	South African Institute of Chartered Accountants
SAIMS	Southern African Institute for Management Sciences
SAIPA	South African Institute of Professional Accountants
SAMRC	South African Medical Research Council
SAYAS	South African Young Academy of Science
SCT	socio-cultural theory
SDGs	sustainable development goals
SERs	self-evaluation reports
SMME	small, medium and micro enterprises
SOC	systems organisation and control
SSIRC	Social Sciences International Research Conference
T&L	teaching and learning
TAU	Teaching Advancement at Universities
UbD	understanding by design
UCL	University College London
UEF	University of Eastern Finland
UFS	University of the Free State
UJ	University of Johannesburg
UK	United Kingdom
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UP	University of Pretoria
UPBI	University of Pretoria Business Incubator

VC	Vice-Chancellor
VR	virtual reality
WBS	Wits Business School
WEF	World Economic Forum
WHITRAP	World Heritage Institute of Training and Research for Asia and the Pacific
WiBE	Women in Business Education
WiL	work-integrated learning

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Preface

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South African commerce faculties are at a turning point in their history. The changes in the international business environment since 2010 have accelerated during and after the coronavirus disease 2019 (COVID-19) pandemic and have reshaped the world of work. Globally, business schools (the equivalent international term for commerce faculties in South Africa) have and are continuing to engage, discuss and research how to effectively adapt and restructure curricula, modes of delivery and research foci to remain relevant. Dynamics as diverse as rapid digital transformation, global imperatives such as the sustainable development goals (SDGs) and, in particular, challenges such as climate change are reshaping the business world. If commerce faculties do not adapt to this rapidly, they will be left behind globally and by other agile and up-and-coming providers.

This book originated from a number of discussions with and by the South African Commerce Deans Association (SACDA). During the June 2022 SACDA meeting, the commerce deans expressed their tentative interest in a research project on rethinking the future of commerce education in South Africa. The detailed proposal by the volume editors of this book was presented to the SACDA members in November 2022. The SACDA deans then provided their full support for such a project. During this meeting, it was made clear that all participating faculties will be invited to submit detailed proposals for chapter contributions based on original scholarly research.

Preliminary broad themes were identified, but contributions were not limited strictly to these broad themes. The most important criteria set for contributions were the expectation that these should be based on original, scholarly and innovative research, should be applicable to a broad range of South African commerce faculties and should preferably not be limited to individual institutional dynamics.

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Since early in 2023, three calls for chapter contributions have been distributed to all commerce faculties. Twenty-five proposals were received, which were reviewed for their originality and scholarly content. After a subsequent review process, when the completed draft chapters were received, fifteen chapters were finally selected for publication. The editors are convinced that the accepted chapters are all scholarly and original and will contribute to rethinking and reshaping commerce education in South Africa. The accepted chapters are also from a wide range of academics located at commerce faculties across the length and breadth of South Africa.

This scholarly book commences with a chapter on the drivers of change, followed by three broad themes, namely, rethinking student support and preparedness, rethinking the role of the academic and rethinking the curriculum and classroom. The outline of the fifteen chapters is as follows:

Chapter 1, ‘Rethinking commerce education: Why do we need to adapt or change?’, explores the changing global business landscape during two important periods: the pre-pandemic decade (2010–2019) and the pandemic and post-pandemic periods from 2020 onwards, sharing examples of how business schools internationally have responded to the changing global environment. This is followed by an overview of the enrolments in commerce education at South African higher education (HE) institutions to understand the national demand and supply dynamics. Within this changing global environment, the chapter offers recommendations on how South African commerce programme offerings, curricula, modes of delivery and research foci need to adapt. The author emphasises the urgency for commerce faculties to prepare themselves for a journey into the unknown by positioning themselves in rapidly changing global, continental and local business environments. Cognisance must be taken of the global forces such as the digital transformation, the increasing demand for micro-credentials, the commodification of qualifications and the new generation of students entering the HE space. It is important not to ignore the importance of global collective societal challenges as represented by the SDGs and climate change.

■ Rethinking student support and preparedness

Chapter 2, ‘The future of commerce education: Facilitating student success in commerce faculties in South Africa’, highlights the well-researched fact that students in South Africa have low success rates and high dropout rates. A bursary scheme to assist indigent students was introduced by the government to improve access, but strict rules limit the completion times of degrees funded under this scheme. This chapter focuses on improving first-year student success as that appears to be the crux of the problem, and in doing so, it attempts to improve the minimum time to completion. The chapter suggests ten interventions that are generic and relatively easy to implement in any commerce faculty that typically struggles with resource constraints. The interventions were designed to assist first-year students in overcoming the problems typically experienced when adjusting from the school environment to the university environment. Therefore, the overarching objective of the chapter is assisting commerce faculties in ensuring that their first-year students perform optimally during their first year and are thus set firmly on the road towards completing their undergraduate degree in minimum time and becoming future-fit business leaders.

Chapter 3, 'A holistic approach to preparing students for the future world of work: Towards a conceptual framework', presents a holistic approach to preparing students for a future marked by technological innovations such as blockchain, data analytics and machine learning. Critiquing the insular nature of current HE structures, the authors call for a paradigm shift that transcends mere specialisations, emphasising the development of skills like critical thinking, adaptability and resilience. Drawing on various academic sources, the chapter highlights the discrepancies between academia's understanding of digital transformation and its implementation. The authors stress the importance of cognitive abilities and behavioural skills while also reflecting on the implications of generative artificial intelligence (AI) for future skills. Ultimately, the chapter serves as an invitation to rethink and reshape how we educate students for an uncertain future.

Chapter 4, 'The future world of work for professional accountants: The top employability skills that the industry expects from university graduates', identifies the top future employability skills that digital accountants must have in response to disruptions caused by the rapid advancements in Fourth Industrial Revolution (4IR) technologies, increased business legislation, scarcity of resources and climate change, globalisation and unending auditing scandals. These disruptions demand future professional accountants to have highly developed technical skills complemented by well-developed digital and data analytics, professional ethics and personal and interpersonal skills to continue supporting their organisations in creating and sustaining value ethically and sustainably. Digital, data analytics and interpersonal skills such as communication, problem-solving, decision-making, critical thinking, adaptive mindset, relationship-building and emotional intelligence will be key to career success. As part of the professional accountancy training ecosystem, universities must redesign their accountancy programmes' curricula to fuse these skills to produce employable graduates.

Chapter 5, 'Valuable lessons learnt from the Presidential Youth Employment Initiative Internship Programme', examines the impact of the Presidential Youth Employment Initiative (PYEI). The PYEI sought to offer unemployed university graduates with no relevant work experience the opportunity to obtain practical workplace exposure and experience in their specified disciplines. Exit interviews were conducted at the end of a year-long internship programme at the University of Fort Hare. The interns were asked to reflect on three aspects of their internship experience: (1) the lessons learnt, (2) challenges faced and (3) suggestions to improve future internship interventions based on their experience. The findings show the efficacy of internships as a tool to enhance the employability of graduates. Further, the findings show aspects that need improvement to enhance the impact of such internship efforts.

■ Rethinking the role of the academic

Chapter 6, 'Framework for academic success: Roles and responsibilities of both students and lecturers', draws from self-determination theory principles to present a framework that identifies key attributes that both students and lecturers must possess to ensure optimal learning outcomes. Hidden barriers to learning are identified, as well as self-regulatory strategies that students can internalise to be able to adapt to the changing expectations of their courses. The role of lecturers in ensuring that students are introduced to the discourse of their disciplines and the importance of aligning teaching and assessment practices are also emphasised. The framework also highlights the need to have effective socio-emotional support structures in place and to develop holistic evaluation and monitoring systems at an institutional level. By combining feedforward and feedback information to both students and lecturers within the proposed framework, targeted interventions can be implemented to achieve lasting improvements in throughput rates.

Chapter 7, 'Towards inclusive teaching and learning practices: A guideline for commerce academics', investigates the frustrations of black students enrolled for commerce qualifications as a means to inform practical modifications in teaching practices. The massification of HE has led to racially and socioeconomically diverse student cohorts in South Africa, but success rates among black students remain disproportionately lower. This chapter investigates the frustrations of black commerce students and offers practical guidelines for improvement by the commerce academics. The qualitative study explored the lived HE experiences of 22 recently-qualified black chartered accountants, representing various institutions.

Frustrations were found to stem from university cultures, student competitiveness, high attrition rates, linguistic and social challenges. The study proposes ways to address these issues to promote inclusive educational experiences and improve success rates among black students in commerce qualifications. The findings herein contribute to the scant scholarship within commerce on responsive education systems. They further equip academics with the tools to deliver inclusive educational experiences.

Chapter 8, 'Digital transformation trends in commerce education influencing the future business professor: Skills, challenges, and implications', explores the competencies needed by university professors for innovative teaching and learning in the digitally transformed HE landscape. Findings indicate that professors found it challenging to contribute towards technological innovations within their discipline, impacting the preparation of students for the digitally enhanced workplace. Because of the global shift within HE, future implications include that professors must develop technology-based skills and pedagogical knowledge to enhance student engagement and learning in an online and digital environment. To achieve the successful design, implementation and evaluation of education, lecturers must develop specific digital skills, such as formulating a problem in the subject field which students have to solve using technology, the ability to actively, creatively and critically understand and use data, implementing new information technology (IT) tools and a critical approach to the use of the Internet and social media. In addition, future commerce professors' professional conduct must be directed by lifelong learning regarding innovation, collaboration and communication, skilfully using technology for teaching and learning while empowering students for a digital society. In this regard, professors need to be skilled in incorporating technology into teaching and learning to enhance students' digital literacy for living, learning and working, as well as application within graduates' future professions.

Chapter 9, 'Rethinking doctoral education for future academics and business leaders', is a conceptual contribution that focuses exclusively on South African doctoral education in the commerce field. It is premised on a broad view of doctoral education that extends beyond thesis completion and successful examination to encompass the processes of scholarly growth and identity development that should be an important part of doctoral education. The starting point is a discussion of the Council on Higher Education's (CHE's) findings and recommendations regarding education provision and academic support in South African doctoral education after the national review of doctoral qualifications. In the second half of the chapter, curriculum and pedagogy perspectives are considered on how doctoral programmes might be improved. It is suggested that more structured learning opportunities focused on developing doctoral attributes would not only improve postgraduate outcomes for institutions but also enrich the postgraduate learning experience and the contributions that doctoral candidates can make after graduation.

Rethinking the curriculum and classroom

Chapter 10, 'The future of commerce education: Utilising Open AI for effective teaching and learning', explores the use of generative AI in enhancing commerce education, focusing on OpenAI's GPT series, particularly ChatGPT. OpenAI's mission is to ensure that artificial general intelligence (AGI) benefits humanity. The GPT series, known for producing human-like prose, is a part of the generative AI paradigm, which uses trained data to generate unique content. These AI models have been applied to various tasks, such as text production, analysis and natural language processing. The chapter underscores how commerce can leverage technologies like ChatGPT to generate complex writing that is indistinguishable from human-written text. However, it also highlights the potential moral, legal and societal challenges such technology poses.

Chapter 11, 'How blended learning can be used to stop the convenient excuse of not innovating because of large classes and resource constraints', explores how blended learning can be used to manoeuvre the academic timetable to create small and intimate sessions where traditional class sizes are beyond a figure of 500 students. The purpose of this innovation is to deal with complex module content and the development of soft skills. The findings indicate that the activities derived from this innovation have improved student behavioural and social engagement with the module content, academic staff and fellow students. The innovation took a module group of 1,000 students and broke it down into classes of 20 in which the activity was conducted, all of which occurred within the confines of the academic timetable and the respective week in which the content was delivered.

Chapter 12, 'Developing the ethics competence of future business leaders: Challenges in higher education', examines various ethics competence development frameworks used in ethics education and identifies key challenges in ethics education in developing future business leaders. Ethics education (a key part of developing ethics competence) for future business leaders is discussed, with reference to the accountancy profession. It is argued that professional accountants often fulfil the roles of business leaders in business and society. Several challenges to the effective implementation of ethics education for accountants as future business leaders are, however, identified. Among others, disagreements among educators on the ethics education content to be taught to effectively increase ethics competence; lack of consensus on the objectives of ethics education; disagreement among educators on whether ethics should be taught as a stand-alone module or integrated with other subjects; and disagreement on which faculty ought to present ethics education to business students.

Chapter 13, 'The role of education curricula in creating ethical business leaders for the future', highlights the critical role of educational curricula in shaping ethical business leaders. It argues that in today's business landscape, ethical leadership is vital because of increasing demands for ethical standards and social responsibility. To achieve this, the chapter explores effective pedagogical strategies like active learning and case studies, as well as cognitive learning theories such as constructivism and social learning theory. It advocates for integrating ethics education into existing courses and creating dedicated ethics courses to prepare future leaders for ethical challenges. The chapter emphasises universities' and business schools' role in fostering ethical behaviour, conducting research, forming partnerships and leading by example. In conclusion, it offers recommendations for collaboration among stakeholders to develop impactful ethics education programmes and produce a new generation of ethical business leaders.

Chapter 14, 'Responsible management education in Africa: Teaching sustainable business strategies', explores the process of teaching sustainable business strategies. The chapter interrogates the context of South Africa, theoretical perspectives on sustainable businesses and a novel methodology. Following the Impactful Five (i5) learning methodology developed by the United Nations (UN) Principles for Responsible Management Education (PRME), an integrative sustainable business strategy curriculum is presented. The overarching design of this curriculum moves education from a performativity to a process of learning that fosters both joy and well-being, makes learning meaningful, develops supportive social interactions, facilitates active engagement and designs for iteration. Rethinking commerce education in South Africa requires that educators pay close(r) attention to the context, opportunities and challenges that commerce students and businesses face. This contribution presents a useful pedagogy and recommends its application within South Africa and more broadly in Africa.

Chapter 15, 'Unlocking the power of micro-credentials in commerce degrees: A practical example', investigates how to use micro-credentials (MCs) to enhance and assess soft skills in a teamwork-based module for commerce students. The chapter focuses on project management behavioural aspects using game-based learning principles as a subset of MCs. Reconsidering traditional teaching methods and addressing the demand for work-integrated skills have become imperatives in HE. Higher education institutions must incorporate technical and professional skills into their curricula to adapt to these changes. However, integrating and assessing these skills pose significant challenges. The findings of this chapter contribute to the ongoing discussion on the value and implementation of MCs in commerce education. By incorporating badges into the commerce curricula, one can provide students with a comprehensive assessment of their soft skills, improve their employability and meet the demands of the rapidly changing job market. Additionally, this chapter sheds light on the need for standardised methods to evaluate and assess soft skills, ultimately benefiting both students and business employers.

Chapter 1

Rethinking commerce education: Why do we need to adapt or change?

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'By failing to prepare, you are preparing to fail.' – Benjamin Franklin

Introduction

Faculties of commerce, also known as faculties, schools or colleges of Economic and Management Sciences in South Africa – or schools or colleges of Business as they are generally known in the international context – have, over the past century, played a crucial role in providing the business world with a workforce that is driving and making an impact on economies and societies around the world. Recent estimates show that there are approximately 334 million businesses in the world (BusinessDIT 2023). Most of these businesses will appoint graduates with qualifications in business – whether it is accountants, tax professionals, auditors, business managers, supply chain managers,

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human resource specialists, marketing experts or economists. Questions arise about the extent to which business schools internationally have responded to changes in the business world and adapted their programmes accordingly, as well as what lessons South African commerce faculties could learn from their experiences.

The world has experienced significant new technological advancements and related digital transformative developments since the year 2000, especially after the global financial crisis in 2010. Parallel with these advancements, the importance of sustainable development also started to take shape in the mindset of the world of business. These two major streams of new developments gained momentum when the coronavirus disease 2019 (COVID-19) pandemic erupted a decade later. The subsequent changes in the global geopolitical and economic landscapes have provided new challenges but have also given rise to even greater opportunities. These rapidly changing global dynamics have an impact on business as well as on society. As it is our role as commerce faculties to provide suitably skilled, competent and adaptable graduates to the market, it is important to take note of these changing dynamics and adapt programmes, curricula and modes of delivery to align with the needs and requirements of a continuously changing business environment.

This chapter will first explore the changing global business landscape during two important periods: the pre-pandemic decade (2010–2019) and the pandemic and post-pandemic periods from 2020 onwards. Selected examples will be shared of how business schools internationally have responded to the changing global environment during the selected periods. This will be followed by an overview of the enrolments in commerce education (termed Business and Management studies according to the Department of Higher Education and Training [DHET]) at South African higher education institutions (HEIs) to understand the demand and supply dynamics in these fields. The final part of this chapter will discuss the international trends and innovations South African commerce faculties need to take notice of and how commerce programme offerings, curricula, modes of delivery and research foci need to adapt. The chapter concludes with concluding remarks.

It is important to note that for the purpose of this book, *commerce qualifications* in South Africa refer to all qualifications in Business and Management sciences. According to the DHET (2017), it includes all business majors in accounting, management, economics and all other business-related majors, such as marketing. In the international context, it is important to note that the equivalent reference term used is *business schools*.

Changing global business environment and international business school responses

The global economic, business and geopolitical environments have experienced an avalanche of events in the past two decades that are already reshaping the current and future business landscapes in multiple ways. The indications are that these events already have a sequential spillover effect on business school programmes.

These events can be classified into two distinct periods: the period following the global financial crisis (2010–2019), the pre-pandemic period, followed by the period since the outbreak of the COVID-19 pandemic (2020 and beyond), termed the pandemic and post-pandemic periods.

The pre-pandemic period

While the period following the year 2000 was characterised by technological advancements in business and society, the global financial crisis in 2008 erupted mainly because of risky business models and unethical managerial conduct (Fournier & Thomas 2022). The pre-pandemic period, better known as Globalisation 4.0 (Vanham 2019), kicked off with the recovery of the global economy after the impact of the global financial crisis of mid-2007–2009.

The major events that dominated the period 2010–2019 are:

- the post-global financial crisis and the associated business management responses
- the rise and influence of social media
- political shifts towards nationalism and anti-globalisation
- a growing realisation of the negative impact of climate change
- the announcement of the United Nations (UN) sustainable development goals (SDGs) in 2015
- the advent of the so-called Fourth Industrial Revolution (4IR).

From this list, the three distinct developments that influenced or reshaped the business landscape and that need further elaboration are the 4IR, the adoption of the SDGs in 2015 and climate change.

The 4IR stands at the centre of the new global order (Schwab 2016). Technological innovations and developments that are taking centre stage as part of this new technological revolution include:

- autonomous vehicles
- biotechnology

- data technology (big data)
- artificial intelligence (AI)
- nanotechnology
- crypto and blockchain technology (bitcoin and other cryptocurrencies)
- quantum computing (quantum computers that could discover new drugs, monitor neurons through a bath cap, etc.)
- the Internet of Things (IoT)
- three-dimensional (3D) printing.

The seventeen SDGs and their 169 targets, also known as the 'global goals', build on the eight UN millennium development goals of 2000 and are a universal call for action to end poverty, protect the planet and ensure that by 2030 all people enjoy peace and security (UN 2015). The SDG document highlights five areas of critical importance, namely, people, planet, prosperity, peace and partnerships (UN 2015). With the announcement of the SDGs, the UN has called on all role players on the planet – including business leaders – to take responsibility for shaping the global agenda in the interest of future generations.

Coinciding with the announcement of the SDGs, particularly SDG 13 and climate action, a greater global awareness was created around the urgency of climate action. It was further elevated by the failure to reach the commitments initially made under the 1997 Kyoto Protocol that was supposed to expire in 2012. The signatories subsequently accepted the Paris Agreement in 2015, which included a revised set of reduction measures to comply with from 2020 onwards (Down to Earth 2009).

Globally, environmentalists and other lobby groups have started to play an important role in making business leaders more aware of their negative business practices and responsibilities in curbing climate change. The World Economic Forum (WEF), annually attended by business leaders (and politicians) from around the world, has also played a significant role in creating greater awareness among prominent business leaders by including climate change themes into their annual event agendas, particularly so since 2015 (WEF 2015). At the 2015 event, it was suitably and profoundly stated that '[t]here is no Planet B' (WEF 2015, p. 6).

During this decade, business schools globally started to become more occupied with these wider challenges and developments in the global business environment and how to respond to these. As far back as 2010, Bisoux (2010) reflects on the lessons learnt after the global financial crisis and highlights the greater awareness among business leaders of environmental challenges as well as the responsibility of the role of business in society. Bisoux emphasises the importance of incorporating sustainability into business school curricula.

Iannarelli (2016, p. 44) states that business schools 'must become drivers of change, not casualties of it' and suggests the following five roles that business schools must play to remain relevant: they must become catalysts for innovation, hubs for lifelong learning, co-creators of knowledge, leaders on leadership and enablers of global prosperity. To achieve these roles, Iannarelli further emphasises the importance of partnerships with industry, interdisciplinary connections and innovative educational practices.

Van Dam (2018) builds on these suggestions and emphasises the importance of business schools servicing lifelong learners and staying abreast of technological advancement and changing educational models. Van Dam highlights two broad trends that are shaping the digital age, namely, an acceleration in the rate of technology adoption and the disruption caused by technologies. In line with these developments, the skills required are also evolving. Van Dam refers to a McKinsey & Company report that concludes that the 21st-century skills required to keep up with technological advancements will most likely lead to 33% of jobs requiring workers who could solve complex problems, 20% of jobs requiring social skills and 15% of jobs requiring cognitive skills, such as creativity and mathematical reasoning. It is important for business schools to take cognisance of these skill requirements and adapt their programmes accordingly.

Perkins (2019, p. 57) reported on a survey conducted under stakeholders, indicating that students need earlier exposure to 'topics of ethics, teamwork, innovation, decision analysis, spreadsheets use and data visualisation'.

It was also during this decade (2010–2019) that business schools internationally started to look at their modes of programme delivery. The first notable shift took place in 2010, when large numbers of open online courses – known as massive open online courses (MOOCs) – entered the higher education space and provided a flow of lecture material in a different format than previously known (De Meyer, Bieger & Xavier 2022). During this decade, learning management systems (LMSs) were also developed and refined to support and supplement lecture content. With the support of the LMSs, a hybrid teaching and learning approach was also widely introduced to take advantage of digital and e-technology platforms (Duncan 2022).

Similarly, during the pre-pandemic decade, a range of global innovations and developments started to reshape the business world. These trends and their expected impact on Business and Management programmes were debated and discussed at various international business school forums, such as at the Association to Advance Collegiate Schools of Business (AACSB) and the European Foundation for Management Development

(EFMD) meetings and are reflected in their publications as well as in conference themes. On an institutional level, the *University World News* (global and African editions) opinion pieces are also involved in these debates. Globally, business schools have become more aware of the 4IR technological advancement drivers and associated digital transformation requirements for their educational models and programme offerings. Parallel to these technological advancements, the announcement of the SDGs and the increased importance of these sustainability targets for businesses and society received prominent attention from various international business school forums and publications. These focused on the importance of incorporating it into programmes, curricula, research agendas and strategic endeavours. Business schools worldwide have also started to utilise social media platforms for marketing purposes and to communicate with students. However, the uptake of technology in educational models was gradual, except for some pockets of excellence. The same applies to incorporating SDGs in curricula and in research themes. What was of importance during this decade was the fact that globally, business schools were sensitised to these new developments and started to incorporate them in some way or another in their strategic endeavours.

The pandemic and post-pandemic period

The pandemic period and beyond, covering the period from 2020 onwards, has been a disruptive period worldwide. The various global episodes have had – and are still having – significant spillover effects on business and society. Early indications suggest that the events over the past four years could cause significant paradigm shifts in the way Business and Management programmes are structured and delivered.

The following key occurrences characterised this period up to the present:[1]

- The outbreak of the COVID-19 pandemic and its economic consequences.
- The emergence of the Fifth Industrial Revolution (5IR) as reflected in further technological advancements of the 4IR and, in particular, the speed with which it is developing.
- The increased demand for micro-credentials and the trend towards the commodification of knowledge.
- The continuing broader sustainability challenges.
- The entrance of centennials into the higher education system.

1. Although the Russian–Ukraine War and the subsequent geopolitical destabilising events caused significant economic and geopolitical disturbances, the impact on the global business school environment has been limited to the affected countries and their direct neighbours. The indirect spillovers are, however, covered.

The outbreak of the COVID-19 pandemic early in 2020 disrupted societies and the world of business and undoubtedly caused the biggest external shock to hit the global higher education (HE) fraternity over the past 40 years. Face-to-face learning institutions had to embark on fully online delivery (emergency remote teaching) at very short notice. Fournier and Thomas (2022, p. 13) refer to this period as causing a 'tectonic, disruptive jolt' that required curriculum and delivery redesigning and restructuring at a speed never experienced by the current generation of academics and students.

The pandemic highlighted the slow pace of digital transformation of many HEIs around the world and forced them to embrace the digital management of their educational models and to take concrete steps to investigate and utilise all the digital platforms and delivery modes available. The speed of technological advancement, which had already started to gain traction prior to the pandemic, gathered new momentum in the HE space. The LMSs were restructured to provide new learning instruments, such as online assignments, quizzes, video clips explaining content, recorded or pre-recorded lectures and blogs (De Meyer et al. 2022). At this time, curricula were adapted to make provision for online delivery and online assessments were implemented. With the associated occurrence of unethical student behaviour, many institutions subsequently embarked on investing in proctorial and plagiarism detection software (Duncan 2022). The pandemic has also facilitated the modification of the hybrid educational model into a so-called *Hyflex* model whereby lectures could simultaneously be attended by students and live-streamed to other students (Duncan 2022).

The emergence of the 5IR, as manifested in the speed of technological advancement that already started to gain traction during the 4IR period, gathered new momentum in the business world. Eighty per cent (80%) of CEOs participating in the 22nd PricewaterhouseCoopers (PwC) Chief Executive Officer (CEO) Survey in 2018 indicated that AI would significantly change the way business is conducted within five years (PwC 2019). This prediction proved to be in line with the latest digital advancements. The rapid development of generative AI and the speed with which ChatGPT has been adopted is still disrupting HEIs, on the one hand, while, on the other hand, also opening a host of innovative opportunities to adapt curricula, assessments and lectures. Furthermore, HEIs have also embraced augmented and virtual reality to enhance the classroom experience.

The demand for micro-credentials has also increased at a more rapid pace. With the emphasis on lifelong learning, the rising costs of HE and the growing access to digital educational platforms, micro-credentials are becoming more prominent. Micro-credentials are seen, according to Pond

(2023, p. 12), as ‘short, flexible, stackable, affordable, inclusive qualifications focused on skills development’ and may be credit-bearing or non-credit-bearing. This trend has already entered the international business school space, and institutions are trying to grasp how to manage the articulation thereof with their mainstream programmes.

In line with the demand for micro-credentials is the trend from prominent companies – mostly tech-driven companies – not requiring a degree as an entry requirement to employment. An expanding list of companies embarked on this route, including the likes of Apple, Google, IBM, Bank of America, Dell, Okta, Penguin Random House and Netflix (Dodd 2023; Tamta 2023). The driving force behind this decision is labour shortages in areas that include predominantly, yet not exclusively, tech skills such as cybersecurity, platform engineering, network administrators, tech marketing and tech sales. According to Dodd (2023), Google’s recruitment for bachelor’s degree candidates fell from 93% to 77% between 2017 and 2021. Duncan (2022) also notes that Google offers Google Career Certificates in just six months through freely accessible MOOCs. Saracco (2022) concludes that the commodification of knowledge is closely associated with the growing influence of large electronic and information technology companies, also known as e-tech companies.

In contrast with the significant digital advancements, the pandemic triggered a severe disruption in the earlier progress made on reaching the SDGs by 2030. The *Global Sustainable Development Report 2023* (based on 2022 data) notes that ‘the challenges have multiplied and intensified’ (UN 2023, p. 6). The UN (2023, p. 6) goes further and ascribes it to ‘a confluence of crises – the ongoing pandemic, rising inflation, and the cost-of-living crisis, and […] environmental and economic distress, along with regional and national unrest, conflicts, and natural disasters’. Despite all these technological advancements, the aftermath of the pandemic and the global geopolitical tensions are causing multiple dilemmas to society. This includes increasing climate change challenges, growing inequality, the slipping of democracy, mounting populism and persistent armed conflicts (Zeleza 2022).

Higher education institutions are now also facing the entry of the so-called centennials (also known as Generation Z). The centennials include those born between 1996 and 2012. This generation of students does not know a world without the Internet and social media. According to Valk (2019, p. 56), based on a survey conducted among the students from the American University of Dubai, this generation is ‘entrepreneurial, creative, ambitious, persistent, realistic and self-sufficient’. This generation of students requires a different educational model than the millennials and will also enter a vastly different world of work where adaptability and lifelong learning will be minimum expectations.

These mentioned factors all have an impact on business school education. On the one hand, Hommel and Meyer (2023) remark that Industry 5.0, or the 5IR, is a step forward and that business schools need to urgently catch up. On the other hand, the global sustainability challenges remain, and business schools need to play a more prominent role as sustainability issues are inextricably linked to business matters. Galdón et al. (2022, p. 29) emphasise the responsibility of business education by stating: 'As business schools, we must embrace our responsibility urgently, meaningful and publicly'. This group represents prominent business school leaders from INSEAD in Fontainebleau, France; Oxford University's Saïd Business School in Oxford (United Kingdom [UK]); IE University in Madrid, Spain; London Business School in Regent's Park, London (UK); and the International Institute for Management Development. Hommel and Meyer (2023) go further by arguing that the business schools of today need to continuously rewind and transform to be more flexible, agile, inter- and multidisciplinary, and embrace research that is impactful. Bach (2019) discusses the role business schools need to play by emphasising the importance of a dialogue with society as well as the importance of multidisciplinary research on big issues and solutions.

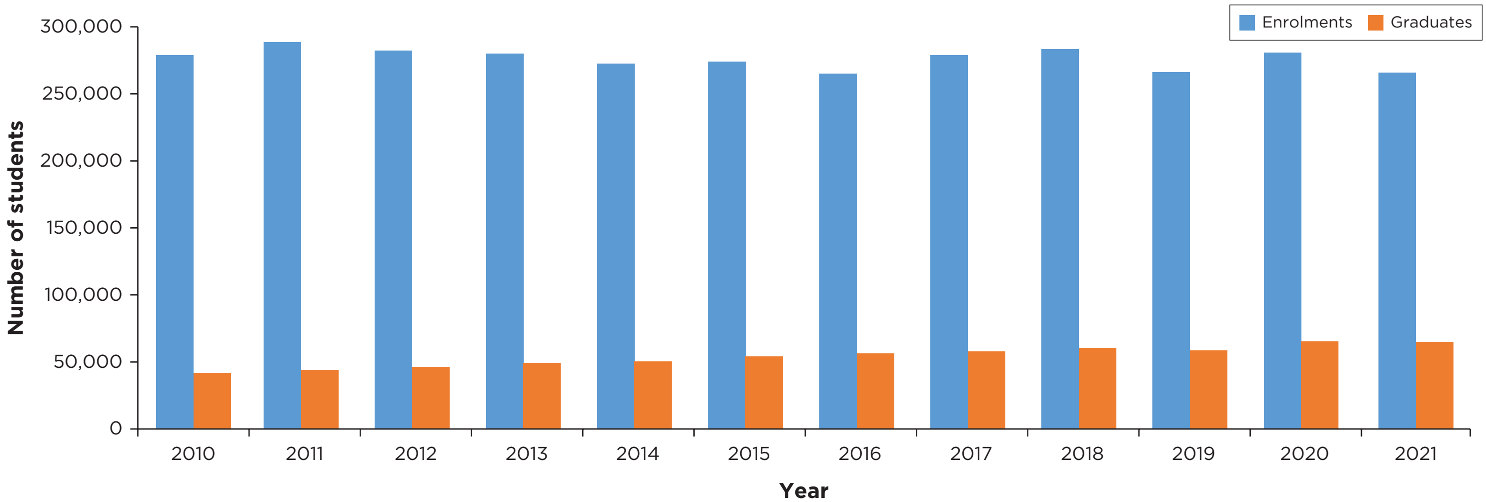
All these global developments are shifting the traditional goalposts of structure, delivery and research foci of commerce education as we know it.

The South African commerce higher education landscape

Commerce (or Business and Management fields, according to the DHET) HEI enrolments continue to grow. These faculties and schools at HEIs provide a sustainable flow of graduates to the labour market. They form an important part of the HEI landscape in South Africa and make crucial contributions to the financial sustainability of HEIs. Students are enrolling at either public or private HEIs.

Public HEIs enrolments in the fields of Business and Management at the 26 universities have remained stable over the past twelve years. The headcount enrolment numbers reached a high of 288,487 students in 2011 and have varied in a narrow band between 272,400 and 283,194 since then (see Figure 1.1). The decline in 2021 to 265,797 could partly be ascribed to the impact of the COVID-19 pandemic, as well as the increase in enrolments in private HEIs.

The enrolment numbers at the 124 registered private HEIs are only available from 2011 and have been based on audited student data only since 2016 (DHET 2023, p. 29). To demonstrate the growth of the private HEI, a total of 232,915 students were enrolled in all programme offerings



Enrolments	278,843	288,487	282,299	279,954	272,409	273,828	264,934	278,930	283,194	265,973	280,489	265,797
Graduates	41,657	44,155	46,042	49,051	50,381	53,863	56,364	57,772	60,459	58,668	65,336	64,971

Source: Department of Higher Education and Training (DHET) 2023, *Statistics on post-school education and training in South Africa: 2021*, DHET, Pretoria.

FIGURE 1.1: Public higher education institutions' Business and Management course enrolments and graduates, 2010–2021.

in 2021, showing a growth rate of an astonishing 126% since 2011. However, looking at the available breakdown, enrolments in Business and Management studies declined from 122,461 in 2019 to 120,145 in 2020, with a further decline to 117,265 in 2021 (DHET 2023, p. 31).

The total public and private HEIs enrolments in the fields of Business and Management in 2021 amount to 383,062, or 29% of all enrolments at HEIs, of which 70% are enrolled in public HEIs and 30% in private HEIs. The private HEIs in this field are expanding their enrolments noticeably, and that is at the expense of public HEIs, an aspect that public HEIs should take note of.

In contrast with the narrow band of movement in public HEIs' enrolments, the number of private HEI graduates has increased with 56% over the twelve years between 2010 and 2021 – from 41,657 in 2010 to 65,336 in 2020 and declining marginally to 64,971 or 27.9% of all graduates in 2021 (DHET 2023, p. 22). This improvement could be indicative of the intensifying initiatives to improve completion times. No details are published on the private HEIs' graduation rates per field of study, and this makes extrapolations on graduation challenging. However, based on the average graduation rate of 22% in public HEIs, it could be estimated that at least 26,000 students graduate each year in Business and Management fields at private HEIs, bringing the total graduates from private and public HEIs to approximately 90,972 per annum. This implies that one-third of all graduates per annum are graduating in the field of commerce.

With 383,062 Business and Management enrolments in 2021 and an estimated 90,972 graduates on all levels of commerce study per annum, it is important that the programme offerings remain relevant and can adjust to the rapidly changing business environment to ensure that the graduates are suitably skilled to make a positive contribution to the world of business.

■ Rethinking South African commerce education

Although South Africa has its unique set of challenges, its open economy forms an integral part of the global economy. The global business trends and dynamics have an important influence on the South African economy and on business and society in general. Taking the global developments over the past fourteen years into account, as discussed in this chapter, South African HEIs – and, more specifically, faculties of Economic and Management Sciences, faculties of commerce or equivalent schools or colleges in the commerce education space – need to align with the changing global business landscape and take note of the international trends in business schools.

There is a complex set of dynamics at play in South Africa. The country is, at present, trapped in a low-growth economic trajectory, a trend evident even prior to the pandemic. The gross domestic product (GDP) grew by a meagre 0.3% between 2019 and 2022 (StatsSA 2023a). This is, among others, limiting funding to HEIs in general as well as funding for disadvantaged students. South Africa also has a very unequal society, exacerbated by an official (narrowly defined) unemployment rate of 32.9% (StatsSA 2023b). The quality of the secondary school system is also variable, with learners entering the HE sector with diverse levels of preparedness for HE learning (Van der Berg & Hofmeyer 2018). As discussed earlier in this study, the demand for degrees in the broader commerce fields is still growing despite all the economic and socio-economic challenges.

The critical question that must be asked is: Do we want to be leaders, or will we be followers who need to adapt our programme offerings at short notice as we have not noticed trends and potential opportunities?

The most notable global business drivers, examples from the international business school environment as well as our country-specific dynamics, are all important forces that we need to consider in earnest in order to remain relevant. The most prominent influences are:

- technological advancements
- the trend towards micro-credentials and the commodification of knowledge
- the importance of the SDGs and, in particular, climate change
- managing the new generation of centennials
- changing expectations on graduate skills and attributes.

These are discussed in the following subsections.

Technological advancements

The technological advancement and the speed of digital transformation are compelling commerce faculties to stay abreast of these developments. In this respect, commerce education in the country has already started to transform. The 2015/16 #FeesMustFall period has inadvertently forced HEIs to experiment with the digital transformation of learning by moving to hybrid educational models. While this was still not sufficient to prepare HEIs for the COVID-19 shock when all face-to-face teaching was suspended at short notice, it has at least facilitated the acceleration in the pace of change. More than three years after the initial COVID-19 lockdown, most commerce faculties are in a much better place in their respective digital transformation journeys than prior to the pandemic.

Nevertheless, challenges remain. Apart from the technological limitations because of resource constraints at selected HEIs, the uptake is widespread. With the advancement of generative AI and the speed at which it is developing, the interest in including AI in educational models is expanding. A recent example, also mentioned earlier, is the arrival of ChatGPT. Commerce educators are already realising that it will change the way lectures, assessments and research will be managed. All HEIs are trying to adapt policies and provide guidelines on how it could be utilised in a constructive manner. These developments will require the transformation of lecturing material and assessments, as well as some form of upskilling of commerce lecturers.

Micro-credentials and the commodification of knowledge

The demand for micro-credentials that include short, flexible and affordable qualifications is on the increase. Adding to this is the demand for continuous skills upgrades through the concept of lifelong learning. The stackable degree concept has not yet taken off in South Africa and would need some careful planning and approval. Although some comprehensive institutions and Master of Business Administration (MBA) schools have already embarked on this route, it requires careful planning. On the positive side, it has the potential to increase the flow of third-stream income; however, it may also place additional pressure on existing lecturing staff.

The commodification of knowledge by industry has received limited traction and attention in South Africa. This may be a potential risk to commerce faculties should big businesses embark on a similar route to, for instance, Google, offering in-house certification.

Sustainable development goals and climate change

The challenges presented by the SDGs in South Africa and beyond our borders in Africa should be addressed as a shared responsibility between business and academia. As commerce educators, we need to expose students to the importance of sustainability in the broad sense and to the progress towards climate change. Several commerce faculties have already embraced the SDGs and have included them in programmes on various levels or in selected subject fields. It also forms part of selected research themes, for example, research on poverty and inequality, green economy and so forth. On an institutional level, several South African universities are participating in the Times Higher Education Impact

Rankings, demonstrating the importance of SDGs as part of their strategic endeavours.

As part of the broader sustainability debate, the addition of ethics, sustainability and governance (ESG) is receiving significant traction in business and investment decisions. It is important that students be exposed to these principles to enable them to have knowledge and awareness as part of their future roles in business and society.

The challenge remains as to what extent it has shifted the mindset of graduates to make a positive contribution on this level when entering the workspace. On the research front, SDG research is inter- and multidisciplinary in nature, which remains a complex undertaking for, especially, young and emerging commerce researchers.

The centennial student

The arrival of the centennials into our lecture halls poses a new set of challenges to commerce faculties. This group of students also comprises those who have been the most exposed to the impact of COVID-19 lockdowns either during their final schooling years or during their HE study periods. Taking the large commerce undergraduate class groups into account, additional interventions such as lecturer re-orientation, student support and curriculum restructuring would be required to entice this generation of students.

Graduate skills and attributes

With the changing world of work, employers have a vastly different set of expectations from graduates. In line with the expected future changes in occupations, the skillset requirements are also changing. Employers would like to employ well-rounded graduates who can *hit the ground running*. They require the addition of softer skills such as human resource management exposure, especially in the more numerical commerce programmes. Also in high demand are communication skills. Furthermore, various forms of data analytics and related technological skills are important. The unethical behaviour of many players in industry in the past has also highlighted the importance of ethical conduct, which will require exposure to modules on ethics. Valuable additions to this list could include cross-cutting skills such as critical thinking and knowledgeability.

Attributes such as understanding and embracing the importance of the SDGs and climate change are crucial for the world we live in. If we would like our graduates to be the responsible business leaders of the future, they need to appreciate the importance of people, planet, prosperity and peace.

Commerce faculties have made marked progress in transforming the chartered accounting programme and a select number of other individual programmes. However, it appears that these developments are more prevalent where professional bodies drive this change. Nevertheless, these international trends will, in time, require the transformation of entire commerce programmes, a major challenge facing commerce faculties at present.

Conclusion

In order to stay relevant, it is important for commerce faculties to prepare themselves for a journey into the unknown. This chapter discusses the importance of the fact that commerce faculties should embrace these new developments and position themselves in rapidly changing global, continental and local business environments. In this regard, cognisance must be taken of the global forces, including digital transformation, the increasing demand for micro-credentials, the commodification of qualifications and the new generation of students entering the HE space. In this process, it is important not to ignore the important global collective societal challenges as represented by the SDGs and climate change.

Commerce faculties have a unique skillset and a responsibility to guide the actions of organisational leaders to create a sustainable future, a role that we should fulfil by being responsible and proactive leaders. As commerce educators, we cannot predict the future; however, we can adapt our strategies, programmes and research foci to cater to it.

Rethinking student support and preparedness

Chapter 2

The future of commerce education: Facilitating first-year student success in commerce faculties in South Africa

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Introduction

It is a well-known and well-researched fact that students in South Africa have low success rates and high dropout rates (Lourens 2020; MacGregor 2020). While this may, as indicated in the literature, be a phenomenon highly prevalent in the higher education landscape across the board and more so in South Africa and other middle-income countries of the world, such as Bangladesh (Jony 2021, p. 288), it is not an ideal situation. This is especially true in countries with scarce resources as well as a large cohort of young people who need to upskill themselves to ensure that they are employable and capable of meeting the needs of a growing economy in a world of work that is becoming increasingly sophisticated and competitive. Given the extremely high unemployment rate in South Africa and the fact

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that obtaining a degree in South Africa is the most effective way of avoiding unemployment (Fraser 2023; Statistics South Africa [StatsSA] 2023, p. 8), improving the success rate of first-year students (and, indeed, for all students) is imperative for most young South Africans and their parents or sponsors. In doing so, more effective use will be made of funding provided to the tertiary education sector in the country, and more jobs will be created via small, medium and micro enterprises (SMMEs).

An added complication in South Africa is that many potential students from previously disadvantaged communities are not able to afford tertiary education because of financial constraints. To address this problem, in 1996, the South African government introduced a government bursary scheme whereby undergraduate students complying with certain household income requirements are financed to study at tertiary education institutions. This scheme, known as the National Student Financial Aid Scheme (NSFAS) and financed by the Department of Higher Education and Training (DHET), as well as local and international donations, covers tuition fees, accommodation, food and travel allowances for 'full-time' students (NSFAS 2023) for a maximum time of $n + 1$ and in exceptional cases $n + 2$ if students have a limited number of modules outstanding. The n represents the minimum time to complete a qualification, plus 1 (+ 1) refers to one additional year and plus 2 (+ 2) to two years beyond the minimum. This chapter will be particularly relevant to institutions and students who are largely financed by NSFAS. Given the high cost of tertiary education worldwide and in South Africa, this student funding scheme is ambitious and costly, with a budget allocation from the government in 2023 of nearly ZAR48 billion (Republic of South African [RSA] 2023). This amount excludes contributions from parents and private bursaries offered by businesses and other providers.

Furthermore, in 2022, the NSFAS bursary scheme introduced an additional limitation to ensure that these bursaries are utilised as effectively and efficiently as possible – this refers to the fact that students must complete their undergraduate studies in the minimum time allowed for the specific undergraduate degree plus a maximum of one year of grace ($n + 1$) and only in exceptional cases, where modules equal to less than a full academic year are outstanding, another additional year (that is, $n + 2$) (NSFAS 2023).

In view of this, it becomes even more important that students who benefit from government bursary funds complete their qualifications as soon as possible. Although several other measures of student success exist, such as a minimum time to completion (Burger & Naudé 2020, p. 625; Jony 2021, p. 289), this chapter will focus exclusively on improving first-year student success, as that is where the biggest problem appears to be (Uleanya & Rugbeer 2020, p. 32). This chapter is based on a case study conducted by the author during his term as deputy dean of Teaching and

Learning at the University of Pretoria (UP), Pretoria, South Africa. To facilitate the replication of proposed interventions elsewhere in the sector, this chapter will focus on intentions that are generic and relatively easy to implement in a commerce faculty that typically struggles with resource constraints.

Interventions that could improve first-year student success at South African tertiary institutions

The landscape of school education in South Africa is broadly divided into different tiers, namely, schools that fall under the Independent Examinations Board (IEB) (so-called independent schools) and public schools that fall under the Department of Basic Education (DBE). In the case of the latter grouping of schools, these can be classified into fee-paying schools (mostly Quintiles 4 and 5, so-called Model C schools) and no-fee schools (mostly Quintile 1–3 schools) (Van der Berg & Hofmeyer 2018, p. 12).

In the case of fee-paying public schools, part of the cost of providing basic education is covered by the government and the remainder by the learners' parents. This financial contribution made by parents may vary greatly and appears to have a substantial impact on the quality of schooling. By contrast, the budgets of non-fee-paying schools are covered by the government in their entirety.

This, in many instances, as well as other pressing socio-economic factors, has led to a perceived disparity in the quality of learners produced by the different school tiers (Burger & Naudé 2020, p. 626; Van der Berg & Hofmeyer 2018, p. 12). In addition, given the widespread problems with the qualification levels of teachers, especially in rural schools in South Africa, the level of career guidance and training in appropriate study skills and exam techniques in the different schools may differ and even be deficient in less-resourced schools. Despite these obvious problems in the basic education system, the fear of being labelled as racist when implementing discriminatory practices has led to most of the historically advantaged players in the tertiary education field finding it difficult to differentiate between learners from the different tiers and to implement differentiated and appropriate interventions.

The interventions listed in Table 2.1 were implemented (except for one intervention that was streamlined) during my term as Deputy Dean: Teaching and Learning at the Faculty of Economic and Management Sciences (FEMS) at UP and will serve as a case study to address the generic problems identified in the literature as well as practically at the university level by first-year students. These interventions could be introduced with

TABLE 2.1: Interventions to improve first-year student success.

Interventions supported by academic research	Practical interventions to alleviate the day-to-day problems of first-year students
Assist students to complete their degree of choice by introducing a largely generic first year to enable students to migrate and perform themselves into their degrees of choice using a specific set of transfer guidance.	Publish conduct rules to be followed by all students to inculcate professional communication and behaviour (including ethics).
Presenting literacy skills modules to assist students with lesser-developed language skills to optimise these skills.	Inform students of the value of completing their degrees in minimum time and doing this via developing time management and study method skills and highlighting prerequisites and other crucial academic rules.
Introduce IT skills modules to assist students who may not have good computer skills in developing these crucial world-of-work skills and inculcate these skills in different modules to ensure that the skills are reinforced.	Plan and stagger learning and assessment activities to ensure that students have an even spread of academic workload throughout the year.
Introduce a mentoring system especially for *first-generation students* so that the absence of academic guidance from siblings and parents can be countered via this system.	Introduce test weeks where no lectures are presented, enabling students to focus exclusively on summative assessments during such dedicated test weeks.
Implement an early-warning system so that first-year students are made aware of their progress or lack thereof in good time to enable them to turn the situation around.	Provide exam guidance to first-year students well in advance of exams to ensure that they are made aware of exam techniques, how to approach exam papers and possible problems surrounding the exam period.

Source: Author's own work.
Key: IT, information technology.

relatively low budgetary implications by an individual commerce faculty or university, and the majority will, in one way or another, assist in developing future-fit business leaders.

Discussion of proposed interventions

It was challenging to monitor the impact of the individual interventions listed over time at UP as these formed part of the entire integrated first-year experience project of the university that commenced late in 2014. Furthermore, many of these interventions were introduced simultaneously and, in certain instances, halfway through an academic year. It was also not possible to test the impact of the interventions by using a control group, as it would be unfair to expose certain students to some of the interventions while others are not exposed. This limitation is present irrespective of whether these interventions were introduced at the faculty level or at the institutional level.

Anecdotal feedback from students in FEMS and employers who in certain instances have indicated a preference for students who graduated at FEMS provides proof that these interventions are valuable and contribute to delivering a well-rounded student. Students who made use of the individual interventions attested to their value and the gradual improvement of student success rates at the first-year level in FEMS over time, from the high seventies in 2013 to just below the mid-eighties by 2022, confirming that the interventions were successful. First-year module pass rates at FEMS were already at a relatively high level by 2013, which was the year before these interventions were incrementally implemented for the first time at scale. Hence, the increase in the annual average module pass rate post-2013 was expected to be gradual and not dramatic. If one had started from a lower base, the impact of the interventions may have been more pronounced.

Other indirect yet valuable evidence of the usefulness and impact of these interventions came from the programme managers' feedback regarding the wraparound support programmes for the Thuthuka, Fasset and Ikusasa Student Financial Aid Programme (ISFAP) bursary schemes at UP. These schemes were all housed in FEMS. Under these bursary schemes, students are exposed to similar academic support interventions; however, partaking of such interventions is compulsory and can be enforced and monitored. As bursary students run the risk of losing their funding if they do not perform to expectation, control over their actions is available. However, because of human resource constraints, this is unfortunately not the case for other students in the faculty who do not form part of these wraparound programmes. The results of taking part and being monitored while partaking in all interventions are evident from the much higher pass rates of students in these programmes compared to those of the remainder of the first-year cohort in FEMS.

The ten interventions introduced over time to address problems experienced by first-year students in FEMS at UP are now discussed individually.

Facilitating migration to a chosen degree

Research has shown that students invariably perform better if they are enrolled for a degree of their choosing. Based on studies conducted in Bangladesh (Jony 2021, p. 292) and Spain (Lauró et al. 2023, p. 14), students and tutors interviewed considered this to be one of the most important factors contributing to student success. This is confirmed locally (Kilfoil 2021, p. 32) with information from a decade-long longitudinal study by the Higher Education and Innovation Research Unit in South Africa. This study indicated that the incorrect course choice or not being admitted to their degree of choice is the most common reason for students dropping out of university. Although a wide range of reasons exist for dropping out of university that are beyond the control of universities, students sometimes fail to meet the admission requirements of their degree of choice by a relatively narrow margin.

In FEMS at UP, the discriminating factors between different commerce degrees are the level of achievement required for Mathematics and Admission Point Score (APS). The APS excludes performance in Life Orientation, and all FEMS commerce students are expected to have achieved a score of at least five for English, four for Mathematics and an APS of 30. Students will thus fail to be admitted to their degree of choice for one of these two reasons.

To assist students in this predicament and to afford them an opportunity to eventually complete their degree of choice or a more appropriate degree and be a successful graduate, a largely generic first year was introduced in FEMS. By introducing this generic first year, the faculty created a more fluid academic pathway and provided students with the opportunity to migrate to and perform themselves into their degrees of choice or a more suitable degree if they initially selected the wrong degree. This is achieved by using a specific set of published transfer requirements, namely the EMS Transfer Guide. This document spells out the different transfer hurdles and requirements that transferring students must adhere to. Requirements were carefully selected to enable a transfer to their degree of choice without setting students up for failure. The transfer process unfolds as follows: When enrolling for the generic first year at FEMS at UP, all commerce students are registered for the following core academic modules, namely accounting, business management, economics and statistics. As mentioned earlier, all students must enrol for the English language and academic literacy module to develop their language, reading and writing skills (for more detail, refer to the later section titled 'Developing language skills to university level') and an information management skills module to develop their IT competencies (for more detail refer to the later section titled 'Developing computer literacy skills').

After successfully completing all their prescribed generic first semester modules, students are allowed to then apply to migrate to their degree of choice or a different degree in the faculty if they initially chose the wrong degree. The migration is not automatic, and students are only allowed to move to their target degree at the end of their first semester at FEMS if the target degree has the same or a lower Mathematics admission requirement or APS requirement as their current degree. Furthermore, they are only allowed to apply for a transfer if they have passed all modules enrolled for during their first semester or year and they achieved the set hurdle rates per the EMS Transfer Guide. Should they wish to transfer to a degree of choice with a higher Mathematics or APS requirement than their current degree, that is only possible at the end of the academic year.

The introduction of a largely generic first year in FEMS facilitated several of the practical interventions described in later sections within this chapter.

Developing language skills at the university level

Several researchers have indicated that the level of English language proficiency is a factor that contributes to or inhibits students' success during university studies (Carpenter & Roos 2020, p. 225; Mphasha, Nkuna & Sebata 2022, p. 19524; Tewari & Ilesanmi 2020, p. 8). To address this problem at UP, a generic academic literacy module was implemented at the institutional level, and this is used to improve the academic reading and writing skills of students. This module is presented in the second semester of the generic first year in FEMS; however, it is not the faculty's choice, and it is recommended that this module should rather be presented in the first semester of the first year. If this was the case, first-year students would have been assisted to develop crucial language skills as close as possible to when they entered the university. However, this timing mismatch is a result of funding and human resources constraints at UP.

Since 2019, to assist students who may have English language proficiency issues more effectively, all students with a six for English First Additional Language (EFAL) and a six or seven for English Home Language (EHL) have been exempt from this academic literacy module, and they no longer have to enrol for it. This approach is an attempt to ensure that students with lower English language skill levels receive more personal attention in smaller groups to improve the development of their academic reading and writing proficiency. It is believed that a lower student–staff ratio would be beneficial to lesser-equipped students compared to a situation where a much higher student–staff ratio applied to the academic literacy module student cohort.

Developing computer literacy skills

With the advent of the Fourth Industrial Revolution (4IR) and (imminent) Fifth Industrial Revolution (5IR) and the differentials in exposure to computers and IT between the different learner cohorts who come together when they enter the university system, computer literacy skills are imperative.

Molokwane and Zogli (2021, p. 8) posit that most students from disadvantaged communities who enrolled at their university of technology did not have access to computers in high school, and this invariably created challenges in university where the use of computers and e-learning is par for the course. In line with this, Musundwa (2022, pp. 142, 239) concludes that students need to be exposed to digital tools early in their academic career (read first academic year), they must receive vocational training in IT and universities must fund the hardware, software and related tools that make online learning possible. Although it is submitted that this latter conclusion was reached in the context of chartered accountancy students, with the advent of coronavirus disease 2019 (COVID-19), the rapid advances in the digital learning environment and the 4IR and 5IR make generalisation in this regard possible to a wider population of commerce students.

At UP, the university enables students to purchase computers by having these charged to their student accounts and only having to pay these at completion of their studies if they do not return the computers. UP also provides campus-wide Wi-Fi, basic software under licence and computer software assistance that students may need at no cost. The latter financial and infrastructural provision is commended, as well as the requirement that all first-year students must enrol for and pass two generic academic information management modules. This module is designed to update and increase the basic computer literacy skills of all first-year students during their first and second semesters at UP. These measures speak specifically to the matters highlighted by Molokwane and Zogli (2021, p. 8) and Musundwa (2022, p. 239) and are worth replicating at all universities, though cost may be a prohibitive factor.

Given the essential nature of computer literacy in the future world of work and the difference between students' computer literacy, these computer literacy modules are compulsory for all first-year students in FEMS. To inculcate the computer skills taught, the skills obtained in these modules are reinforced in two other dedicated IT modules in the first and second semesters of the first year of most degrees. Furthermore, other first-year modules require students to use the specific computer programmes mastered during assignments and assessments. Furthermore, using the learning management system and student email system set up at UP for assignments, online assessments and announcements, where appropriate, regularly exposes students to computer usage. Depending on the degree enrolled for, these skills are also reinforced in additional second-semester modules in certain computer-usage-rich degrees. It is believed that consistent and regular exposure to IT is key to successfully embedding computer skills in the student body.

A first-generation student mentoring system

Several researchers have concluded that first-generation students are at a disadvantage as they do not have a parent or sibling to guide them through the university experience. The findings of both of these sources are supported by several other earlier authors, as mentioned in their literature studies, confirming this phenomenon (Burger & Naudé 2020, p. 626; Uleanya & Rugbeer 2020, p. 42).

To counter the potential negative impact that being first-generation students could have on their academic performance, a mentoring system for such students was introduced. All first-generation students at the faculty are initially identified via the central university database. Next, all first-generation students on wraparound support programmes sponsored by bursaries who already receive similar assistance from these programmes are removed from the list. This is done to ensure that the assistance given is focused only on those students who do not receive support from another source.

At UP, we are fortunate in that we have employees appointed as faculty student advisors (FSAs). They, as a rule, assist all FEMS students with study techniques, goal-setting, career exploration, time management skills, as well as personal and other problems. In the case of first-generation students, the FSAs assume the role of siblings or parents and thus guide first-generation students through the intricacies of studying at university as a parent or sibling who had previously completed a degree would have done. Although this task is performed by FSAs at UP, a less costly option would be to identify and train academically strong senior students to mentor these first-generation first-year students regularly as peers.

Implementing an early-warning system

It would appear that one of the biggest problems first-year students have is that they seem to not have a clear understanding of how they should interpret the marks they have achieved at a certain point in a semester or the academic year. One explanation could be that the accepted pass rate of 30% at high school level may give students an incorrect perception of what an acceptable level of performance at university is. Each university has its own early-warning system in use (Masango et al. 2020, p. 94). Masango et al. (2020, p. 94) cite several older studies on this topic in their literature review. However, the sophistication of early-warning systems varies substantially between different institutions. Bearing in mind funding constraints, FEMS at UP designed and implemented a simple and inexpensive early-warning system in 2014. This system has been refined over time and utilises the academic performance in the four generic first-year modules mentioned under the earlier section titled 'Facilitating migration to a chosen degree'.

In essence, this system assesses each individual student to establish the range within which their progress mark for each of the four generic commerce modules lies on completion of the first (halfway through the first semester) and third quarters (halfway through the second semester) of the academic year. The student is then provided with a focused and personalised email for each of the four modules, containing a short message giving each student a sense-check of their current levels of achievement. The message is sent shortly after the marking process of their first or third semester or year test has been completed, and this generally coincides with the end of the first or third quarter or the beginning of the second or fourth quarters. The progress mark at that stage is calculated considering all assessments and assignments completed up to that point, and the calculation of the mark is explained carefully to prevent queries as to how it was calculated.

The process is executed as follows: The progress marks calculated are ranked from top to bottom, and different messages are compiled and sent to each student based on where in the predetermined marks intervals they appear. In our experience, it is important that the message accompanying the progress mark should be encouraging and to the point rather than judgemental. For instance, students who achieve a distinction at that early point in the academic semester or year would receive a message congratulating them on their excellent achievement and encouraging them to maintain that level of excellence. To this analogy, students achieving between 70% and 74% are encouraged to work harder to achieve a distinction, as this may be easily within their reach. Students in the 50% to 54% range are encouraged to achieve at least 60% in their next assessment, as in our experience, students at that level can easily slide to below 50%. These students and those with marks below 50% are identified as *at risk* and are invited to complete a questionnaire in terms of which their problem areas are identified. Once their problem areas have been identified, these students are strongly encouraged and invited to seek assistance by consulting with FSAs, mentors, lecturers and tutors on an individual basis to correct what went wrong, resolve problems and take charge of their own academic career and performance. They are reminded for a second time to take control of their academic career; however, thereafter, no further action is taken as students need to take responsibility for their own future and academic careers.

Introducing conduct rules

Academic literature is clear that first-year students struggle to adapt from school to university (Lourens 2020; MacGregor 2020). In view of this, FEMS decided to introduce faculty-wide conduct rules as a first practical invention to provide students with a single point of reference and guidance on simple but important matters pertaining to the academic and work environment. The conduct rules are included in the study guide of each module. These rules, among others, aim to develop professional and ethical behaviour over time, to stimulate respect for the time of academics and fellow students, and serve to provide clarity on timelines for submission of documentation in respect of tests, sick-notes and perusal of test or examination papers.

An important prerequisite to achieving the objectives set when introducing conduct rules is that they must be applied consistently by all lecturers in all undergraduate modules in a faculty. This is to ensure that students adhere to these consistently and that the conduct encouraged by the application of the rules is inculcated across all modules over their period of undergraduate study.

Academic knowledge is power

Over time, we also came to realise that most first-year students – and especially first-generation students – are not informed of nor do they understand the academic rules and regulations that apply in the university environment. This aspect is also confirmed in the study by Masango et al. (2020, p. 94) and Uleanya and Rugbeer (2020, p. 43), who investigated the effectiveness of orientation programmes for first-year students. For instance, first-year students do not realise the impact of not meeting a prerequisite for follow-up modules, they do not understand the impact of a subminimum for examination admission or an examination, and they do not understand the impact of not completing their degree in minimum time. Time management is also a major problem; hence, a FEMS-customised compulsory online module was designed to explain these intricacies to students. This is in addition to the formal orientation programme that students receive on arrival at UP. First-year students must complete this module during their first semester at UP to sensitise them to these matters and provide them with assistance to achieve their academic goals.

Staggering academic interventions

Considering how students struggle with the adjustment from school to university and time management, the staggering of academic interventions was introduced as a third practical measure directly after introducing a mostly generic first year in FEMS (refer to the earlier section titled ‘Facilitating migration to a chosen degree’). This enabled FEMS staff to ensure that the workload of first-year students is spread evenly across their first academic year. The four generic academic modules were divided into two different groups (two modules per group) and the due dates of continuous electronic formative assessments and other assignments administered via the learning management system were then scheduled in alternate weeks for the two groups.

By way of illustration: In Week 1, students are tasked with submitting assessments and assignments for accounting and business management and in Week 2, Statistics and Economics. The process then repeats itself throughout the year.

Introducing test weeks

The fact that we introduced a largely generic first year (refer to the earlier section titled 'Facilitating migration to a chosen degree') created the opportunity for FEMS to introduce test weeks for first-year students during the first semester of their first year. During these test weeks in the first semester, first-year students do not attend lectures but are allowed to focus exclusively on studying for their tests.

After careful consideration, it was decided to create test weeks during the first semester only to provide students with time to adjust. It is believed that they would have adjusted to the pace at university by the second semester; however, an added justification for this decision was that first-year students start with specialisation modules over and above the generic modules in the second semester of their first year. To sensitise students to the latter, they are regularly advised during the first semester that this arrangement will only apply for the first semester and that they will no longer have this benefit in the second semester.

Provide exam guidance well in advance

The last intervention implemented was designed to assist students with preparing for their first university exam. Understandably, the first university exam is daunting for most students. To counter this, each student receives an email containing clear guidance with regards to their preparation for the first exam approximately one month before the first semester exams commence. In this email, students are made aware of the exam admission level, they are made aware of study techniques and scheduling, it is explained how they should train to focus for the entire duration of the exam papers, different approaches to writing exam papers are provided and other possible problems surrounding the exam period are explained.

Conclusion

In conclusion, the ten interventions mentioned were designed to assist first-year students in overcoming the problems they typically experience when adjusting from the school environment to the university environment. Furthermore, the overarching objective is to ensure that they perform optimally during their first year and, in doing so, are set firmly on the road towards completing their undergraduate degree in minimum time and becoming future-fit business leaders.

It is anticipated that the misalignment between South African basic school education and tertiary education systems will not be resolved soon; hence, these proposed interventions will stand the test of time through at least the next decade.

Despite the best efforts with various interventions to assist students, one must bear in mind that students are adults and need to self-regulate. Furthermore, it is well known that attending lectures regularly and spending effective time on academic tasks is key to academic success (Burger & Naudé 2020, p. 627; Jony 2021, p. 292). Hence, while academic staff and universities endeavour to create the most favourable environment to facilitate success among first-year students, attending lectures regularly and spending effective time on academic tasks remains the student's responsibility.

Chapter 3

A holistic approach to preparing students for the future world of work: Towards a conceptual framework

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Introduction

In an age where technology evolves at a pace that outstrips our ability to adapt, where jobs are displaced over months instead of decades and where the nature of work is in constant flux, there stands a monolith that seems impervious to structural change: traditional higher education (HE). As Bryan Garvey (n.d.), Vice President of Human Resources at Virginia Tech noted, 'Higher education is a very insular world and it needs transforming'. This system, which has withstood the test of time, is now confronting a future it appears ill-equipped to handle with offerings that are eroding

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value faster than curriculum updates can take place. The field of commerce is especially in the throes of this transformation, where blockchain technology, data analytics and machine learning are not merely buzzwords but the keys to unlocking value. So, here we find ourselves standing at an impasse, peering into the great unknown of a future workforce that is still taking shape.

In this chapter, we propose a radical departure from the conventional wisdom of HE. It is intended to inspire change and embrace a more holistic approach to student learning. We argue for a new structure for degrees in the field of management that can withstand the exponentially increasing changes to the job market. Our approach, however, demands a departure from traditional paths. It calls for us to embrace a radical shift, a leap into a new paradigm of learning that goes beyond the comfortable confines of specialisation and deep expertise. The challenge is clear and urgent: universities must not just adapt but reinvent themselves and the offerings they sell in response to the relentless pace of digital transformation (DT). In this context, Marks and Al-Ali (2022) accentuate the absence of a comprehensive outlook, proficiency in DT and robust data organisation and processing emerging as the primary obstacles to DT in HE. In most instances, they are focused on the digitisation of forms, incorporating workflow and authorisation processes. However, none of the reported initiatives involved advanced DT technologies such as analytics, machine learning, artificial intelligence or big data in the teaching and learning context. They further the argument through their findings, indicating that a substantial discrepancy between the academics' understanding of DT maturity and the fundamental prerequisites of such maturity exists. Rof, Bikfalvi and Marques (2022) correctly state that negating the reality, nature and state of DT in HE significantly threatens the relevance of universities that are inadequately adapted to these changes. Universities must dismantle the old paradigm and construct a new one that is flexible, future-proof and reflective of the changing nature of work. This is not just about preparing for the future but shaping it. This is the crux of the impasse we find ourselves at as we gaze into the uncertainty of a future workforce that is still forming.

Imagine a degree design that does not just inform but transforms, one that does not merely educate but cultivates. Envisage an educational model that nurtures not just technical savants but well-rounded individuals, armed with a diverse arsenal of skills that include critical thinking, creativity, adaptability and resilience. This is the holistic approach to education we propose, a new trail that we blaze on this exploration.

As we traverse the uncharted territories of the future workforce, let us indulge your curiosity, question the status quo and dream of possibilities that may redefine our conception of HE providers and the products they sell. This chapter is not just a discussion but an invitation – an invitation to reimagine and reengineer the way we prepare students for the future. Let us step into the unknown together. Let the exploration begin.

Understanding the future of work

We stand at an intriguing crossroads, where the future of work is sculpted by rapid technological advancements and shifts in societal norms. Just as the world itself evolves, so too does the world of work (Manyika 2017). The Fourth Industrial Revolution (4IR) hastened the rate of technology adoption and moved the boundary between human and machine work in various industries and regions. If we aim to navigate this transformation, we must first understand the changes unfolding and their implications for the workforce. We need to determine whether our structures, processes or systems are able to cope with the expanding demands of industry. In many respects, the future of work calls for the radical reform of many myopic perspectives on how the workplace should operate and even more so, who should be part of it (Goulart, Liboni & Cezarino 2022):

> The current higher education system is failing in its primary objective of developing professionals with the skills demanded by the job market. More than that, it fails to provide an education that addresses social and emotional skills as well as technical skills and thus incorporates humanistic and non-cognitive education. (p. 8)

The emergence of the field of the future of work has been fuelled by the unprecedented speed of disruption in today's world. We need to understand these transformations, anticipate the skills that will be in demand and help individuals and organisations adapt effectively. This accelerated pace of disruption does not allow for reactive measures; it requires proactive adaptation.

By observing the use of current technologies, we can illustrate the complexities and reveal the current readiness gap. Moreover, we can examine how legacy mindsets and practices resist pleas for change. The shift towards sustainability, technological advancements, supply chain modifications and evolving consumer expectations are all driving the need for new job roles across different sectors and locales. These jobs necessitate a skill evolution in order to sustain itself. The speed of this revolution is the most important facet of concern. We cannot overhaul qualifications and expect them to remain relevant for the next five years; instead, we need to engage in continuous adaptation aligned with industry changes. We can observe the growing importance of cognitive skills; this underscores the growing significance of complex problem-solving skills in the professional environment. Bygstad et al. (2022) accentuate the significance of cognitive abilities as progressively ascending in prominence. The ongoing digitisation of tertiary education is facilitating the creation of a novel, digital learning environment. They further note that this emerging sphere is typified by the harmonisation of digital pedagogy and digitised subject matter, a transformation of the traditional dynamics between tutors and students and the propensity of universities to reach beyond their conventional physical and institutional parameters, enabling interaction with the wider community (Bygstad et al. 2022). In broadening the cognitive skills narrative with a behavioural lens, Akour and Alenezi (2022) position social and emotional competencies within intrapersonal and interpersonal skillsets as key areas of development in the future-of-work scenario. They additionally found that effective behaviour demands skills within oneself, like setting achievable goals, maintaining a positive attitude, exercising self-discipline, managing emotions and having strategies to handle stress. Furthermore, to interact effectively with others, one needs social problem-solving abilities, the capacity to understand different perspectives and good conversational and listening skills. Furthermore, we observe that creative thinking is gaining significance at a slightly faster pace compared to analytical thinking. As generative artificial intelligence (AI) becomes more powerful and is integrated into more work systems, will we see a shift in these skills, and how fast will this happen?

Universities are currently encountering various obstacles, such as students losing interest, high rates of dropout and the ineffectiveness of the conventional *one-size-fits-all* education approach (Bygstad et al. 2022; Rogozin, Solodovnikova & Ipatova 2022; Rof et al. 2022). Modern learners have grown up with technology and are proficient in adapting to the ever-evolving education system. The use of AI is poised to play a significant role in shaping the experiences of the next generation (Dwivedi et al. 2023). With AI, learning can be tailored to individual needs, improving outcomes. Personalised learning taps into students' innate knack for using technology, but it extends beyond just tech and algorithms. It involves the thoughtful crafting of a blended teaching approach that merges traditional classroom teaching, tech-supported instruction and peer collaboration. This method capitalises on each student's unique learning style and interests to promote a more profound understanding of the material.

While it is impossible to predict the future with absolute certainty, we can anticipate some changes based on the trajectories we see in technology, business and society. What we know about the future of work is that it is dynamic, interconnected, fast-paced and unpredictable (Santana & Cobo 2020). Professionals can no longer rest on a static set of skills but now require ever-evolving skillsets and competencies. This demands seamless transfer between roles, constantly adapting to new situations and working collaboratively with diverse teams. The future of work is not a distant reality but a present challenge. It demands a new breed of professionals – ones who are technically adept, culturally aware, resilient and adaptable.

We typically envision jobs as stable constructs made up of a predetermined set of duties assigned to a specific worker, accompanied by a clearly outlined set of tasks. However, these defining lines are dissolving as disruptions and inconsistencies question conventional work models and beliefs. In a world without boundaries, work is not confined to specific jobs, workplaces are not geographically fixed and numerous workers are not conventional employees. Nonetheless, the notion of the 'job' is so deeply rooted in organisational functioning that it is challenging to envisage an alternative way of handling work and workforce.

In this high-stakes scenario, the ability to adapt and innovate has become paramount. Volini et al. (2021, p. 6) underscore this, highlighting the fact that 'look beyond the skills for which individuals were hired and instead focus on the workforce's potential, capabilities, motivation, and capacities'. It is not just about acquiring a new skill but about continually updating your arsenal to stay relevant in this fast-paced race. Herein lies the challenge for our higher education institutions (HEIs). The conventional model of qualifications targeted at job roles is much like a map that no longer aligns with the territory. We need to break free from the past and chart a new course.

■ A competence-based approach

Our vision of the future of work predicts swift and unpredictable changes, especially in the business landscape, which will in turn cause shifts in the job market. For present-day business learners, the future will present a multitude of new job prospects, but it will also pose numerous challenges in the form of vanishing job roles. Business education, which is primarily focused on disseminating knowledge, needs to adopt more flexible strategies like a competence-based approach that incorporates knowledge, skills, experience and attitudes. Many recent studies highlight the future-fit nature of competency-based learning (Bratianu, Hadad & Bejinaru 2020; OECD 2018; Santana & Cobo 2020; Scoresby et al. 2018). It is no surprise then that Nodine (2016) reports a swift adoption of competency-based learning models across HE because they want to become more learner-centred and improve outcomes for graduates.

Embedding competencies in knowledge-based modules has been driven for quite some time now; however, transferring to a competency-based system shifts the emphasis to focus on developing the desired level of competency more consciously rather than expanding the learner's knowledge in that field. This approach intentionally moves the currency of education from time to outcomes. The competencies consequently represent the outcome of an educational programme, and a curriculum provides the mechanism through which competence is to be acquired.

Source: Van Melle et al. (2019).

FIGURE 3.1: Five core components of competency-based medical education.

As technology, such as generative AI, improves our ability to retrieve information, so too the desire to develop a student's level of proficiency in a set of competencies increases. In health care education, competencies are seen as a way to place the student at the centre of the learning process (Ai Li et al. 2023; Harris et al. 2010). Building on this field's success, Van Melle et al. (2019) provide five core components of competency-based medical education (see Figure 3.1).

These components strike well the forces at play with the future of work, enabling an approach that can adapt, encourage fast knowledge renewal and embrace AI-driven personalised learning. This strategy also aims to incorporate Bloom's taxonomy categories through reflective practice, which involves cycles of experimentation, iteration and assessment.

Importance of an agile curriculum in catering to future world of work demands

The principles of curriculum design are widely recognised in educational literature and curriculum development frameworks. Various reputable educational textbooks, research articles or curriculum design guides suggest the incorporation of the key design principles (Diamond 2008; Fink 2003; Marzano & Kendal 2006; Tyler & Hlebowitsh 2013; Wiggins & McTighe 2005):

- Alignment with educational goals, standards and learning outcomes, as well as the educational institutions' strategic intent.
- Relevance to the expectations of learners (e.g. employability).
- Coherence and organisation to build on prior knowledge, incorporating a logical flow in learning and progress in learning and eventually skills development.
- Flexibility that asks for the integration of diverse learner needs (e.g. differentiated learning styles and approaches).
- Integration allowing for inter- and transdisciplinary connections within the context of the core field of study.
- Authenticity of tasks and assessments reflecting and incorporating the real world of work, inclusive of creative and critical thinking techniques and opportunities.

- Enhanced engagement through igniting inquisitiveness and active problem-solving and decision-making.
- Diverse assessment and feedback as to whether learning effectively took place, coupled with timely feedback.
- Continuous improvement as compared to a static process where no changes or dynamic changes to the curriculum are allowed in a given cycle (e.g. three- to five-year fixed curriculum structure, content and delivery mode). The increasing role of technology asks for almost real-time adaptation and a market or work-relevance-related dynamic.
- Equity and inclusivity that offer learners equal access to quality-oriented learning opportunities.

These principles retain their utmost significance as the fundamental basis for conventional curriculum design. This chapter does not reject the generic and classical principles; instead, it acknowledges them as inherent aspects while pursuing real-time relevance as an organism of disruptive innovation. The focus extends beyond mere continuous improvement to encompass a systemic approach akin to molecular interaction. The seminal work of Wiggins and McTighe (2005) in establishing the Understanding by Design (UbD) educational framework offers a structured methodology for curriculum design, instructional planning and assessment. This framework does not restrict disruptive designs but rather encourages the incorporation of 'big ideas' and emphasises the interconnectedness of curriculum elements, concepts and constructs. Our approach thus incorporates one facet of this approach among others.

When seeking insights into 'the future of curriculum design' via ChatGPT, an intriguing array of constructs emerges, encompassing (eds. Aspin et al. 2012; Durlak et al. 2011; Ertmer et al. 2012; Hwang et al. 2012):

- personalised and adaptive learning
- competency-based education
- interdisciplinary and project-based learning
- social and emotional learning (SEL)
- global and intercultural perspectives
- integration of emerging technologies
- lifelong learning and upskilling.

The initial question that arises from this list, devoid of explicit references, is the novelty it brings to the educational landscape. Furthermore, while these elements have been incorporated by curriculum designers for years, they prompt us to reflect on whether we are designing with direct workplace alignment and immediacy in mind. Are our students, upon graduation, truly prepared for immediate entry into the workforce? In this context, the inclusion of adaptive design (addressing the dynamic nature of work), competency (ensuring the ability to effectively perform job tasks), interdisciplinarity (interconnecting unrelated and related contexts), global perspective (acknowledging the global nature of work), technology integration (embracing emerging technologies such as AI) and upskilling (nurturing the growth of both graduates and teachers) becomes essential. These elements collectively represent the concept of agile design and resonate with the fundamental principles of classical Design Theory, which originated in ancient civilisations (Conboy, Gleasure & Cullina 2015). The essence lies in crafting functional designs that equip individuals with the competencies necessary for immediate employability while simultaneously fostering meaningful contributions of value and quality within the workplace.

Educators can effectively analyse and address the evolving demands of the future workforce by adopting a continuous application of agile design principles. Such an approach facilitates an organic and systemic interconnectivity among curriculum designers, teachers and the world of work. D'Angelo, Thoron and Bunch (2019) highlight the significance of a backward design approach to curriculum development aligned with the principles of UbD. This resonates with the approach taken in this paper, wherein learning goals are co-designed in collaboration with the world of work, ensuring their relevance and alignment with industry expectations.

Strategies for integrating agility into curriculum design and updates

The principle of determining students' abilities, knowledge and understanding serves as the foundational premise in contrast to the traditional approach of content-driven instruction, wherein the teacher's preferences and reliance on standardised or classical textbooks dictate the teaching and learning process. According to Taiyabi (2021), the latter is referred to as the 'inherent flaws of traditional design', characterised by a focus on coverage and activity-centred planning. In the realm of publicly funded HE in South Africa, curriculum design and implementation face significant regulation, primarily attributable to the bureaucratic structures and systems within educational institutions. Qualifications and corresponding curricula are fixed within specified timeframes and must undergo numerous committee approvals prior to their introduction to the market (authors' reflection). The entire process of curriculum innovation, including potentially disruptive innovation, in the context of translating new ideas into practical implementation, can span up to three years for authorisation from HE authorities. As previously mentioned, the evolving world of work, particularly in terms of the future of work, demands agile approaches aligned with the rapid adaptation of curricula to meet employer requirements and ensure the immediate employability of graduates.

This window of opportunity for developing competencies is significantly shorter than the current burdensome regulatory processes. Within the domain of business managerial curricula, modules such as business analytics must swiftly transform and adapt to keep pace with technological advancements in platforms, software and applications, particularly in relation to the progress of AI's machine learning capabilities.

The complexity is further heightened by the need for interconnected interdisciplinary learning. Curricula that fail to leverage the benefits of interdisciplinary integration, thus inhibiting a more holistic and insightful approach that considers the bigger picture, remain stagnant and ill-equipped to address the rapidly changing world of work and innovate in curricular development. Turner et al. (2022) frame the intricacy of interdisciplinary inclusion in undergraduate curricula as follows:

> [*B*]oth teaching and learning in interdisciplinary ways are complex skills that make significant demands on both parties. Despite the strong institutional support for this innovation, the barriers of administrative framing and staff and student habits proved challenging to overcome (p. 15).

Traditional bureaucratic systems within HE act as barriers to the agile incorporation of interdisciplinary connectedness, mainly because of regulatory frameworks that involve unequal credit allocation across disciplines, irrelevant or narrow prerequisites and discrepancies between the description of courses in the yearbook and their actual offerings in the classroom. As an illustration, in the traditional siloed system, it would take approximately two years to introduce coding or developer modules from an IT curriculum to business management students if such skills were deemed crucial for future business managers. The current fixed credit curriculum structure restricts the potential for customisation (Lego building) or personalised compilation of modules that cater to individual aptitude, passion and the rapidly evolving demands of the workplace. Consequently, we inadvertently impede our students' immediate employability and transfer the responsibility of competency development to the employer, our primary client, thereby increasing productivity lead time.

On the other side of the agile learning coin lies the aim of enabling learners to actively contribute to the workplace by fostering innovation through the application of new techniques, methods and approaches they have acquired during their studies. This entails graduates, with their interdisciplinary background, bringing fresh perspectives that prompt incremental or transformative innovation within their employing organisations. For instance, competencies developed through a social media marketing module could empower graduates to immediately revolutionise a traditional corporate employer lacking a social media presence. The interactive dynamic between new scientific knowledge generated and transmitted within the classroom should consequently empower graduates to offer innovative solutions to their employers. Furthermore, curriculum design should exhibit agility in promptly incorporating ever-changing critical skills requirements obtained from employers. Fischer et al. (2022, p. 3) suitably argue that the world post-COVID-19 exhibits 'periods of economic uncertainty and DT is to create a sustainable change in learning mechanisms and teaching formats, to produce graduates who are highly fit for the labour market'.

The symbiotic nature of this relationship has the potential to significantly enhance future youth employment figures. The model presented in this paper strives to comprehensively address the underlying symbiotic premise. Nikolic and Gledic (2012) rightly stated a decade ago that:

> The very essence of the way study programs is designed and implemented must be changed if universities are to remain the most prominent credential bodies. In addressing these issues, we suggest an agile approach – applying a variation of work methodologies and strategies created in the world of software development and lean/just-in-time production industries focused on maintaining and promoting high rates of improvement (p. 1328).

They further the argument by mentioning that curricula should 'welcoming changing requirements, quick and regular adaptation to changing circumstances, frequent/iterative delivery, self-organising, cross-functional teams and motivated individuals' (Nikolic & Gledic 2012, p. 1328). This methodology encapsulates the essence of agility and fosters a symbiotic interconnection between various elements, including content, instructional delivery techniques and the ever-changing and dynamic professional environment. In their study, Ozkan et al. (2022) emphasise the significant involvement of the learner within the agile framework, highlighting that their learning requirements should not be superseded by imposed content but rather fostered through an engaging educational voyage. In a more comprehensive fashion, Brink et al. (2021) propose seven principles to be present in the design and execution of agile curricula, as shown in Table 3.1.

The initial quartet of principles pertains to the institutional backdrop. Among them, the *entrepreneurial management* principle holds paramount significance in this study, owing to its association with agility, a proclivity for ceaseless identification of opportunities and the promotion of innovation, particularly in disruptive forms. These traits represent fundamental entrepreneurial competencies, a scarce skill in HE management. The principle of *organisation and governance*, as conventionally understood, tends to impede agility and hinder the speed of bringing qualifications to the market. Therefore, a transformative shift is necessary to facilitate a seamless transition into the dynamic domain of the proposed conceptual model outlined in this paper. The authors summarise the last three principles suitably as: 'innovative, flexible pedagogic perspectives, including the

TABLE 3.1: The seven principles for curriculum agility.

Principle	
Stakeholder involvement	Structures and procedures at the institution for identifying and prioritising new needs, inviting stakeholder involvement in change processes to ensure an effective process for carrying out changes.
Organisation and governance	Ensuring an organisational structure that can effectively address the administrative system and institutional and national regulations to implement and maintain curriculum changes.
Decision-making	Having an effective curriculum and course approval process: timeframes, steps required, number of persons involved and communication channels.
Entrepreneurial management	Establishing and maintaining a change culture. Ensuring a culture rather than a 'one-person engagement'. Establishing how change can be achieved and initiative- driven – proactive rather than reactive.
Programme and course design	Allowing flexibility in programme and course design: adjustable projects, designing learning outcomes for change and flexibility. Also providing opportunities for learners to build their own profiles.
Educational innovation	Encouraging initiatives and innovation that promote education that is responsive and adaptive to change.
Pedagogy and didactics	Promoting scholarship of teaching and learning among both teachers and learners. Encouraging collegial teaching teams.

Source: Adapted from Brink et al. (2021).

professional and societal demands perspectives that are added in an integrated way' (Brink et al. 2021, p. 2). These principles served as the design thinking frame for the development of the Competency-Centric Degree Design (C2D2) Model.

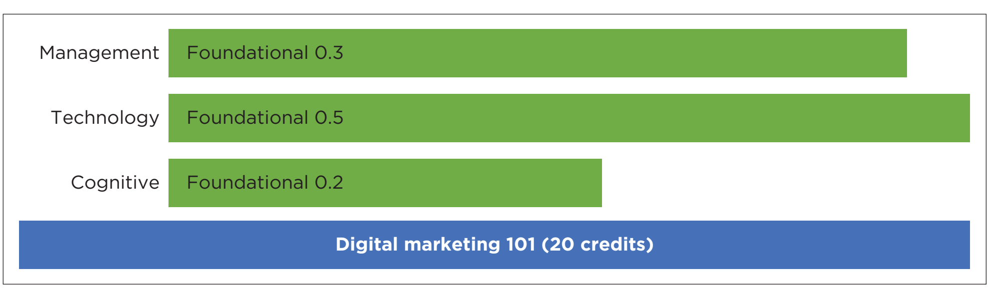
The Competency-Centric Degree Design conceptual model

According to Bratianu et al. (2020), universities:

> [*S*]hould open their learning environment towards the business landscape for experiential learning through [internships] and part-time jobs for students and should create a digital universe of knowledge to stimulate students for individual study. (p. 1348)

The primary focus of this conceptual model revolves around the discipline of business management. While the context of qualifications may vary across different disciplines, the underlying framework can be replicated in various job market demand environments (e.g. human sciences or engineering). A business management degree primarily caters to the private sector or the industry meso-environment, encompassing a wide range of functional areas such as strategy, marketing management, supply chain management, financial management, business analytics, communication management, project management, human resource management, entrepreneurial and design thinking, innovation and leadership. Its overarching goal is to cultivate proficient and capable general managers as a key outcome of the qualification. As a result, it necessitates continuous and direct engagement with the world of work, which serves as the target customer in this context. Furthermore, it demands flexibility to integrate core skill categories aligned with the future of work across all levels of curriculum delivery and content. The structure should function as an open system that can adapt and incorporate these critical skills as they evolve in the short, medium and long term.

Critical skills for the future of work are documented on a bi-annual basis (Di Battista, Grayling & Hasselaar 2023) (Figure 3.2). Currently, critical skills for the future of work are often treated as faddish or supplementary components in the final year of a business management programme, with little to no credit-bearing value and limited resonance with employers. There is a general agreement that these skills are required in a generic context (e.g. embedded in all programmes and not as specific deep drilling components). Sometimes, they are even offered as extra-curricular online options within work readiness programmes. The constraints on agility in curriculum design and execution, as discussed earlier, pose a direct obstacle to the inclusion of inter and transdisciplinary modules. These modules not only contribute to a holistic understanding of the business context but also offer in-depth insights into the broader landscape of knowledge and skills (e.g. critical or creative thinking in non-business discipline contexts). Additionally, these constraints prevent learners from incorporating modules that align with their interests or aptitudes. For example, a learner passionate about the restaurant industry should have the opportunity to take modules in nutrition sciences or interior design. However, the traditional pathway for business management qualifications is generally inflexible, lacking elective options such as interdisciplinary modules. This limitation stems from fixed credit constraints and scheduling overlaps that typically arise because of the high enrolment volume of business degrees. In addition, there are other noteworthy deficiencies in the current approach. Firstly, there is a lack of direct industry exposure beyond the confines of the classroom. Learners often miss out on first-hand experiences and interactions with real-world industry settings, which are crucial for bridging the gap between theory and practice.



Source: Authors' own work.

FIGURE 3.2: Module competency composition.

Secondly, industry involvement in curriculum design is often limited to one-time consultations, serving merely as a sounding board rather than engaging in continuous and sustained collaboration. This hinders the ability to effectively align the curriculum with industry needs and emerging trends.

The proposed agile-oriented C2D2 model is a conceptual model that combines both new and old concepts to provide a holistic approach to preparing students for the future workforce. It considers the speed of change and the need for agility while providing a compatible format for academics to integrate their existing subjects. Core competency categories derived from our current understanding of the required future competencies drive the model, supported by sub-competencies.

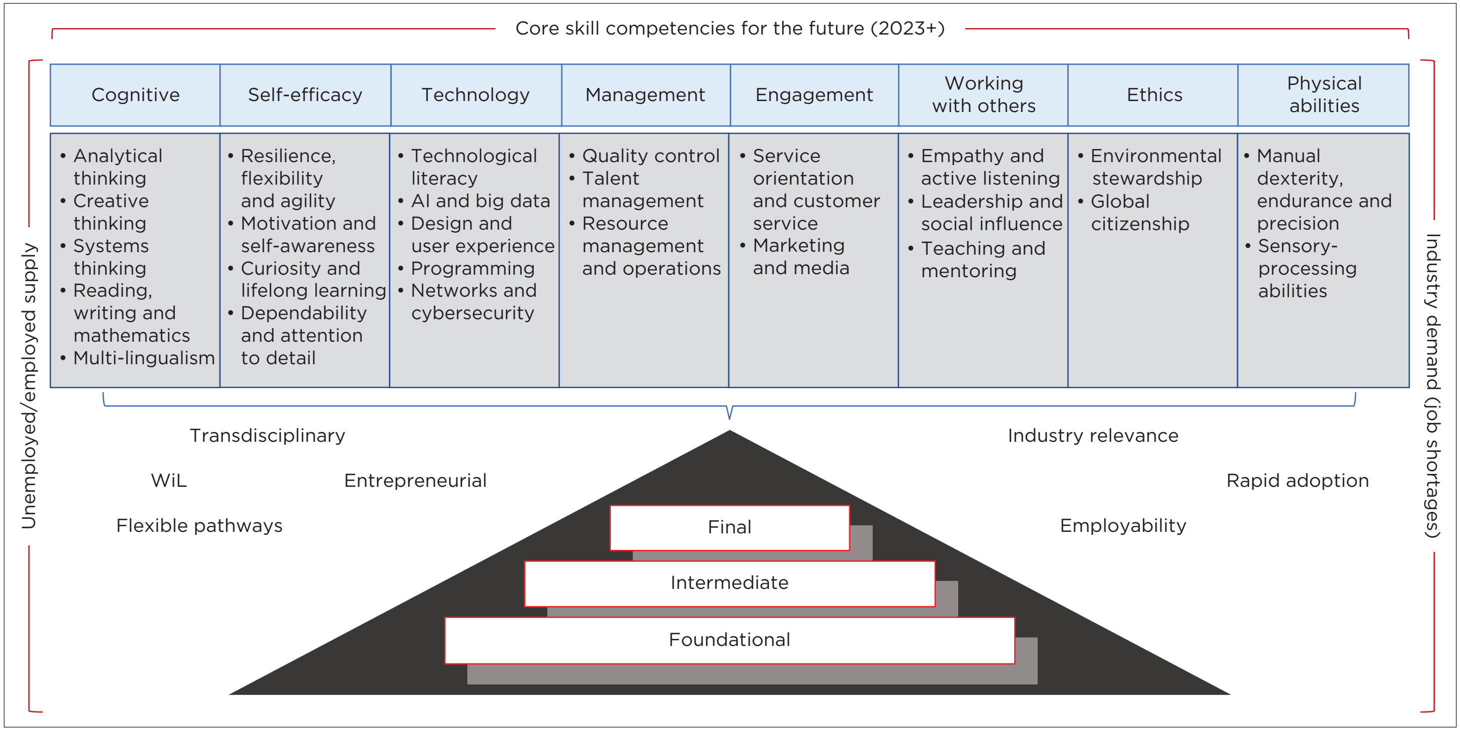
The C2D2 model proposes that a degree comprises of a collection of competency credits rather than module credits. Under this model, traditional modules remain but are now weighed by the extent to which they build a particular competency and at what level of proficiency that competency is applied.

Figure 3.3 provides an example of a module in digital marketing that has been established to spend 20% of its time building several cognitive skills at a foundational level.

Each module's existing credits are then weighted against that particular competency, so in our example, Marketing Management 101 would contribute 5 (0.2*20) foundational competency credits towards a degree. A student, therefore, would need a section of modules that equate to predetermined competency credits at three competency levels, namely foundational, intermediate and final. A learner should also be able to select an industry focus from a selection defined by labour shortages. An industry focus will then allow modules to be selected that contain industry-relevant knowledge while building up their proficiency in the required competencies. If a learner opts for a management degree with a specialisation in the health care industry, an algorithm can be employed to curate a selection of modules that are highly relevant to the industry, enabling the learner to develop the necessary competencies simultaneously.

Moreover, the proposed C2D2 model aims to tackle all the aforementioned constraints and seize the associated opportunities in order to develop and implement a distinctive employability-linked qualification in the field of business. By incorporating industry exposure, interdisciplinary modules and sustained industry collaboration in curriculum design, the conceptual model strives to enhance the relevance and practicality of the qualification, ensuring that graduates possess the necessary skills and knowledge for successful employment in the dynamic business landscape.

The C2D2 conceptual model is depicted in Figure 3.3, with a set of competencies represented by core skill categories.



Source: Authors' own work.
Key: WiL, work-integrated learning.

FIGURE 3.3: Competency-Centric Degree Design Conceptual model.

■ Conclusion

The traditional HE system is facing a critical challenge in preparing students for the future workforce. The rapid pace of technological advancements, shifting societal norms and evolving nature of work demand a more holistic and agile approach to education. In this chapter, we have explored the need for a radical departure from conventional wisdom and proposed a C2D2 conceptual model that addresses these challenges. Designing an agile curriculum is essential to meeting the needs of the future workforce. This involves aligning educational objectives, standards and learning outcomes while also considering relevance, coherence, flexibility, integration, authenticity, engagement, diverse assessment methods, continuous improvement and equity. By adopting agile design principles, the curriculum can be continually and proactively adapted to meet industry needs, ensuring that learners are prepared for the ever-changing job market.

The C2D2 conceptual model presented in this chapter offers a conceptual framework for designing and implementing agile and industry-aligned business management qualifications. The conceptual model emphasises the integration of core competencies and sub-competencies, replacing traditional module credits with competency credits. By incorporating industry exposure, interdisciplinary modules and sustained collaboration with employers, the C2D2 model enhances the relevance and practicality of the qualification, ensuring that graduates possess the necessary skills and knowledge for immediate employability and future success.

The future of work demands a transformative approach to HE. The C2D2 conceptual model offers a promising framework for universities to adapt and provide students with the skills and competencies needed to thrive in the evolving job market. By embracing a holistic, agile and industry-aligned approach, HEIs can effectively equip students to navigate the uncertainties and complexities of the future world of work, shaping their destinies and contributing to the advancement of society as a whole. Let us embark on this exploration together and reimagine how we prepare our students for the future.

Chapter 4

The future world of work for professional accountants: The top employability skills that industry expects from university graduates

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‘Old accountants never die. They just depreciate.’ (Author unknown)

Introduction

‘Today, we are at the beginning of a Fourth Industrial Revolution. Developments in genetics, artificial intelligence, robotics, nanotechnology, 3D printing, and biotechnology, just to name a few, are all building on and amplifying one another. This will lay the foundation for a revolution more comprehensive and all-encompassing than anything we have ever seen.’ (World Economic Forum [WEF] 2016, p. v)

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These are the opening sentences of the January 2016 Global Challenge Insight Report by Klaus Schwab and Richard Samans of the WEF.

The Fourth Industrial Revolution (4IR) marks the onset of the digital world. According to McKinsey and Company (2022), the digital world is shaped by the following foundational digital technologies:

- **Analytics and intelligence:** Advanced analytics, machine learning (ML) and artificial intelligence (AI).
- **Human-machine interaction:** Virtual reality (VR) and augmented reality (AR), robotic process automation (RPA) and autonomous guided vehicles.
- **Connectivity, data, and computational power:** Cloud technology, Internet of Things (IoT), blockchain, drone technology and sensors.
- **Advanced engineering:** Renewable energy, nanoparticles and additive engineering such as three-dimensional (3D) printing.

Furthermore, surveys done by professional accounting bodies (PABs) such as the Association of Chartered Certified Accountants (ACCA) (2016), the American Institute of Certified Public Accountants (AICPA) and the Chartered Institute of Management Accountants (CIMA) (2019) and Chartered Accountants Australia and New Zealand (CA ANZ 2017) also identified the key drivers of the 4IR as:

- **Institutional and systematic:** Globalisation, geopolitics, resource scarcity and climate change, increased business regulation and governance, and the changing business and societal expectations of professional accountants (PAs).
- **Social:** Demographics shifts and rapid urbanisation.
- **Market:** Customers empowerment.
- **Technology:** 4IR digital technologies and automation.

These key drivers are continuously changing, disrupting economies, industries and professions across the globe, leading to fast changes in the global economic and business landscapes. Exponential advancements in digital technologies have been singled out as the main disruptor of business models in the digital world (ACCA & CA ANZ 2019; AICPA & CIMA 2019). The chapter, therefore, is structured within the mainframe of the top skills that the industry expects from university accountancy graduates in the era of the 4IR.

The accountancy profession has not been spared from the disruptions resulting from the 4IR technologies. These 4IR technologies, together with increased business legislation, scarcity of resources and climate change, globalisation of business, accounting and auditing scandals and societal expectations about accountants define the PA's digital world of work (ACCA 2016; ACCA & CA ANZ 2019). This new world of work profoundly impacts the accountancy profession, with businesses and the Big 4 audit firms (e.g. Deloitte, Ernest & Young [EY], PricewaterhouseCoopers [PwC] and Klynveld Peat Marwick Goerdeler [KPMG]) adopting data analytics, AI, RPA and other digital technologies in their taxation, financial management, strategic planning and control, accounting and auditing tasks (Almufadda & Almezeini 2022; Kokina & Davenport 2017).

According to Kreuzwieser et al. (2023), processes in 4IR business models are digitalised and automated in almost all areas within an organisation. These business models make the digitalisation and automation of auditing and the organisation's finance function necessary and easier. Manita et al. (2020) write that digitalisation and automation of audits relieve auditors of manual and routine tasks, enabling them to focus on complex and demanding audit tasks. Furthermore, Fotoh and Lorentzon (2021) and Raphael (2017) assert that audit digitalisation and automation are expected to increase the value of audits as these enable firms to deliver high-quality and more efficient audits. Technological advancements are accelerating with discussions on real-time and continuous financial reporting, auditing and using an app-based financial reporting system at an advanced stage (Alles et al. 2022; Almufadda & Almezeini 2022).

These changes demand digital accountants to have highly developed technical skills complemented by well-developed digital acumen, professional ethics and interpersonal skills (AICPA & CIMA 2019; International Federation of Accountants® [IFAC®] 2019; Tsiligiris & Bowyer 2021) to support their organisations in creating and sustaining value. The professional accountancy training ecosystem must help digital accountants develop these employability skills. This ecosystem is comprised of IFAC®, the global umbrella body for the accountancy profession with 180 members across 135 countries, PABs, most of which are IFAC® members, higher education institutions (HEIs), auditing regulators and approved training organisations.

The upcoming section, titled 'Literature review on the identified broad categories of skills for digital accountants', identifies the skills of digital accountants, and this is done by reviewing the following three strands of literature:

- Selected surveys done by PABs and journal articles.
- The IFAC® (2019) *Handbook of International Education Pronouncements and the* IFAC® (2022) *Handbook of the International Code of Ethics for Professional Accountants*.
- The competency frameworks of the ten leading PABs worldwide.

Because PABs have close links with employment markets, they regularly conduct surveys on future skills and competencies that will be required by the employment markets (ACCA 2016; AICPA & CIMA 2019; CA ANZ 2019).

Professional accounting bodies use the results of these surveys to update their syllabi and competency frameworks.

Ten PABs were selected based on their sizes (number of members) and their influence in the profession. The selected PABs are the ACCA, the AICPA, CA ANZ, Chartered Accountants Ireland (CAI), the CIMA, Chartered Professional Accountants of Canada (CPA Canada), the Institute of Chartered Accountants in England and Wales (ICAEW), the Institute of Chartered Accountants of Scotland (ICAS), the Institute of Singapore Chartered Accountants (ISCA) and the South African Institute of Chartered Accountants (SAICA). These PABs, though IFAC® members, have adapted the IFAC® competencies to meet their local needs and regularly update their syllabi and competency frameworks to reflect the current and future skills employers require.

The digital accountants' skills are discussed under the technical, digital, professional ethics and interpersonal skills categories. The later section titled 'The impact of digital accountants' skills on the curricula of higher education institutions' discusses the impact of these skills on the curricula of HEIs. The applicability of digital skills to other commerce disciplines is discussed in the section titled 'The applicability of digital skills to other commerce disciplines', and the 'Conclusion' concludes the chapter.

Literature review on the identified broad categories of skills for digital accountants

Future accountants need an optimal and changing mix of technical, digital, ethical, business and soft skills to continue supporting their organisations in creating and sustaining value (ACCA 2016; ACCA & CA ANZ 2019). Similarly, studies by Thomson Reuters (2018) and Tsiligiris and Bowyer (2021) found that digital accountants must complement their highly developed accountancy subject knowledge with well-developed digital, professional ethics and interpersonal skills for career success.

The IFAC® (2019) sets out the key skills for entry-level PAs in three education International Education Standards (IESs), 3, 4 and 5:

- **IES 3:** Initial professional development – technical competencies
- **IES 4:** Initial professional development – professional skills
- **IES 5:** Initial professional development – professional values, ethics and attitudes.

In response to the emergence of the 4IR, IFAC® revised its education IESs 2, 3 and 4 in June 2019 to incorporate digital skills deemed important for future accountants.

The sampled PABs, though members of IFAC®, have adopted mixed classifications and descriptions for these skills, as shown in Table 4.1.

TABLE 4.1: Professional accounting bodies' categories of competencies for professional accountants.

PABs and PAs' skills	PABs and PAs' skills
ACCA (n.d.) • Technical skills and ethics • Business and data skills	**CPA Canada (2022)** • Technical competencies • Enabling competencies (incl. digital skills)
ICAS (2023) • Technical subjects (incl. digital acumen) • Public trust and ethics	**ISCA (2022)** • Technical competencies (incl. digital skills) • Ethics and professionalism
CA AAZ (2021) • Technical competencies • Personal competencies • Business competencies (incl. data and digital acumen)	**CAI (2022)** • Functional competencies • Core professional values • Business competencies (incl. IT awareness)
ICAEW (2022) • Technical skills (incl. digital skills) • Professional development • Ethics and professional scepticism	**AICPA (2021)** • Accounting competencies (incl. digital skills) • Business competencies • Professional competences
SAICA (2021) • Technical competencies in the value-creation process • Enabling competencies (incl. data and digital acumen) • Professional values and attitudes	**CIMA (2022)** • Technical skills • Business skills • People skills • Leadership skills • Digital skills • Ethics, integrity and professionalism

Source: Authors' compilation based on the following sources: ACCA (n.d), AICPA (2021), CA AAZ (2021), CAI (2022), CIMA (2022), CPA Canada (2022), ICAEW (2022), ICAS (2023), ISCA (2022) and SAICA (2021).
Key: PAB, Professional accounting bodies; PAs, professional accountants; ACCA, Association of Chartered Certified Accountants; CAI, Chartered Accountants Ireland; CPA Canada, Chartered Professional Accountants of Canada; IT, information technology; ICAEW, Institute of Chartered Accountants in England and Wales; SAICA, South African Institute of Chartered Accountants; AICPA, American Institute of Certified Public Accountants; CIMA, Chartered Institute of Management Accountants; ICAS, Institute of Chartered Accountants of Scotland; ISCA, Institute of Singapore Chartered Accountants.

Table 4.1 shows that PABs have also embraced these emerging 4IR technologies and included digital skills in their competency frameworks. Most universities now include digital skills in their curricula and programmes, respectively (Clayton & Clopton 2019; Keys & Zhang 2020; Kotb et al. 2019; Qasim, El Rafae & Elette 2022; Sledgianowski, Gomaa & Tan 2017). This approach by IFAC®, PABs and universities confirms the increasing importance of digital skills and technologies in the work of PAs.

Technical, digital, professional ethics and interpersonal and business skills are, therefore, the four broad categories of employability skills for digital accountants. Each of these skill categories is discussed in detail in the following subsections.

Technical skills

Surveys done by the ACCA (2016) and ACCA and CA ANZ (2019), as well as studies done by Thomson Reuters (2018) and Tsiligiris and Bowyer (2021), identified the key technical competencies of digital accountants as accountancy subjects that include financial accounting and reporting, management accounting, finance and financial management, taxation, audit and assurance, business strategy and governance, risk management and internal control. These technical competencies underpin the accountancy profession and already remain core skills in the digital world.

According to the AICPA and CIMA (2019), Lim et al. (2016) and Tsiligiris and Bowyer (2021), digital accountants must have advanced technical and professional ethics skills complemented by highly developed digital, business and personal skills to enable them to support their organisations to create and preserve value in the digital world. Because of the continuing disruptions in business models, some existing technical competencies are expected to increase in importance while others will decline, and new competencies will emerge (ACCA 2016). Some emerging competencies in some of the core technical skills disciplines are as follows.

☐ Financial reporting

- Reporting non-financial data (sustainability reports and integrated reports) (ACCA n.d.; AICPA 2021; CAI 2022; SAICA 2021)
- Interconnectedness of financial and non-financial reporting (ACCA n.d.; AICPA 2021; CAI 2022; SAICA 2021).

☐ Auditing and assurance

- Cybersecurity and General Data Protection Regulation (GDPR) (ICAEW 2022)
- Sector knowledge and global mindset/perspective (ACCA 2016)
- Increased focus on professional scepticism. (ACCA 2016; IFAC® 2019).

☐ Management accounting and financial management

- FinTech and Cryptocurrencies (ICAEW 2022)
- Islamic Finance (ACCA 2016)
- Sustainability Finance/Green Finance (ICAEW 2022).

IFAC® also stresses the importance of technical competencies for future accountants. According to IFAC® (2019), technical competencies that entry-level accountants must have upon completing their undergraduate studies (intermediate level) are categorised as follows.

☐ Core technical competencies

- Financial accounting and reporting
- Management accounting
- Finance and financial management

- Taxation
- Audit and assurance
- Governance, risk management and internal control
- Business strategy and management.

Foundational technical competencies

- Business laws and regulations
- IT
- Business and organisational environment
- Economics (foundation).

The core technical competencies are further developed at the advanced level directly by PABs or through accredited graduate or postgraduate programmes. Some PABs adopt different names and configurations of these technical competencies in their intermediate and advanced levels. ACCA (n.d.), CA ANZ (2021), CAI (2022) and CPA Canada (2022) have optional modules in their professional examination, as shown in Table 4.2.

TABLE 4.2: Intermediate and final modules of ACCA, CA ANZ, CAI and CPA Canada.

PABs' intermediate and final modules	PABs' intermediate and final modules
ACCA (n.d.) • Financial Reporting • Audit and Assurance • Taxation • Performance Management • Financial Management • Strategic Business Leader • Strategic Business Reporting	**CA ANZ (2021)** • Risk and Technology • Financial Accounting and Reporting • Tax • Business Performance • Audit and Risk • Integrated Chartered Accounting Practice
Options (Pick any two subjects) • Advanced Financial Management • Advanced Performance Management • Advanced Taxation • Advanced Audit and Assurance	*Options (Pick any two subjects)* • Advanced Tax • Assurance • Data Analytics and Insights • Strategy and Performance
CAI (2022) • Auditing and Assurance • Strategic Finance and Management Accounting • Financial Reporting • Taxation II • Final Admitting Examination	**CPA Canada (2022)** • Financial Reporting • Strategy and Governance • Management Accounting • Audit and Assurance • Finance • Taxation • Capstone and Common Final Examination
Options (Pick one subject) • Advanced Auditing and Assurance • Advanced Taxation • Advisory • Financial Services • Public Sector	*Options (Pick any two subjects)* • Assurance • Performance Management • Tax • Finance

Source: Authors' compilation based on the following sources: ACCA (n.d.), CA AAZ (2021), CAI (2022) and CPA Canada (2022).
Key: PAB, Professional accounting bodies; ACCA, Association of Chartered Certified Accountants; CA ANZ, Chartered Accountants Australia and New Zealand; CAI, Chartered Accountants Ireland; CPA Canada, Chartered Professional Accountants of Canada.

The remaining PABs do not have optional modules in their intermediate and final professional examinations, as shown in Table 4.3.

Technical competencies, therefore, remain key for digital accountants. Closely linked to technical competencies are digital skills, which are the recent skillsets for digital accountants.

Digital skills

Digital skills enable digital accountants to use the emerging 4IR technologies increasingly embraced by businesses as well as auditing and accounting firms competently and effectively. A recent survey by Harrast, Olsen and Sun (2023) shows that practitioners recommend that the eight emerging topics in accountancy are data analytics (98%), predictive analytics (91%), digital acumen (90%), cybersecurity (89%), IT risk (89%), IT governance (76%), IT audit (74%) and systems organisation and control (SOC) engagements (60%).

TABLE 4.3: Intermediate and final modules of ICAEW, SAICA, AICPA, CIMA, ICAS and ISCA.

PABs' intermediate and final modules	PABs' intermediate and final modules
ICAEW (2022) • Financial Accounting and Reporting • Audit and Assurance • Financial Management • Tax Compliance • Business Strategy and Technology • Business Planning (*Options*: Banking, Insurance and Taxation) • Corporate Reporting • Strategic Business Management • Case Study	**SAICA (2021)** • Financial Reporting • Auditing and Assurance • Management Accounting • Financial Management • Strategic Management • Taxation
AICPA (2021) • Accounting and Data Analytics • Audit and Accounting Information Systems • Tax • Business Analysis and Reporting • Information Systems and Control • Tax Compliance and Planning	**CIMA (2022)** • Managing Performance • Advanced Management Accounting • Advanced Financial Reporting • Strategic Management • Risk Management • Financial Strategy • Strategic Case Study
ICAS (2023) • Assurance and Data • Business Tax • Financial Reporting • Strategic Finance and Modelling • Risk and Technology • Test of Professional Expertise	**ISCA (2022)** • Financial Reporting • Assurance • Business Value, Governance and Risk • Taxation • Capstone – Integrative Business

Source: Authors' compilation based on the following sources: AICPA (2021), CIMA (2022), ICAEW (2022), ICAS (2023), ISCA (2022) and SAICA (2021).
Key: PAB, Professional accounting bodies; ICAEW, Institute of Chartered Accountants in England and Wales; SAICA, South African Institute of Chartered Accountants; AICPA, American Institute of Certified Public Accountants; CIMA, Chartered Institute of Management Accountants; ICAS, Institute of Chartered Accountants of Scotland; ISCA, Institute of Singapore Chartered Accountants.

The digital skills required by digital accountants are data literacy, data extraction, data application knowledge, visualisation and storytelling, advanced data analytics, predictive analytics, digital acumen skills and an understanding of cloud, IoE, drone, sensor, AI, RPA, FinTech and cryptocurrencies, Blockchain and ledger technologies (ACCA & CA ANZ 2019; ICAEW 2018).

Businesses and auditing firms are now intelligently using AI and RPA technologies to automate their auditing and assurance, and financial accounting structured, simple, rule-based and repetitive processes (ACCA & CA ANZ 2019; Bakarich & O'Brien 2021; ICAEW 2018; Kokina & Davenport 2017; Moffitt, Rozario & Vasarhelyi 2018).

The Big 4 audit firms now use advanced data analytics and 4IR technologies for analysing documents such as contracts or leases, strategic planning and benchmarking, collecting and consolidating inventory counts, investment valuations and related procedures, analysis of general ledger and journal entries and cash audits (Almufadda & Almezeini 2022; Dickney, Blanke & Seaton 2019; Kokina & Davenport 2017; M2 Presswire 2016; Raphael 2017).

According to AICPA and CIMA (2019), Lavinia-Mihaela (2019) and Moffitt et al. (2018), the application of these technologies augments PAs' capabilities. It brings real benefits such as faster data analysis, reduced error rates, increased productivity in new tasks, shorter working hours, improved audit and quality financial reporting, enhanced efficiency and reduced revenue misstatement risks.

The IFAC® (2019) does not have a specific standard for digital skills. It has incorporated these skills in its education IESs 2, 3, 4 and 8. Similarly, PABs have embraced these emerging 4IR technologies and included digital skills in their competency frameworks, as shown in Table 4.1. Only CIMA (2022) stated digital skills as a separate category. Other PABs have included digital skills in their business competencies (ACCA n.d., CA AAZ 2021; CAI 2022) or enabling competencies (CPA Canada 2022; SAICA 2021) or technical competencies (AICPA 2021; ICAEW 2022; ICAS 2023; ISCA 2022).

Furthermore, PABs have integrated digital skills into the syllabi of their core technical disciplines. The AICPA (2021), for example, integrates digital skills and technologies in its Accounting and Data Analytics, Audit and Accounting Information Systems (AIS), Tax and Business Analysis and Reporting disciplines.

Bughin et al. (2018), Capita (2019), Thomson Reuters (2018) and Tsiligiris and Bowyer (2021) list digital skills (basic and advanced digital and data skills) alongside ethical, business, personal and interpersonal skills such as logical thinking, computational thinking and problem-solving as the key skills for future PAs in response to 4IR dynamics and evolution.

Professional ethics skills

As with technical skills, professional ethics skills will always remain fundamental and a core attribute for digital accountants. These skills exemplify and enhance the accountancy profession's reputation. Ethical behaviour, honesty, integrity, accountability and trustworthiness are identified as some of the most important business skills. Given the unending corporate scandals, employers and society in general are increasingly expecting accounting graduates and PAs to maintain high standards of professional ethics, independence and professional scepticism and to always act to protect the public interest (ACCA 2016; ACCA & CA ANZ 2019). Professional scepticism involves a critical assessment of evidence and thus supports effective decision-making (ICAEW 2022).

The IFAC® (2019) Standard, IES 4 and the International Ethics Standards Board for Accountants (IESBA's) Code of Ethics for PAs clarify necessary ethical skills. The Code of Ethics (IFAC® 2022) sets out the professional, ethical skills that aspiring accountants must develop upon completion of their undergraduate studies. These competencies include a high-level understanding of the fundamental principles (integrity, objectivity, professional competency and due care, confidentiality and professional behaviour) and the conceptual framework, independence and how PAs apply these principles in business, public practice and audit, review and assurance services (IFAC® 2019, 2022). In June 2019, the IFAC® updated its Code of Ethics to include professional scepticism, which it regards as a key competency for PAs.

PABs also regard professional ethics, independence and professional scepticism as key competencies for their members. As shown in Table 4.1, some PABs list professional ethics, independence and professional scepticism as separate core competencies (CAI 2022; CIMA 2022; CPA Canada 2022; ICAEW 2022; ICAS 2023; ISCA 2022) or as part of technical skills (ACCA n.d.; AICPA 2021), or part of interpersonal skills (CA ANZ 2021). The South African Institute of Chartered Accountants (SAICA 2021) lists ethics, values and attitudes under professional values and attitudes skills. Professional accounting bodies expect their members to comply fully with their codes of ethics, which derive from the IESBA's Code of Ethics.

Although 4IR digital technologies come with many benefits, such as increased scope, speed, efficiency and effectiveness of financial reporting and auditing, they also impose ethical and legal challenges to digital accountants (ACCA 2017; CPA Australia 2019; Tsiligiris & WECD 2019).

Their input or output data may be misused and cyber-attacked, adversely affecting the company's stakeholders' reputation. Fourth Industrial Revolution digital technologies, therefore, threaten compliance with the fundamental principles of the IESBA's Code of Ethics and for professional accountants (IFAC® 2019). These technologies have added a new dimension to professional ethics, the ethics of technology. Digital accountants must, therefore, also have highly developed ethics of digital technology skills to ensure that they remain ethically sound in their work (Tsiligiris & Bowyer 2021). The ethics of digital technology skills as the first line of defence will enable them to avoid data biases, maintain data confidentiality and exercise professional scepticism on technological data inputs and outputs, which enables them to be ethical gatekeepers of corporate data and ethical standards (AICPA & CIMA 2019; Zhang 2019).

Personal and interpersonal skills

The digital world of work is characterised by rapid changes in business models, automation of manual and routine tasks, increased uncertainty, increased competition and big data (ACCA 2016). Automating most finance functions frees time for digital accountants to provide strategic consultation and business advisory services to their organisations (Tsiligiris & Bowyer 2021).

To work effectively in the 4IR environment and help their organisations create and preserve value, digital accountants must complement their excellent technical, professional ethics and digital skills with well-developed personal and interpersonal skills. These skills are a combination of cognitive and interpersonal skills that enable digital accountants to be competent professionals who can communicate effectively, make decisions, lead their teams, influence others (to get what they want), build relationships, collaborate with other departmental heads (to gain information), offer creative solutions to complex problems, adapt to the changing business environment, critically analyse data inputs and outputs and consult for their organisation (Mabe & Bwalya 2022; Tsiligiris & Bowyer 2021).

The personal and interpersonal skills of digital accountants include communication, time management, enhanced (dynamic) problem-solving, decision-making, critical (analytical) thinking and judgement, adaptive mindset, collaboration, teamwork, relationship-building, negotiation, leadership and strategic thinking, emotional intelligence, marketing, in-depth industry knowledge, project management, consulting and business advisory skills (ACCA & CA ANZ 2019; Banasik & Jubb 2021; Barac et al. 2016; Dunbar, Laing & Wynder 2016; Lim et al. 2016; Low et al. 2016; Rumbens et al. 2019; Tan & Laswad 2018). With rapid changes in digital technologies and business models, AICPA and CIMA (2019) assert that a life-long approach to continuous professional development (CPD) (self-initiative to upskill, unlearn and relearn) is also a critical soft skill for digital accountants. According to Tsiligiris and Bowyer (2021), these skills are becoming increasingly important for career success, with most employers placing a greater emphasis on them.

The IFAC® (2019) IES 3 categorises soft skills that aspiring PAs need to develop by the end of their initial professional development (IPD) as:

- **Intellectual skills:** Problem-solving, decision-making, critical thinking, adaptability to change (flexibility) and professional judgement skills.
- **Interpersonal and communication skills:** Skills relating to effective communication and interaction.
- **Personal skills:** Skills relating to personal attitudes and behaviour.
- **Organisational skills:** skills that relate to teamwork and effective management of people and resources.

As shown in Table 4.4 and Table 4.5, PABs have elaborate lists of personal and interpersonal skills that they want their members to develop.

TABLE 4.4: Personal and interpersonal skills specified by the ACCA, ICAEW, CA ANZ, CPA Canada, CAI and ISCA.

PABs' personal and interpersonal skills	PABs' personal and interpersonal skills
ACCA (n.d.) • Intelligence (problem-solving) • Creative (creativity) • Emotional intelligence • Vision (innovation and strategic thinking) • Experience (value-creation)	**ICAEW (2022)** • Adding value • Communication • Decision-making • Problem-solving • Teamwork
CA ANZ (2021) Business competencies (How do I operate) • Communication • Collaboration and relationships • Problem-solving • Decision-making Personal competencies (Who I am) • Critical thinking and judgement • Adaptive mindset • Ethics and integrity	**CPA Canada (2022)** • Leading • Collaboration • Self-management • Adding value • Problem-solving • Decision-making • Communication
CAI (2022) Business competencies • Communication • Problem-solving • Managing self and others • IT awareness • Project management • Stakeholder management	**ISCA (2022)** Personal effectiveness • Timeliness • Accuracy • Communication • Motivation • Flexibility and embracing ambiguity • Cooperativeness • Conflict resolution

Source: Authors' compilation based on the following sources: ACCA (n.d), CA AAZ (2021), CAI (2022), CPA Canada (2022), ICAEW (2022) and ISCA (2022).
Key: PAB, Professional accounting bodies; ACCA, Association of Chartered Certified Accountants; CA ANZ, Chartered Accountants Australia and New Zealand; CAI, Chartered Accountants Ireland; CPA Canada, Chartered Professional Accountants of Canada; ICAEW, Institute of Chartered Accountants in England and Wales; ISCA, Institute of Singapore Chartered Accountants.

TABLE 4.5: Personal and interpersonal skills specified by SAICA, CIMA and AICPA.

PABs' personal and interpersonal skills	PABs' personal and interpersonal skills
SAICA (2021) Business acumen • Business internal environment • Business external environment • Innovation, creativity and curiosity Decision-making acumen • Analytical/critical thinking • Integrated thinking • Problem-solving • Judgement and decision-making • Professional scepticism Relational acumen • Communication • Leadership • People • Relation-building • Teamwork • Self-management • Emotional intelligence	**CIMA (2022)** Business skills • Strategy • Business models • Market and regulatory environments • Process management • Business relations • Business ecosystems management • Project management • Macroeconomic analysis People skills • Influence • Negotiation • Decision-making • Communication • Collaboration and partnering Leadership skills • Team building • Coaching and mentoring • Driving performance • Change management • Ability to motivate and inspire
AICPA (2021)	
Business competencies • Strategic perspective • Global and industry perspectives • Process and research management • Governance perspective • Customer perspective	Professional competencies • Decision-making • Collaboration • Leadership • Communication • Project management

Source: Authors' compilation based on the following sources: AICPA (2021), CIMA (2022) and SAICA (2021).
Key: SAICA, South African Institute of Chartered Accountants; AICPA, American Institute of Certified Public Accountants; CIMA, Chartered Institute of Management Accountants.

The impact of digital accountants' skills on the curricula of higher education institutions

According to Tsiligiris and Bowyer (2021), technical and professional ethics skills remain the core competencies for future PAs and, thus, should stand out as the main pillar of professional accountancy education and training programmes in the digital world. The digital world, however, demands that future PAs complement these skills with highly developed digital, business and soft skills for operational efficiency and effectiveness and career success (Bughin et al. 2018; Capita 2019; Thomson Reuters 2018). The PA training ecosystem, composed of universities and other tertiary education providers, PABs, IFAC® and training organisations must also include and prioritise the development of digital, business and soft skills in their programmes.

By and large, universities play a critical role in the training of PAs by partnering with PABs (Tsiligiris & Bowyer 2021). Professional accounting bodies usually outsource the provision of their full or partial academic programmes to universities through an accreditation or exemption process. Accredited universities use the relevant PABs' competency framework to develop their accounting curricula. This approach ensures that all the key competencies are included in the curricula and that the curricula are updated as PABs update their competency frameworks in response to changes in the skills demanded by the employment markets. Unlike universities, PABs have close links with employment markets, which enables them to conduct regular surveys on skills and competencies that are required in the future (ACCA 2016; AICPA & CIMA 2019; CA ANZ 2019). The results of these surveys feed into the design and update of their competency frameworks, hence the next section.

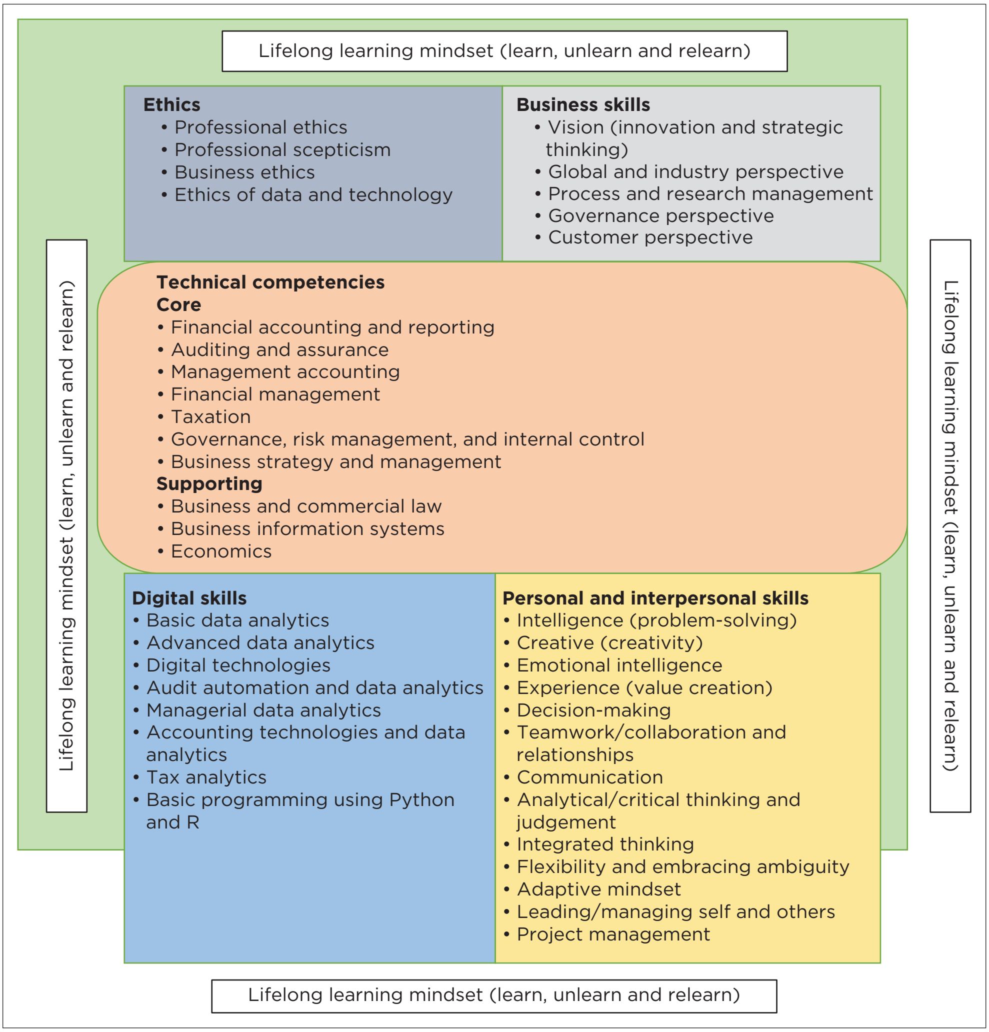
The conceptual framework for higher education institutions accountancy education in the digital age

Future accountants increasingly need education in cloud computing, the use of big data and evolving accounting and tax regulations. The knowledge of digital technologies exposes the skills gap of accountants. At present, accountants lack knowledge of the transformation of new disclosure regulations and corporate financial reporting protocols. Unfortunately, few universities have developed curricula for accounting students in line with their future needs. Universities should develop or incorporate new units, such as cloud computing, big data, digital technology and integrated reporting for accounting students. It is up to the universities to invest in existing faculty cohorts for training and learning or to recruit experts to coordinate and lecture new units (Islam 2017).

Therefore, Tsiligiris and Bowyer (2021) propose a conceptual framework for university accounting education curricula that includes the development of technical, ethical, business, soft, digital and data skills. This conceptual framework, however, has limited business, personal and digital skills. The conceptual framework can be adapted to include business and personal skills common to all the PABs surveyed, as these are important for the career success of digital accountants. The conceptual framework must also specify digital technologies for the four core technical competencies. The adapted conceptual framework for university accounting education curricula is shown in Figure 4.1.

Teaching and learning

The teaching and learning philosophies adopted by universities must support the effective development of all the 4IR competencies identified in



Source: Adapted from Tsiligiris and Bowyer (2021).

FIGURE 4.1: Digital age conceptual framework for professional accountancy education in higher education institutions.

the conceptual framework in Figure 4.1. Universities have vast experience in developing technical and professional ethics and skills. Thus, this area of the conceptual framework should therefore not pose a challenge for them in the digital world. Furthermore, technical competencies must continue to be developed per subject area to ensure that all the required skills in all the subjects are developed. Professional ethics and ethics of technology skills must continue to be developed within the auditing subjects but must be assessed across all subjects to emphasise their importance and fit for purpose.

In addition to technical and professional ethics skills, universities must also include the development of business, soft and digital skills in their curricula (Chaffer & Webb 2017). Universities can use placement work-integrated learning (WIL), project learning, simulations, industry mentoring, real-life case studies, role plays, experiential learning, teamwork tasks and extra-curricular activities to help their graduates develop the much-needed business and soft skills (Jackson et al. 2017; Smith, Ferns & Russell 2016; Wats & Wats 2009). Digital skills are a new set of skills, and thus, universities' accountancy departments must adopt appropriate teaching and learning strategies to develop these competencies effectively.

Universities are using several approaches to fuse these skills into their curricula. The first approach is to gradually integrate these skills into each of the four major accountancy disciplines (Al-Htaybat, Von Alberti-Alhtayba & Alhatabat 2018; Clayton & Clopton 2019; Keys & Zhang 2020; Kotb et al. 2019; Showalter & Krawczyk 2022; Sledgianowski et al. 2017). Integration may be from the second year up to the final year of the undergraduate accountancy programme. This approach requires core module lecturers to be upskilled to develop digital competencies competently and effectively.

The second approach recommended by Tapis and Priya (2020) and Vincent, Igou and Burns (2020) is introducing new digital skills modules from the second year to the final year of the undergraduate accountancy programmes. This approach enables a department to recruit specialist data analytics and digital technologies lecturers to develop and teach the digital skills modules. A department thus benefits from engaging a specialist in digital skills and technologies.

The third approach suggested by Coyne, Coyne and Walker (2016) and Pan and Seow (2016) is to modernise and broaden the existing AIS course to include digital skills and make this course specific to accountancy students. These skills cannot be developed in a single course. Thus, departments adopting this approach may need to introduce another AIS course for the final year of their undergraduate programme.

The last approach is the hybrid model, where the institution introduces a new stand-alone digital technologies course to develop and integrate these skills into the core technical disciplines (Banasik & Jubb 2021; Dzuranin, Jonesb & Olverac 2018; Polimeni & Burke 2021; Qasim & Kharbat 2020). This approach requires that the lecturers of the core technical disciplines are upskilled to develop and assess digital skills competently.

The applicability of digital skills to other commerce disciplines is discussed in the next section.

The applicability of digital skills to other commerce disciplines

The 4IR affects all industries and professions, although each industry and profession is being impacted differently (WEF 2016). For example, each profession is defined by its own technical and professional skills, which are expected to remain in demand in the digital world. As with digital accountants, professionals of other commerce disciplines must complement their highly developed technical and professional ethics skills with well-developed digital and soft skills for career success in the digital world.

According to Landsberg and Van den Berg (2023), digital and soft skills are called 4IR or 21st-century skills, as they enable all professionals to participate in the digital world. Digital skills enable professionals across disciplines to apply the 4IR digital tools in their work, while soft skills enable their organisations to operate efficiently to create and sustain value. The 4IR soft skills are identified by Menon and Castrillón (2019) and WEF (2016) as communication, complex problem-solving, critical thinking, creativity, judgement and decision-making, collaboration or coordinating with others, negotiation, cognitive flexibility, leadership and people management, service orientation and emotional intelligence.

Chaka (2020) and Mabe and Bwalya (2022) identify the basic digital skills for the 21st century as data analytics, big data, data visualisation, computational, programming and coding skills. Some commerce disciplines like auditing and business information systems (BIS) will, however, require advanced digital skills for complex applications. The 4IR employability skills for digital accountants are therefore also applicable to other commerce disciplines.

Conclusion

In this chapter, we identified the top employability skills of future PAs in the digital world via a literature review. The employability skills of digital accountants are highly developed technical and professional ethics skills complemented by well-developed digital, business and soft skills. Technical and professional ethics skills will, for a long time, remain the core skills of the accountancy profession in the digital world, and these, among others, are financial reporting, auditing and assurance, taxation, financial management, cost and management accounting, governance and risk management and business strategy. The supporting technical competencies include company and business law, macro and microeconomics, IT and business, and organisational environment.

The digital skills required by digital accountants are data literacy, data extraction, data application knowledge, visualisation, and storytelling, advanced data analytics, predictive analytics, digital acumen skills and an understanding of cloud, IoE, drone, sensor, AI, RPA, FinTech and cryptocurrencies, blockchain and ledger technologies. These skills must be complemented by logical thinking, computational thinking, problem-solving, information and digital literacy, data ethics and cybersecurity skills. The business and soft skills required by digital accountants are communication, complex problem-solving, critical thinking, creativity, judgement and decision-making, collaboration or coordination with others, negotiation, cognitive flexibility, leadership and people management, service orientation and emotional intelligence.

To this end, 4IR affects all industries and professions, although each industry and profession will be impacted differently (WEF 2016). As such, digital and soft skills also apply to professionals in other commerce disciplines, as they also work in the digital world. Each profession is defined by its own technical and professional skills, which are expected to remain in demand in the digital world. As with digital accountants, professionals of other commerce disciplines must complement their highly developed technical and professional ethics skills with well-developed digital and soft skills for career success in the digital world.

Chapter 5

Valuable lessons learnt from the Presidential Youth Employment Initiative Internship Programme

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Introduction

There is a noted investment, especially in the Global South, in skills development initiatives (Harry & Chinyamurindi 2022). However, a threat often facing such efforts is found in the macro-environment. For instance, internationally, there is acknowledgement of challenges such as (1) economic uncertainty, (2) globalisation, (3) changes in technology and (4) changing workplace demographics, and these affect skills development efforts (De Janasz & Murphy 2019). South Africa has not been spared from such international dynamics. There is also acknowledgement internationally (Vu et al. 2022) and in South Africa (Chinyamurindi 2022; Du Plessis & Thomas 2021) of the impact the coronavirus disease 2019 (COVID-19) pandemic has had on skills development. This has led some to call for a re-emergence of new roles for all stakeholders involved in skills development (Chinyamurindi et al. 2021). Further, interventions are needed in which

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these new roles can be put into practice to enhance the skills and graduate development agenda (Clarke 2017).

An internship serves a twofold utility as argued by a group of South African scholars (Coetzee, Oosthuizen & Van Niekerk 2022). Firstly, internships assist in giving the intern work experience and an opportunity to acquire skills. Secondly, internships afford the opportunity to learn about the world of work including the necessary skills and professional practice needed. These utility roles position the internship experience as potentially useful, especially in South Africa, given challenges such as the growing unemployment rate (Harry & Chinyamurindi 2022). Further, such interventions can be linked to enhancing employability and, ultimately, the career satisfaction of individuals (Matsuo 2022).

Within the accounting profession, for instance, the internship experience was found to be a useful gateway to the formation of pervasive skills (Keevy & Mare 2018). Such skills become important in assisting the next generation of future accountants in coping with challenges in their profession. Given this observation, within an entrepreneurship education space in South Africa, an internship experience component was argued as necessary in possibly assisting the transition from student to small business owner (Botha & Bignotti 2016). Furthermore, research shows the need for preparedness and motivation, especially in transitioning from a student to an entrepreneurship internship (Åmo 2023). This also includes the need to expose interns to the necessary skills and experience as required by the labour market (Koyana & Mason 2018). Despite all this, there is continued interest in understanding the relevance and utility of internships, especially in post-democratic South Africa (Mabela 2019). This has necessitated this study informed by pointers presented in the next section around the context of the study.

The rest of the chapter follows the structure set out below. In the first section, the literature review is presented and split into two subsections, namely, theoretical and empirical literature. This informs the research question of the study. The second section consists of the research methods and design followed in the study. In the third section, the results are then presented, including the use of illustrating quotes from the participants. The final section presents a discussion of the findings in view of the extant literature. This also includes some implications from the study for theory, practice and policy. The limitations and conclusions of the study end the chapter.

Literature review

Theoretical foundation

The socio-cultural theory (SCT) (Vygotsky 1978) was utilised as the theoretical lens for this study. Through the use of the SCT, one is able to understand how the interns experience aspects related to their internship exposure, including the role of the context in shaping such experience (Bandura 1986). The intern is placed as an important 'agentic' voice (Bandura 1986), and three aspects of their behaviour are addressed (Parajes et al. 2009). Put differently, agentic voice simply means that as an individual operating in an environment, the intern is able to make sense of their environment, including making decisions (Chinyamurindi 2022).

These three aspects include (1) the intern as having agentic power, (2) the role of significant others to the intern as influencing this agentic power and (3) the role of the context in shaping collective agency of influence. It is through the exercise and experience of these three aspects that the meaning-making of an experience such as internship emerges, including future developmental aspirations (Campano 2007; Smagorinsky 2011).

Empirical literature review

Because of the context of uncertainty and their inexperience, it can be expected that interns will adopt a range of strategies for survival. For instance, in response to environmental uncertainty, there is an observation of employees in formal work settings adopting survival-centred mode strategies (Collings et al. 2021). Such a survival-centred mode becomes crucial, especially given some noted challenges experienced by interns in the world of work (McHugh 2017). In addition, interns usually do not have the necessary social capital and networks to be able to survive within the world of work (McGowan & Sekaja 2022). In essence, their survival within the world of work could be linked to seeking such social capital and networks. Others have extended that interns may also need to develop psychological capital to aid their experience during and after the internship (Jiao & Zheng 2019).

Interns would also be expected to experience a range of challenges that could potentially impact their well-being. In failing to cope with the demands of a challenging work environment, interns may also exhibit high levels of stress and anxiety (Smith 2020). The lack of support may potentially result in feelings of abandonment and loneliness (Wang et al. 2021). Finally, perceived high job demands may also result in burnout (Vu et al. 2022). Such a situation necessitates not just individual but also organisational responses (Nazeema et al. 2023). Targeted interventions should focus especially on those working as interns, given their susceptibility to mental health challenges (Naidu et al. 2019).

The internship experience can potentially be a useful conduit for the emergence of new skills and competencies. Among commerce students, it was found that the internship experience influences entrepreneurial intentions and entrepreneurial self-efficacy (Botha & Bignotti 2016).

In essence, this also creates a platform for self-directed learning (Singaram, Naidoo & Ramrathan 2022). Interns need exposure through the internship experience as a conduit for future career preparedness (Mofolo & Botes 2016). The roles of a range of career actors and stakeholders become important in supporting experiences such as the internship experience (Bozionelos, Lin & Lee 2020).

Despite the positive aspects of the internship experience, some negatives have been found to exist. Mofolo and Botes (2016) found challenges related to supervision and lack of orientation to be hampering the internship experience. Further, this included work-related challenges such as (1) a high workload, (2) a lack of resources, (3) staffing issues and (4) challenges in the work environment. Within the hospitality sector, interns also recorded negative experiences, including hostility based on the intensive nature of the sector (Farmaki 2018).

It is noted, especially for interns from previously disadvantaged communities, that there is no guarantee that after the internship experience an intern will have secured employment (Majova 2018; Mseleku 2020). This places emphasis on the necessity for support at varying levels. This support includes supervisor support (Bilsand, Nagy & Smith 2014) and organisational support (Chen, Shen & Gosling 2018). Others argue that interns can also support their fellow interns as co-workers in responding to the challenges they face (Kmieciak 2021).

Based on the presented literature, the following research question is formulated: What are the experiences of interns taking part in the Presidential Youth Employment Initiative Internship Programme (PYEI) that came to the fore upon exit?

Methodology

The adopted research philosophy was the interpretivist philosophy, relying on an exploratory research design. A qualitative research approach to using interviews and focus groups with interns was incorporated. All these allowed the research to provide an answer to the research question. An added angle here appeared to be the use of stories and narratives of the participants to be able to understand their internship experience. This narrative work is something praised in the literature (Lyons et al. 2012).

Sampling

A total of 143 interns took part in the PYEI at the University of Fort Hare across the seven faculties. From this, a total of 35 interns were allocated to the Faculty of Management and Commerce, and of these, a total of 22 interns agreed to take part in the research. Focus groups and unstructured individual interviews were conducted with the 22 interns.

Based on the information analysed, ten males (46%) and twelve females (54%) participated in the study. Furthermore, regarding the racial split, the participants were black (90%) and coloured (10%). Concerning age, the majority of respondents (60%) were in the 20–25-year-old cohort, which was followed by the 26–30-year-old cohort (35%) and finally, the 31–35-year-old cohort (5%). All the interns had graduated with at least a commerce qualification from any of the departments at the University of Fort Hare in Industrial Psychology, Business Management, Public Administration, Accounting, Economics or Development Studies.

Data collection

Data were collected for a period of six months, with all the participating interns having decided to meet at an agreed date and venue on campus for data collection. The interviews and focus groups were all conducted in English. With the interns' permission, all interviews were recorded to allow for ease of reference during the data analysis stage.

Data analysis

The data analysis procedure was guided by suggestions from previous narrative research (McCormack 2000). Firstly, the completed transcriptions were imported into QSR NVivo Version 12 software. Secondly, a data analysis procedure based on three levels of meaning-making was adopted (Thornhill, Clare & May 2004). Level 1 was performed by re-reading each interview and listening to audio recordings. This process helped the researcher to understand and identify markers from each story to answer the research question. In level 2, participants' responses were classified into meaningful categories. Quotes based on perceptions of the internship experience were then used to illustrate the markers. Level 3 helped the researcher to analyse the content of the gathered narrative accounts and themes. This means of analysis allowed cross-case comparison in understanding participants' sense-making around their lived experiences (Nachmias & Nachmias 1996).

Ethical consideration and trustworthiness

The necessary ethical clearance was obtained from the university where the study was conducted. Participation in the study was voluntary and signed written informed consent was a prerequisite to participation. Anonymity and confidentiality were guaranteed as interns were informed of their rights and that participating in the study was voluntary. To ensure data quality, some steps were guided by other scholars' research (e.g. Guba & Lincoln 1981). Firstly, initial interview questions were pre-tested with a sample of ten interns (non-participants from another discipline outside the commerce field) who fit the same profile as those interviewed in the main part of the research. Secondly, all interview data were recorded and transcribed verbatim within 24 hours to ensure credible data. Thirdly, after transcribing data, participants were emailed a copy of the transcription to verify if this was accurate as per the interview. Finally, in addition to the recordings, comprehensive notes were taken at all critical stages of the research to ensure additional depth and quality.

Narrative findings

The findings show three narratives emerging from the data analysis. Firstly, a narrative of self-appreciation – consisting of praise for the PYEI as a gainful tool, especially given the high unemployment rate in the country. Secondly, a narrative of experienced constraints – consisting of inherent challenges experienced en route to acquiring work experience for the interns. Thirdly, a narrative of an envisioned future – detailing how future internships can be improved based on the lived experience of a year-long internship programme such as the PYEI. The three narratives illustrate the opportunity-intricacy experienced within an internship programme.

A narrative of self-appreciation

The participants' first narrative was mainly about self-appreciation of the PYEI exposure as assisting their career development. Notably, the majority of the interns had spent at least a year at home upon graduation looking for employment. The opportunity through the PYEI came at an opportune time, given the challenges of securing employment. For instance, one participant expressed this:

> 'The internship opportunity was one of the best things that has happened to me. I have been unemployed for the past three years and searching for a job. Someone gave me the advert and I just applied. To be honest I never thought I would get the internship, but the outcomes was [*sic*] good. From staying at home doing nothing I appreciated this opportunity because it helped me do something meaningful.' (Participant 16, interview, n.d.)

Another intern also praised the PYEI as affording them the opportunity to acquire skills that can only come from work experience:

> 'The university has done well to give us the theoretical knowledge we need. I majored in Industrial Psychology and Business Management. I can confirm that I have this requisite knowledge. However, lacking is the skill and ability that can only come with work experience. The internship gave me that exposure. Learning something basic as how to answer phone calls or assisting staff and

students when they come to the office. This was something I am grateful for that I am glad now shows on my CV.' (Participant 12, interview, n.d.)

Finally, the self-appreciation of the PYEI, as expressed by the participants, was also centred and focused on the perceived long-term results of the internship experience. One participant was convinced that the internship experience opportunity was the right approach to addressing the youth unemployment challenge:

> 'Through the internship experience I can confirm my confidence is at a better level than before. When you apply for jobs, internships and even learnerships and all you get are rejections or even no responses. Just being able to get an opportunity to be part of this internship has changed my outlook and confidence.' (Participant 5, interview, n.d.)

Based on the first finding and the illustrating quotes, there was a sense of appreciation of the internship experience in assisting to get some form of work experience and exposure. The following additional quotes support the presented first narrative finding:

> 'The internship experience was a blessing. This was my very first opportunity as a graduate. You will appreciate that for some of us the first opportunity is usually one where you struggle in searching for a job. So, for me this was the opportunity I had been waiting for.' (Participant 9, interview, n.d.)

> 'I applaud the government for introducing this opportunity. It has really helped. Yes, the stipend is too little but the experience the internship brings will last beyond.' (Participant 11, interview, n.d.)

> 'The internship afforded me opportunity to be self-reliant. I now could decide and control my spending rather than depending on my single mother.' (Participant 13, interview, n.d.)

> 'Most of the interns are grateful for this opportunity. A number of us had been unemployed. When I saw the advert and applied to getting the call – it was just unbelievable.' (Participant 14, interview, n.d.)

A narrative of experienced constraints

The second narrative finding was around the experienced constraints from the PYEI. These challenges were framed as personal to the intern or related to the structure of the internship experience. For instance, one participant expressed this:

> 'Yes, there was some good from the internship experience, but also it was tough for me. Having been unemployed for six years from graduating and staying at home, and even giving up applying, I did not manage very well. I had to second-guess myself for the fear of failing. For instance, being asked to photocopy a document. In my head was always a fear and a voice – what if I don't do it well. I think the exposure to an internship after years of being unemployed was made difficult by this self-doubt of my ability.' (Participant 20, interview, n.d.)

This view was also supported by another intern, experiencing the psychological challenges and hurdles they had to cross, all stemming from the prolonged period of unemployment.

> 'A challenge I experienced related to one of a mental health nature. This includes depressive periods because the next question was what next after the internship? I did not enjoy the last days of the internship because I can just describe it a [*sic*] mental torture.' (Participant 17, interview, n.d.)

Some of the challenges experienced related to the structure (or the lack of structure) of the internship experience. For instance, there was consensus in the view that parts of the internship experience appeared to not have structure:

> 'From day one, it appeared as if the internship did not have some form of structure. For instance, there was no visible workplan. It's like we were just floating based on what the host would want to do. At first, I did not have a problem with this, I was just glad to be having the opportunity. However, when it came to the 5th and 6th month and I noticed this was continuing, I began to worry. This was something some of my fellow interns picked. Unfortunately, it also exposed to [*sic*] tasks and activities not necessarily mandated to us.' (Participant 10, interview, n.d.)

Based on the second finding and the illustrating quotes, there appeared to be some bottlenecks to the internship experience. The following additional quotes support the presented second narrative finding:

> 'One of the concerns I had was that there appeared to be no briefing to our hosts as to what we know and what we do not know. The expectations from our hosts were that we should just get along with the work or learn in the shortest possible of time. To be honest I am a slow learner and that should not mean I am a bad worker. This lack of a briefing affected not just completion of tasks but also relations with hosts.' (Participant 4, interview, n.d.)

> 'For me, a challenge with the internship was trying to balance between the things of the present and those things of the future. The internship was a great opportunity but I felt it was rather short. At the mid-point of it all it dawned on me that I have no time left. I had to start thinking of what I was going to do for the future. At the same time, I notice a sudden lack of interest in the activities of the present due to this worry of the future.' (Participant 2, interview, n.d.)

> 'There was just no structure. I think you get the sense the universities were also rushed into accepting a large number of interns. Remember the idea was also to try and link the imbursements from the PYEI to student debt. So, for some departments of the university, you could get the sense they were prepared in dealing with the presence of the interns. Other departments and unit [*sic*] did not know what to do with us really. Some of the time was just spent sitting around.' (Participant 7, interview, n.d.)

> 'A challenge I faced was making the transition from being unemployed to now dealing with the internship experience. I had to become organised within a short space of time. It was tough at first but I managed. When I had the opportunity to be given tasks to do, it was difficult at first. It was really a confidence thing.' (Participant 8, interview, n.d.)

A narrative of an envisioned future

The final narrative finding focused on a narrative of an envisioned future. The desire here was for the interns to detail how future internships can be improved based on their lived experience of a year-long internship programme such as the PYEI. These are mostly borrowed from seeking to improve on the identified challenges in finding two.

A first focus of attention was the need to provide a structured internship programme that balances on the wide repertoire of skills that need development. One participant expressed this:

> 'The internship experience needs to be structured. For instance, there should be an open discussion between the host and the intern around areas that are needed to drive for improvement. I get the sense not just from our institution but other institution [*sic*] this really never happened. It was really a free flow and let's work as things happen. The structure is needed.' (Participant 1, interview, n.d.)

A second focus of attention was to support the mental well-being of interns, especially during the internship experience. One participant expressed this:

> 'You must understand for most of us we have never worked at all. We need to have strategies in place that support especially our mental well-being during the internship experience. I understand this is a privilege given to staff members, but we are not full-time staff members. Also we are not students, so the support services from the Counselling unit may not apply to us. There is need for psycho-social support.' (Participant 3, interview, n.d.)

A third focus of attention was to increase the duration of the internship experience. One participant expressed this:

> 'A year was never enough. This I am saying because just when I was getting into the internship I began to worry about the internship coming to an end. I think the internship can be a two-year internship that affords more opportunity to acquire the requisite skills long-term.' (Participant 6, interview, n.d.)

The following quotes support the third finding:

> 'I expected the internship, especially for me as an accounting major, to be linked to aspects of my training. I actually picked up that all of us were randomly put into units and departments not entirely linked to our skills and professional training. This could be something for improvement.' (Participant 15, interview, n.d.)

> 'I prefer the internship to have been at least for 2 or 3 years. It establishes some form of continuity for the host and also for us. Imagine after this year and one is back to looking for a job again for another five years. It really defeats the purpose of skills empowerment.' (Participant 18, interview, n.d.)

> 'Future internship experiences could have more structure. Like clear deliverables and also support services. At some point of my internship experience I felt that some aspects were not necessary and those that were necessary where not being prioritised.' (Participant 17, interview, n.d.)

> 'I would like to see more coping skills embedded into the internship experience. Skills like how do you address challenges of a mental health nature. Truth be told, just before the internship.' (Participant 19, interview, n.d.)

Overall findings and conclusion

Findings

The chapter reported on the findings of an exploratory study with a sample of interns taking part in the PYEI. The findings in the form of exit interviews reveal the (1) lessons learnt, (2) challenges faced and (3) suggestions to improve future internship interventions based on the experience of the interns. The findings of the study attest to the ways in which skills development initiatives can be improved (Harry & Chinyamurindi 2022). The study magnifies the role of an internship programme as a crucial skills development effort. Internships among commerce students appear to be a window of opportunity to the world of work (Gunz & Peiperl 2007).

The findings of the study offer suggestions on how the skills and graduate development agenda can be improved. For instance, the third finding magnifies areas of improvement in an internship. These suggestions become useful in positioning new roles and practice interventions coming from the experience of the interns. Ultimately, the internship experience provides useful skills and experience to flourish in a chosen career path (Chinyamurindi 2022). In the third finding, the interns offering angles of improvement related to the structure of the internship programme is the work showing concern over areas of improvement. These areas of improvement can be used as a basis to enhance future marketability within the labour market (Small, Shacklock & Marchant 2018).

The findings of the study also show support for the twofold utility argued by previous South African research based on internships (Coetzee et al. 2022). In finding one, a self-appreciation of the internship opportunity is in support of the utility of attaining work experience and opportunity. In finding two, the identified challenges experienced by the interns are also identified as opportunities through which interns can understand the world of work from the lens of challenges. The ultimate aim, as espoused in finding three, was the desire for enhanced employability (Matsuo 2022). This is a desired state viewed by the interns as crucial, not just to their own career development but also that of others.

Conclusion

The study makes some important contributions with theoretical, practitioner and policy-maker value. Firstly, in magnifying the issues affecting interns as part of an internship experience, strategies can be developed to assist in enhancing the work experience of interns (Hunt & Scott 2020). Commerce students can be assisted through an internship experience to acquire the requisite skills needed in the labour market. The study and its findings attest to the potential interacting role that can take place between the work of higher education institutions (Anjum 2020) and the government (Yu & Ross 2018) in addressing challenges related to unemployment, graduateness and work experience. From such a partnership, strategies can be proposed to assist commerce students in search of skills and experience to enhance their employability. This emphasises the importance of internships as a useful vehicle for skills acquisition.

Secondly, the chapter through the focus on the intern and the internship experience seeks to contribute to the human resources management literature. There is also support for the use of the SCT (Vygotsky 1978) as a theoretical lens beyond the realm of education studies and also to human capital development issues. The SCT has assisted in understanding intern experience and how experiences shape the acquisition of skills. The three narrative findings' interaction, as argued by Bandura (1986), appears to exist between the individual and their environment. Further, in referring to their context, interns were also convinced to use the frame of reference of others as useful in understanding their experience of the internship (Bandura 1986). It is through this exercise and experience of the internship that some form of meaning-making appears to be emerging (Campano 2007; Smagorinsky 2011). Internships for commerce students (as shown in this study) can serve this purpose.

Some practical inferences can be drawn from the study. Firstly, as noted especially from finding one, the interns appear to be surviving in a labour market dependent upon work experience. This is also an observation from the literature (Carlsson & Eriksson 2019). A need may exist to extend the duration of the internship experience to more than one year. From the vantage point of the intern, it affords the opportunity for more on-the-job experience and a sustained absorption of skills needed by the labour market. Some work can be done here by all stakeholders to the internship intervention by proposing an internship plan that takes into cognisance the needs of all stakeholders. This planning can then be useful to gauge how well the internship intervention is doing, bearing in mind the needs of these stakeholders.

Secondly, there is a need to continually extend psycho-social support to interns. In the findings of the research, there appears to be an apt description of the difficulty being experienced by interns en route to skills and work experience acquisition. The challenges identified in the research show similarity to those from previous studies (McHugh 2017). A twofold work may be needed here. Firstly, an urgent priority is to assist in the provision of mental health support services. The interns forming part of the study flagged challenges related to heightened anxiety and concern for the future. The need for counselling support proved to be important. Secondly, interns could also be assisted in acquiring social capital and skills to enhance their employability while still part of the internship experience. These efforts could attest to survival-centred mode efforts argued as needed, especially within a contemporary workplace (Collings et al. 2021). The study shows this from the lens of interns as a unit of analysis. Psycho-social interventions need to be incorporated into the internship intervention.

Thirdly, an issue needing attention could be the desire to provide some form of structure to the internship programme as espoused through the findings of this research. Planned periodical orientation sessions could be organised to impart information and also to receive feedback from the interns. Furthermore, efforts could include making interns aware of the policies and procedures around their work experience. This can also include an awareness of the clear reporting structures and where to report in the event of a grievance. Finally, a joint effort is needed between the intern and the host to address the identified challenges facing interns (Mofolo & Botes 2016). Inclusive here are efforts to address (1) the high workload, (2) the challenges of a lack of resources, (3) staffing guidelines and (4) challenges in the work environment. A follow-up intervention could be introduced in view of these issues and embedded into the evaluation of the impact of the internship intervention.

Rethinking the role of academics

Chapter 6

Framework for academic success: Roles and responsibilities of both students and lecturers

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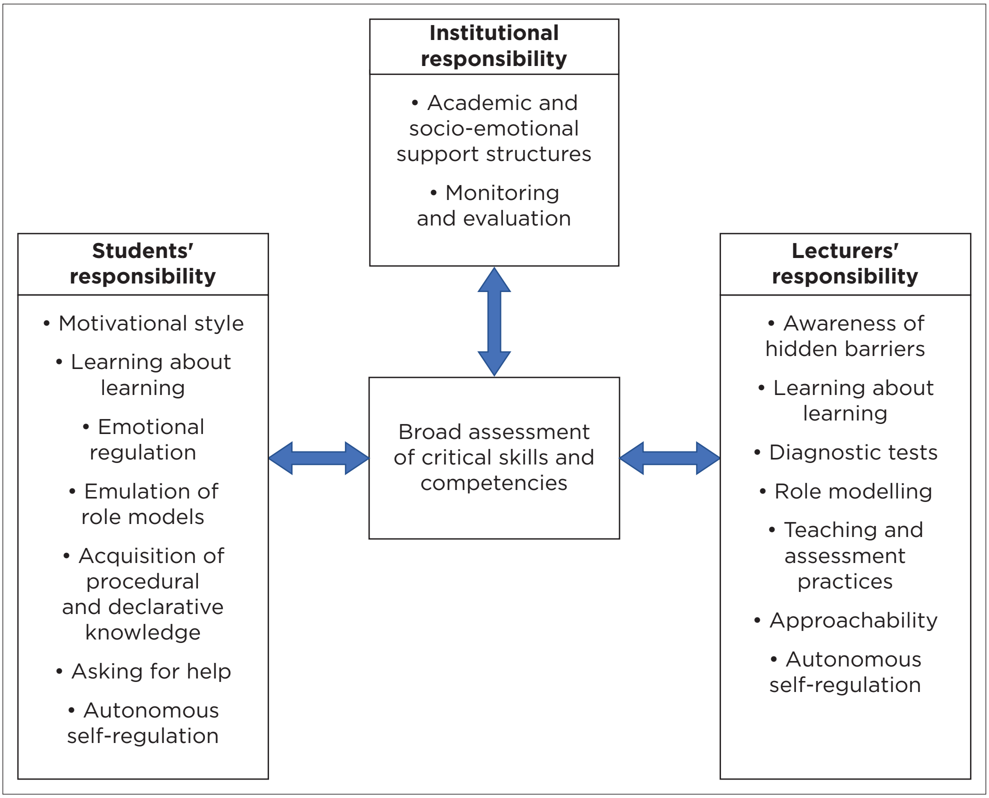
■ Introduction

As lecturers, we are often left wondering why, despite all the effort that we put into the design and delivery of the courses that we lecture, students do not do as well as anticipated. Students, in turn, are also left wondering why, despite putting so much effort into their studies, their efforts do not lead to the results that they had hoped for. A possible way to understand and address these disappointing outcomes may be to interrogate the drivers of behaviours of both lecturers and students in this regard. Behaviours can be affected by deeply held assumptions about oneself that are seldom questioned. These driving principles, if properly aligned, have proven to be effective in supporting the processes of transformation that need to take place to ensure that learning occurs (Dweck 2017). In this chapter, a range of hidden barriers to learning that condition the behaviour of students and lecturers are made explicit so that interventions can be developed to increase awareness and encourage proactive change (Weimer 2013).

This chapter is the result of several research projects that explored the role of motivational, emotional and behavioural factors on the academic performance of students (Merino & Aucock 2015; Merino & Aucock 2017; Merino, Jooste & Vermeulen 2019). In summary, the findings suggest that students' success should be seen as the result of a common process in which both lecturers and students work together towards a common goal and where students are able to access both formal and informal support structures. In other words, in addition to taking responsibility for developing the necessary skills, strategies and behaviours associated with self-regulation, students need to be willing and able to reach out for appropriate academic and socio-emotional support. For their part, in addition to fulfilling their regular teaching responsibilities, lecturers need to be willing and able to supply that support.

The chapter starts by briefly describing the role of motivation in learning and how learning actually occurs at a neurological level. This is then complemented with several insights into how the teaching and learning practices that students are exposed to during their schooling compromise their capacity to perform well at university. The behaviours of students as they interact with lecturers and their emotional reactions to failure are then explored. The chapter then presents a framework that identifies a range of academic success factors that must all be present if academic outcomes are to improve (Figure 6.1). In conclusion, the framework emphasises the need for adopting a broader approach to monitoring and evaluation that goes beyond lecturer and course evaluations. Targeted interventions can then be implemented to achieve lasting improvements in throughput rates.



Source: Authors' own work.

FIGURE 6.1: Framework for academic success.

Understanding the role of motivation in the learning process

Self-determination theory stipulates that human beings have intrinsic desires to satisfy their need for autonomy, relatedness and competence and to achieve a unified sense of self, that is, to be self-determined (Ryan & Deci 2017). According to this theory, to the extent that individuals consider themselves to be the initiators and drivers of activities to achieve these goals, they are said to be intrinsically motivated. When it comes to learning in a structured environment, such as at school or university, very few students are intrinsically motivated to learn. They see learning as something that is being imposed on them or as a means to an end, such as achieving financial independence. This, in turn, conditions the goals they set for themselves and the amount of effort they put into their studies.

The level of extrinsic motivation experienced by students varies in accordance with the extent to which they make an effort to internalise the reasons for learning and results in different types of self-regulatory profiles (Ryan & Deci 2019). Extrinsic motivation can be associated with high degrees of autonomous self-regulation if students make an effort to understand and accept as their own the reasons for learning. These students set themselves personal learning goals and engage in autonomous behaviours that are likely to result in high degrees of competence. Controlled self-regulation, on the other hand, implies that very little effort has been made to understand or accept the need to learn. As learning is being externally imposed, the amount of effort applied to learning activities will be limited to striving to achieve performance goals, that is, just achieving a passing mark. The amount of autonomy displayed by these students will also be limited. Students will try to be guided as much as possible by their lecturers, which in turn will limit their capacity to solve problems on their own and to take responsibility for their own learning. The implication of these behaviours is that the motivational aspects of learning must be understood by both students and lecturers. Failure to do so may lead students to start their university studies unaware that their motivational profile may be strongly associated with poor academic results.

■ Learning how to learn

Medical advances in neuroscience have led to the identification of the different areas of the brain involved in cognitive processes (Sokolowski, Hawes & Ansari 2023). It is now possible to combine these discoveries with information processing theories of learning that have identified the various processes involved in learning from a theoretical perspective (Sweller 2020). Information processing theories work on the assumption that the brain is able to encode information into long-term memory. During learning tasks, working memory is used to compare new information with selected information that is retrieved from long-term memory to create meaningful connections. The process of organising new information and relating it to existing knowledge makes it easier to understand and remember new concepts, that is, to encode the new information into long-term memory. To be able to learn, it is necessary for students to master strategies that give them control over the processing and retrieval of information in the brain.

Two broad sets of strategies have been suggested as necessary to facilitate the processing of information (Schunk & Zimmerman 2012). They are rehearsal and elaboration strategies. Rehearsal strategies can be useful for the initial acquisition of information. Some common rehearsal strategies include underlining, summarising and repeating information to oneself. Rehearsal, however, does not lead to the encoding of information into long-term memory. New information can start to be linked to existing information through processes of elaboration. In these processes, the student starts to classify the information into hierarchies and also starts to make meaningful connections with existing knowledge. Mind-maps, active note-taking, the use of mnemonics and active questioning are all strategies that can facilitate the creation of meaningful connections (Wilmot & Merino 2015).

A further process that is required for learning to occur is comprehension monitoring. Rehearsal and elaboration strategies can be thought of as a car that can enable someone to reach a destination. Comprehension monitoring can be thought of as the driver who chooses the destination and perseveres in their efforts until they reach their destination. Comprehension monitoring allows students to identify learning gaps and make decisions as to what approach they are going to use to close those gaps. If the learning approach chosen is not working well, comprehension monitoring will lead students to follow a problem-solving approach and decide what changes in learning strategies are needed to close the knowledge gaps. Feedback mechanisms will continue to be employed until the student is satisfied that she has learned the new material. Comprehension monitoring, if properly applied, will result in both declarative knowledge, knowledge of the *what*, as well as procedural knowledge, knowledge of the *how*. That is, knowledge of what approach is more suitable for each learning task, as well as knowledge of how to use each approach. The learning process therefore requires the student to learn how to learn by acquiring awareness of the key strategies that are needed, and also learning when and how to use each strategy.

Learning can also be affected by the emotional state of the students. Medical research has been able to map the areas of the brain that are activated when students are under situations of stress and anxiety (Cavalera et al. 2018). This research has shown how negative emotions can affect students' capacity to concentrate and use working memory. It is also much harder to implement elaboration strategies under these emotional states. For learning to take place, a further requirement is therefore needed: the capacity of the students to self-regulate their emotions in ways that support, rather than hinder, the learning process. Consequently, the learning process necessitates awareness of motivational drivers, application of procedural knowledge and the capacity to self-regulate emotions. Students who integrate all these dimensions of learning are likely to be self-determined.

Social dimensions of learning

The fulfilment of psychological needs can either be supported or hindered by the educational settings in which the learning occurs. If the educational setting is supportive, students will be able to develop their own autonomy and will also engage in meaningful relationships that will allow them to become competent. If the educational setting is not supportive, students may react by employing maladaptive coping strategies that will compromise their capacity to learn (Reeve 2012). It is the responsibility of lecturers to create conducive environments for learning and to support students in their academic journeys. In this regard, awareness of the social dimensions of learning and the role that lecturers can play in supporting students as they become experts in their fields is very important.

For social cognitive researchers, one of the primary roles of teachers and lecturers is to equip students with the capacity to take responsibility for their own learning (Zimmerman 2013). This is achieved when students acquire self-regulatory competence. Teaching activities are designed with the primary aim of ensuring the development of the capacity to self-regulate over time. In the early stages of learning, the primary focus is to learn by observation and emulation. As students mature, a shift in focus is needed so that students can internalise the reasons for self-regulation and start to use self-regulation adaptably.

Social influences are used at the observational and emulative stages to model to students the skills required for them to learn (Merino & Aucock 2017). The success of these strategies partly depends on the capacity of the students to imitate accurately the behaviours being role-modelled to them. Practice and reinforcement are needed for the students to master the learning techniques. At the emulative stage, a student is no longer just copying behaviours but has already acquired a capacity to emulate the general patterns of the model; for example, to ask questions but using different words to those that the lecturer would use. For students to mature further, they need to move to a stage in which they can start to use strategies independently as they tackle learning tasks. At this point, there is still a reliance on role models, but students start to internalise the reasons for using different strategies, and they work independently to master them. The focus starts to shift from the social to the self. The last stage of this process of growth is one in which the student has gained confidence in his or her own abilities to use the different learning techniques and is able to set learning goals independently. At this point, the student is able to apply procedural knowledge and to adapt the use of strategies to match the demands of each learning task.

As can be seen, the start of the process of learning how to learn is social in nature, as it is heavily dependent on imitating role models and learning how to use learning techniques from them. The reliance on role models reduces gradually as the student grows in self-efficacy and starts to acquire procedural knowledge. Becoming an autonomous, self-regulated student, however, does not mean becoming completely independent of others. Access to and reliance on role models will always be important to students who can self-regulate, but the need to consult will be reduced to situations in which comprehension monitoring triggers the need to reach out for academic support to close a specific learning gap.

Hidden barriers to learning

Creating awareness of motivational drivers and the need to acquire self-regulated learning competence with the help of role models may not be sufficient for students to do well academically. Further awareness of how deeply held beliefs, or self-theories, can affect learning is also needed. The acceptance of inequalities in student–lecturer relationships, the malleability of personal attributes, misunderstandings about the role of failure in the learning process and lack of openness to ask for help can all have a detrimental effect on the efforts of students to become competent. Once students become aware of these hidden barriers, it is possible to engage in behavioural changes that can pave the way for the achievement of good academic results.

Power distance and uncertainty avoidance

The processes of socialisation and the acquisition of self-regulatory competence can be compromised by students' beliefs about the role of inequality in lecturer–student relationships and the amount of uncertainty that students are willing to tolerate. Hofstede (1980) describes power distance as the extent to which the weakest party in a relationship expects and accepts inequality to be present in a relationship. Uncertainty avoidance determines how a particular person reacts to unstructured or unpredictable situations. Students with high uncertainty avoidance profiles tend to seek rules and guidelines to determine how to act in a particular situation, while students with low uncertainty avoidance tend to be open to accepting higher personal risks (Hofstede 1986).

In South Africa, the schooling system tends to foster significant power distance between learners and teachers, as well as high uncertainty avoidance. The end goal of the educational system seems to be the achievement of high pass rates, without much consideration for the development of the learning skills of the students (Maddock & Maroun 2018). This is achieved by encouraging rote learning and the memorisation of past papers in order to pass. As explained above, rote learning is associated with rehearsal strategies that do not help to encode information into long-term memory. Elaboration strategies through which the understanding and application of principles are developed are therefore largely ignored. This, in turn, limits the need to develop and apply comprehension monitoring strategies and restricts the development of students' capacity to solve problems and take reasonable risks. As there appears to be no need to develop independent thinking skills, the role of the teachers is restricted to encouraging learning through observation and emulation. Students become dependent on the teachers to initiate learning activities, and they are not made aware of the need to achieve self-regulatory competence, that is, to learn *how* to learn.

Emotion-focused coping strategies

Self-theories about the malleability of personal attributes, such as one's level of intelligence, give rise to growth mindsets and fixed mindsets (Dweck 2017). Students who believe that there is a limit to how much their intelligence and skills can develop are said to have fixed mindsets. Students who, deep down, believe that they can always learn new things and develop skills if they apply themselves enough are said to have growth mindsets. Fixed mindsets can be extremely debilitating. If students believe that their capacity to grow is limited and they experience academic failure, they may wrongly conclude that they are not intelligent enough and that there is little that they can do to overcome failure. This mistaken assessment of reality can also trigger emotion-focused coping strategies leading to feelings of inadequacy and shame, which in turn can further limit students' capacity to respond to failure. Under these circumstances, students may also resort to impression management strategies to hide their failure from others (Boekaerts 2010). The reaction to failure of students who believe in effort to grow is very different. Failure may be taken to be an indication that the level of knowledge that is expected from them has not been reached yet. These students may not be conditioned by feelings of shame or guilt, as failure will not be construed as a sign of personal inadequacy.

In the South African context, it is common for students to start their university studies unprepared for the academic demands of their degrees (De Klerk, Maleswena & Spark 2022). This leads them to continue using the study approaches that served them well at school. When they start to fail tests and exams in their first year, they realise that their efforts do not lead to the results that they were expecting (Papageorgiou & Callaghan 2020). Rehearsal strategies prove ineffective and there is no awareness of the need to apply comprehension monitoring and to identify and adjust learning strategies that foster understanding and application of principles. Because there is no awareness of the need to learn how to learn, and the fact that problem-solving necessitates openness to taking reasonable risks, students find themselves without the tools needed to be able to address their learning needs. As failure continues, the effects of fixed mindsets may start to manifest, whereby students wrongly conclude that they might be somehow limited in their capacity to learn. These self-assessments may then trigger feelings of inadequacy that are likely to be accompanied by negative emotions such as shame and guilt. If failing continues, maladaptive coping strategies such as procrastination and withdrawal are likely to be adopted by these students, and some of them may start to experience feelings of depression as well.

The reactions to failure of students who have made an effort to integrate into their way of being the reasons for studying towards a degree and who see learning as a process of growth that requires them to be autonomous are very different to those of students who have not done so. Experiencing failure is never pleasant, but failure for them is not construed as a personal deficiency or a sign of a limitation. Failure is construed as a means to an end. If this is done, failure can be taken as a sign that progress can be made if the right strategies are followed and if enough effort is made to master those strategies. These students may have the courage to abandon strategies that might have proven successful in the past if they are no longer effective. This implies that following a problem-solving approach and being open to taking risks, such as applying new strategies, may not result in immediate gains. In the long term, however, this openness to change can lead students to determine how best to study and master each of their subjects, as what might work for one subject may not necessarily work for another.

To transition from emotion-focused coping strategies that are reactive to experiences of failure to problem-solving focused coping strategies that are self-regulated, students need to be able to reframe failure from something negative into something that can be an enabler of learning. To be able to reframe failure, students need to learn how to self-regulate their emotions, which implies learning to forgive themselves for not succeeding and counteracting negative thoughts with positive affirmations (Menzies 2022). These processes also need to be accompanied by the questioning of self-theories that stress personal limitations so that students can start to believe in their potential to grow, and instead of seeing obstacles, they can start to see opportunities for self-improvement and development.

Vulnerability

Another hidden barrier to learning stems from self-centred coping mechanisms that emphasise self-sufficiency and resourcefulness and suppress vulnerability and the need to ask for help (Merino & Aucock 2015). Self-centred coping mechanisms conceptualise asking for help as a sign of weakness, incompetence or laziness. Negative emotions must be hidden and suppressed, and difficulties have to be overcome on one’s own by sheer grit and determination. This approach highlights the importance of taking responsibility and persevering in one’s effort, and it has the potential to lead to good results if combined with good self-regulatory skills. However, putting a lot of effort into applying ineffective learning skills may eventually lead students to question why, despite working so hard, they find no correlation between effort and results.

The problem that many students face is that they lack self-regulatory competence, and they also lack understanding of the social dimensions of learning. Many students feel intimidated by lecturers. They believe that if they approach lecturers and show that they need academic help, they will be judged as inadequate or deficient. They also reason that lecturers have status and therefore they should not be approached. In the eyes of the students, asking for help requires being vulnerable and taking a personal risk that may lead to negative emotions, which is something that many of them are not prepared to do (Boekaerts & Niemivirta 2000).

The process of being open to receiving help can be greatly facilitated if students are able to interact with lecturers so that they can get to know them. These interactions can take place before the beginning of the academic year and should be informal in nature. Through these interactions, students can be helped to challenge their preconceived ideas about lecturers, and they can also be introduced to the benefits of consulting as a way of acquiring both declarative and procedural knowledge. Lecturers, in turn, must also learn how to be approachable (Reeve 2016). If a student has a bad experience because a particular lecturer is insensitive to the needs of that student or the lecturer comes across as harsh, the chances of that student making an effort to consult again will be greatly reduced.

One of the skills that students need to acquire is therefore to learn how to consult. This involves convincing themselves that the benefits of taking the risk of consulting will greatly outweigh any emotional costs that they may experience. Some students use self-talk to put aside their insecurities and to prepare themselves for consultations (Merino & Aucock 2015). These students welcome being questioned by the lecturers, and if they do not know the answer to those questions, they are then open to admitting so rather than engaging in impression management strategies. They also understand that through those questions, the lecturer will be able to point out problems to them that they may not be aware of. Students can also benefit from the way in which the lecturer role models the application of elaboration strategies when applying theory to solve problems. Therefore, students can gain both procedural and declarative knowledge as part of the consultation process.

As well as access to academic support structures in the form of consultations and tutorials, students need socio-emotional support structures to be able to cope with the pressures of operating within the university environment (De Klerk et al. 2022). The need to have meaningful interactions with peers naturally leads students to form informal support groups. During the pandemic, when physical interaction with peers was not possible, many students made use of social media to continue supporting each other in their academic journeys. Physical and virtual support groups can both be effective, but there must be a conscious effort by the group members to want to support each other in positive ways (Volet, Vauras & Salonen 2009). These groups allow students to realise that other students also go through the same challenges that they go through. This realisation allows them to acquire a balanced view of their personal reality, makes them less likely to resort to maladaptive coping strategies, and supports positive reframing of difficulties. Like the other skills that have been described in this chapter, students may need to learn how to interact effectively with others to be able to make the most of these support groups.

In some situations, however, recourse to academic and informal socio-emotional support groups may not be enough for students to overcome personal problems that may be exacerbated by the academic demands that they face (Mason 2019). Financial constraints, lack of family support, the threat of academic exclusion, being victims of crime and experiencing violence can result in intense negative emotions and depression. For these students, access to professional psychological services is a necessity. However, sometimes there is a great reluctance to make use of these services as they are perceived as remedial in nature, which is something that goes counter to the self-centred coping style of many students. Universities need to challenge these perceptions by developing effective communication strategies that emphasise the benefits of asking for help from professionals who are trained to address the psychological needs of the students.

■ Role and responsibilities of lecturers

Some lecturers may not be able to relate to the hidden barriers to learning that have been identified in this chapter. Their personal and academic journeys might have been very different to the ones of the students that they have to lecture. Also, after many years of working with the same technical material, many of the thinking processes that are core to their disciplines may have become automated, to the point that it is difficult to break them down to make them explicit to students. The result of this lack of awareness is that despite them thinking that they are putting a lot of effort into their teaching, they are unable to get the students to perform well academically.

Awareness of these challenges could lead lecturers to relook at the design and delivery of their courses to see how best to support students in their learning process (Reeve 2016). Lecturers need to make explicit to students the elaboration strategies that are applicable to each discipline. This can be done as much as possible through the role modelling of thinking processes so that students can make relevant connections to prior knowledge and start to create meaning for themselves (Merino et al. 2019). The result of these efforts should be to introduce students to the discourse of their discipline, wherein students come to understand what is required of them and gradually become experts in their fields.

Lecturers can also introduce low-stakes diagnostic tests as part of their courses to identify whether there are fundamental knowledge gaps that need to be addressed (Bennett 2011). If students do not have the foundations on which to build further knowledge, then no matter how much effort is put into the teaching of new content, the likelihood of students learning the new content will be greatly reduced. Diagnostic tests can also be used to identify the current level of procedural knowledge of the students. If students are unaware of the problem-solving strategies that they need to use, or their repertoire of strategies is limited, this can also contribute negatively to their performance.

Finally, in terms of assessments, lecturers must ensure that there is alignment between the activities that are used to prepare students for tests and exams and the content which is assessed in those tests and exams (Myyry et al. 2022). If there is a mismatch between learning activities and assessments, students are unlikely to be able to do well. They may then wrongly conclude that their poor performance was because of them not having studied enough or not being competent enough when, in fact, the reason for their poor performance can be attributed to the misalignment between what they were taught and how they were subsequently assessed.

Framework for academic success

This chapter has highlighted a series of behaviours and personal attributes associated with good academic outcomes that both lecturers and students should display if completion and throughput rates are to improve. The challenge for administrators at an institutional level is to make sure that both lecturers and students work towards common goals. As has been seen, many of the items that have been identified relate to personal self-management and the development of autonomy. These attributes can be developed by students if they are made aware of their importance and if they are given the necessary support to do so. However, it may not be reasonable for individual lecturers to introduce activities related to the acquisition of motivational and self-management skills in their courses. These initiatives can potentially be better managed at an institutional level through the development of extra-curricular modules that students can complete as part of their studies. Lecturers, however, should take responsibility for addressing the hidden barriers to learning identified and for ensuring that students acquire and develop both declarative and procedural knowledge.

The framework for academic success presented in Figure 6.1 highlights the need to develop a broader understanding of the assessment of skills and competencies of both students and lecturers. The current focus in terms of evaluation and monitoring carried out at the institutional level in many universities tends to focus on course and lecturer evaluations only. What is proposed is that all the stakeholders involved in the educational project take an active role in monitoring and evaluating a broad set of competencies and skills that have been shown to be associated with good academic outcomes.

At the student level, these efforts can be focused on each of the items identified under ‘Students’ Responsibilities’ in Figure 6.1. The role of these items as contributors to students’ learning has been discussed in the sections above. Creating awareness of the importance of motivation, learning about how to learn, managing emotions and dealing with failure, learning from others, mastering both procedural and declarative knowledge, learning how to ask for help and taking responsibility for one’s own learning are all areas that students should be introduced to. Students should also be helped to assess their level of competence in each of these areas. Once this is done, personal goals can be set to address any gaps that are identified through self-reflection processes.

In terms of the hidden barriers to learning, self-theories and emotional regulation were identified as important determinants of students’ performance. Students could be encouraged to access questionnaires that have been developed to measure mindsets (Dweck 2013), as well as proneness to shame and guilt (Tangney & Dearing 2003). Knowing their scores across these constructs can also provide students with feedforward information in terms of likely academic outcomes and can lead them to take proactive action to challenge deep-seated assumptions about themselves and the nature of social interactions.

Regarding the responsibilities of lecturers, it is important that they understand the personal challenges that students might encounter as they embark on university studies. Challenging deep-seated beliefs about student–lecturer interactions, the role of failure in the learning process and the need to learn how to ask for help can be influenced greatly by lecturers’ approachability and by how they structure and deliver their courses. Also of critical importance is the capacity of lecturers to be role models to the students of ways of being in their profession. These are areas that can be monitored by eliciting information from the students on a regular basis and by tailoring questionnaires that students can complete that assess the competence of lecturers in not just transmitting technical knowledge but also in their capacity to engage with students and support their academic journeys.

All the areas highlighted above can be incorporated into monitoring and evaluation systems that collect information from both students and lecturers. In Figure 6.1, under the responsibilities of both lecturers and students, the item *Autonomous Self-Regulation* has been included. This item highlights the importance of taking personal responsibility for initiating change and responding proactively to challenges. These processes can be greatly fostered through flexibility in terms of feedforward and feedback information flow within monitoring and evaluation systems. If these systems are too rigid and do not allow for the customisation of feedback mechanisms to suit the particular needs of students and lecturers, the capacity to take proactive and corrective action may be greatly compromised. Higher education institutions can address these issues by allowing for the customisation of feedback mechanisms and by encouraging timely feedback that can be acted upon as courses are being delivered.

Conclusion

The roles and responsibilities of both students and lecturers in ensuring that students acquire the discourse of their disciplines and are adequately prepared to acquire both procedural and declarative knowledge have been highlighted. In addition to being unaware of what is required for learning to take place from an information processing point of view, students face added challenges stemming from personal beliefs about the meaning of failure in the learning process, implicit rules guiding student–lecturer interactions and misconceptions about the consequences of being vulnerable. Helping students and lecturers to understand the sources of these challenges and their associated behaviours can be the catalyst to support behavioural change aimed at acquiring emotional and academic self-regulatory competence.

The *Framework for Academic Success* that has been presented also highlights the importance of developing monitoring and evaluation mechanisms that go beyond traditional lecturer and course evaluations. Broad assessments of personal attributes and self-regulatory skills are also needed to ensure that students are equipped with the personal skills required to succeed in their studies. As well as creating awareness of the need to acquire these skills, socio-emotional support structures are also needed at an institutional level to support students in their personal and academic journeys. Creating autonomous students who take responsibility for their own learning and who are supported by lecturers who understand and are responsive to hidden barriers to learning is likely to result in lasting improvements in pass rates and throughput rates.

Chapter 7

Towards inclusive teaching and learning practices: A guideline for commerce academics

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Introduction

> 'Many political and educational plans have failed because their authors designed them according to their own personal views of reality, never once taking into account (except as mere objects of their actions) the men-in-a-situation to whom their program was ostensibly directed.' (Freire 1970, p. 67)

2. This chapter is based on the PhD of the author: Musundwa, S 2022, 'Developing a framework to address the underrepresentation of black citizens in the chartered accountancy profession: Case of South Africa', PhD thesis, Professor Theresa Hammond (supervisor), Department of Financial Accounting, University of South Africa, https://uir.unisa.ac.za/bitstream/handle/10500/29357/thesis_musundwa_fs.pdf?isAllowed=y&sequence=1.

3. Ethical clearance for the PhD study was obtained from the Research Ethics and Review Committee at the University of South Africa (ERC Reference #: 2021_CAS_020).

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To meet the needs of a diverse student population, academics teaching commerce programmes are expected to deliver an inclusive education without necessarily being equipped with the tools that enable them to do so. Recent student protests in South Africa, such as *#Feesmustfall* and *#Rhodesmustfall*, have highlighted the need for equal access to higher education and decolonised learning experiences. These protests suggest that multiple new voices (previously excluded from South African higher education [HE]) are present and that the student population has expanded to include population groups that were previously excluded from participating. This expansion places a significant amount of pressure on academics to adjust their teaching practices to accommodate students from a range of socio-economic backgrounds.

Black students in particular face disproportionately high dropout rates from HE in general when compared to their peers. This trend is particularly evident in commerce-related programmes (McGhie, Venter & Dos Reis 2020, p. 17), including chartered accountancy qualifications (Coetzee, Leith & Schmulian 2019, p. 465; Parsons, Davidowitz & Maughan 2020, p. 161; Sartorius & Sartorius 2013, p. 401). The persistence of this trend suggests that urgent intervention is needed to address its underlying causes. Previous literature attributes and aligns these unfavourable trends to systemic challenges emanating from the substandard education offered to the black population under apartheid, which has not ceased post-democracy (McGhie et al. 2020; Spaull & Kotze 2015). What is, however, scant in literature is an account from black students themselves of the underlying causes of their frustrations. While the chapter’s focus is on the lived experiences of black students, the principal emphasis is on the role that academics can play in facilitating inclusive educational experiences in commerce programmes.

The aim of this chapter is therefore to use the lived experiences of black students studying in commerce programmes in South Africa as a basis for empowering academics to deliver more inclusive teaching. It is argued that if academics are better equipped with knowledge of black students’ lived experiences, they can respond to their needs more effectively, and thereby contribute to reducing attrition.

The chapter begins by providing context to why commerce education needs to be re-thought and why academics are at the forefront of making this goal achievable.

■ Contextualising the delivery of inclusive teaching practices in commerce subjects

Race is a salient feature of all aspects of South African society. Research interrogating the influence of race on academic achievement within commerce studies is, however, rare. As this book is focused on *Rethinking commerce education in South Africa: The case for change to develop future-fit business leaders*, it becomes impossible to effect change in education without consideration of race. The author of this chapter asserts that because of South Africa's segregational history, it is not feasible to develop business leaders who are oblivious to the social inequality rooted in race. This is supported in a recent study by Terblanche and Waghid (2020, p. 221), who highlight the crucial role that higher education institutions can play in the development of socially conscious business leaders. To cultivate the requisite leadership skills in students, it becomes essential for commerce academics to exhibit such skills themselves. This chapter therefore emphasises the significance of academics' capability to lead through inclusive educational practices.

To effect meaningful change, academics must be empowered with knowledge of their students' lived experiences. Although some studies on students' lived experiences in commerce programmes have been undertaken, the number of such studies is limited. While this chapter discusses commerce programmes in higher education institutions in general, accounting programmes, which encompass a diverse range of subjects within commerce, offer valuable insights. To make the contribution of the chapter as practical as intended, it was also important to focus on one stream within commerce. The literature presented in this section therefore concentrates only on accounting literature. Furthermore, the focus is only on black students because they have been reported to perform lower than all other races. If academics can address the challenges experienced by black students in particular, the effects will be transformative not only for education but also for the profession and the country. Considering that race is a prominent aspect in South African society and that black people are the majority population group, it is crucial for academics to understand how it is that black people are perceived to be lagging behind.

The sections that follow present the lived experiences of black accounting students as reported over the years.

A poor sense of belonging in programmes

Black students are reported to not enjoy a sense of belonging in HE. When black students begin their undergraduate qualifications in universities, it is often their first exposure to higher education institutions, as they tend to represent first-generation university entrants in their communities and families (Roos & Carpenter 2020). The legacy of apartheid and current socio-economic conditions in the country dictate that these students experience discomfort from the onset. This discomfort stems from the conflicting dichotomies that they encounter, specifically the differences between their personal lived experiences and the privileged university environment (McGhie et al. 2020; Mpofu 2015; Sartorius & Sartorius 2013; Terblanche & Waghid 2020). For many years, fully accredited accounting qualifications accredited by the South African Institute of Chartered Accountants were only offered at historically white institutions (HWIs) (Lubbe & Coetzee 2018; Verhoef 2014). However, in recent years, efforts have been made to accredit historically disadvantaged institutions (HDIs) to strengthen equitable access to the profession. Despite this progress, teaching practices in accounting education have not necessarily adapted to accommodate the wider demographic cohort (Terblanche & Waghid 2020), leaving many black students operating on the periphery of the university offerings.

There is evidence that some pedagogical practices still rely on ideologies that prioritise the socio-political context of first-world countries (Verhoef & Samkin 2017) and are alienating to local lived experiences (Terblanche & Waghid 2021). For instance, the curriculum has a tendency to prioritise the perspective of listed entities while neglecting smaller enterprises and public sector organisations, which actually constitute a larger proportion of the local economy (Terblanche & Waghid 2020, p. 221). This lack of representation can be seen as problematic because it limits the scope of knowledge and skills that accounting students will gain, particularly in relation to the economic realities of the local context. By maintaining a curriculum that is closely aligned with Western and foreign ideologies, accounting education risks not only alienating African perspectives but also ill-equipping graduates for the societies in which they are expected to operate as business professionals and responsible, future-fit leaders.

This lack of representation of local contexts can also cause black students to feel rejected and experience feelings of disconnection from both the university system and the accounting profession at an early stage of their education. This can ultimately result in negative consequences for their aspirations to become not only successful professionals but also responsible citizens, which may be reflected in their poorer academic performance. The marginalisation of black students and their contexts goes against the democratic philosophy of Ubuntu, which emphasises the importance of recognising and respecting the humanity of all individuals. This philosophy is based on the idea of interconnectedness and interdependence, and it highlights the need for a sense of community and shared responsibility (Hammond, Streeter & Musundwa 2021; Ngubane & Makua 2021). The principle is currently undermined in educational practices that omit contexts enjoyed by the majority demographic in the country.

Inadequacy of foundational skills for commerce programmes

Systemic challenges limit the success that black students can enjoy in higher education. The unequal basic education system, resultant of apartheid, renders black students ill-prepared for higher education. The socio-economic legacy of the country dictates that black citizens remain subjected to poorer socio-economic conditions, the impact of which cannot be outlived irrespective of the passage of time (Mpofu 2015). As a result, black students who are studying in business-related programmes, such as accounting, may face difficulties in university because of their limited exposure to business concepts during their earlier years of education (McGhie et al. 2020). Additionally, apprehension towards mathematics and related subjects that may have been developed in childhood can be difficult to overcome within the relatively short period of time that students spend at university (Spaull & Kotze 2015). Studies over the years have further shown that black accounting students often struggle with communication skills, which puts them at a significant disadvantage in their studies (Coetzee, Schmulian & Kotze 2014; Sadler 2003; Weil & Wegner 1997). Effective written communication is especially critical for academic success as it is the primary means by which students demonstrate their competence. Unfortunately, because of inadequate preparation in their foundational education, black students often struggle to keep up with the complex mathematical and linguistic demands of the programmes in which they are enrolled. 'They start behind and stay behind' is how research aptly captures their experiences (Spaull & Kotze 2015, p. 13).

Intervention has been considered. It is important for academics to be aware that efforts have been made to address the challenges faced by black accounting students who have compromised academic foundations. There is research that suggests that extending the chartered accountants (CA) academic programmes at universities from three years to four could help address these issues by allowing more time for the development of lagging skills (Lubbe 2016). In addition, mathematical and literacy tuition classes have been introduced with the aim of addressing the same (Barac 2015). The effectiveness of these interventions has, however, only been investigated to a limited extent (Ontong, De Waal & Wentzel 2020). Consequently, no significant change has yet been affected.

A lack of role models

The lack of role models is frequently identified as a hindrance to the advancement of black students. However, the persistence of this issue in present-day South Africa is alarming. According to the literature, having role models is an important factor in motivating aspiring professionals (Smith et al. 2022; Young et al. 2015). Therefore, role models play a critical role in the success of students. Furthermore, studies confirm that students are more inspired to perform when they are in classrooms where the teacher and students are of the same race (Egalite, Kisida & Winters 2015). The low number of black academics in accounting and other commerce-related modules therefore negatively influences the experience of black students in this field. Without role models, black students can become despondent and feel isolated (Smith et al. 2022). Initially, the absence of role models could be attributed to the restricted opportunities for black professionals during the apartheid era. However, after nearly three decades since the establishment of democracy, black business professionals remain severely underrepresented in academia, communities, and even in business-related professions. In the HE setting, it becomes challenging to provide students with role models to emulate when they cannot observe them in person. Therefore, academics who are similarly trained as business professionals are essential in bridging this gap. The concept is not new, as literature has demonstrated that educators have been addressing societal gaps, such as the need for role models, for many decades (Young et al. 2015). As mentioned earlier in the chapter, by showcasing their ability to bring about essential changes in business programmes, all academics set an example for students of what it takes to become effective leaders in the future.

Persistent financial vulnerability

The scarcity of financial resources continues to be a significant challenge for black students pursuing HE. Because of the lasting impact of the country's socio-economic history, black citizens face restricted access to economic resources (Carpenter & Phaswana 2021, p. 1), contributing to black students struggling to source funding to pursue HE. The majority of research on university funding has focused on its function of granting access to HE (as shown by studies such as Barac 2015; Manik 2015; Ontong et al. 2020; Sadler & Erasmus 2003), while little consideration has been given to its influence on academic attainment. In doing so, the role that academics play in funding has become entirely obscured. Barac (2015) notes that many students in accounting obtain funding through scholarships. However, the stringent compliance requirements and inflexibility associated with such funds may hinder independent learning and contribute to the frustrations experienced by the students. A study by Roos and Carpenter (2020, p. 222), evaluating the effects of finances on educational outcomes, confirms that there does indeed exist a positive correlation between funding and academic performance, although the relation can be complex. Other studies, however, suggest a negative correlation or no correlation at all (Naidoo & McKay 2018; Papageorgiou & Callaghan 2020). The contradictory findings emphasise the urgent requirement for additional research to gain a deeper comprehension of this phenomenon, allowing academics to implement appropriate interventions that can better support students. To provide inclusive teaching practices, academics must support students in a way that reflects sensitivity to their financial vulnerability and ensures that they are positioned for success.

Stereotyping and its effects

The author observed that business literature avoids making any references to race and instead uses terms such as 'not mainstream', 'previously disadvantaged', 'marginalised', 'underprepared', 'at-risk' and 'dropouts' to describe black students (Musundwa 2022). While these terms are positioned as diplomatic, they encourage stereotyping and influence how black students view themselves and their studies, which can affect their engagement and success. It also influences how students of other races, employers and other stakeholders view them. While race may not be mentioned, the contents of the studies reveal that the terms refer specifically to black students. The terms, used as adjectives, also assign the blame for many of the systemic challenges reported in this review on the students, thus shifting the focus away from the systemic structures that result in students being poorer performers. If academics are to contribute to developing future-fit business leaders, then the narratives built around the students at the university level should support this aim. The narratives promoted include the interventions designed to support black students through the academic pipeline. Recent studies have raised concerns regarding the way interventions are carried out, which can lead to the marginalisation and exclusion of those who are obligated to attend, specifically black students who make up the majority (Lubbe 2016). For instance, some of the academic interventions are carried out outside of standard university hours (Ontong et al. 2020, p. 197), really entrenching the marginalised status of those required to attend. These practices reinforce deficiency, place blame on the aspirants for their circumstances, and do little to curb their attrition. Given that many black aspirants are pioneers in their families and communities, a positive narrative is needed to inspire resilience, grit and success.

Theoretical lens

The literature reviewed above serves as a foundation for selecting an appropriate theory to underpin the guidance to be offered to academics in re-envisioning teaching practices. The literature shows that black students face numerous barriers in commerce education, many of which are non-academic in nature. These challenges are rooted in a legacy of racial segregation, which persists despite the dismantling of the apartheid system. While black students must navigate these challenges as individuals, the author argues that it is the systems and structures that hinder their success that must be dismantled. Weber's theory on social closure (Murphy 1984, pp. 547–567) offers a useful framework for examining the experiences of black commerce students and disrupting current academic practices that leave them on the margins. This theory is rooted in sociology and explores how a dominant group in society monopolises resources based on social constructs like race and class. South Africa's colonial and apartheid governments marginalised black people and placed them on the fringes of all activity in the country, including education (Gallo 2020). This highlights how Weber's theory is a suitable framework for comprehending why black commerce students feel disheartened in a system where other racial groups consistently outperform them. The author believes that academics have an important role to play in alleviating the burden which, to date, remains placed solely on the students.

Methodology

The chapter's primary objective is to utilise the experiences of recent black graduates who have completed commerce modules as a basis for providing guidance to commerce academics on inclusive teaching practices. To achieve this goal, the author employed a qualitative approach.

After obtaining ethical clearance, the author interviewed 22 qualified CAs to garner their reflections on their education and training leading up to their qualification. While studying accounting undergraduate degrees, students are exposed to a wide range of commerce subjects before tapering down to specialise in accountancy-related subjects in the latter years of the degree. This made them well-suited to provide insights into the challenges they faced across various commerce subjects. The first five participants were identified by the author and contacted, and the rest were identified through snowballing techniques. The participants represented various higher education institutions in the country, including both HWIs and HDIs, as well as residential and distance institutions. The interviews, which lasted approximately an hour each, were recorded and transcribed on www.otterai.com, which was verified to be secure and compliant with data security regulations. The author independently reviewed, edited and thematically analysed the transcripts. Participants were assured of the confidentiality and anonymity of their discussions, and no incentives were offered for their participation.

Results and recommendations

Academics' (un)awareness of untaught skills

Higher education institutions (HEIs) must assume the role of teaching students how to learn. The interviews revealed the presence of a 'hidden curriculum' where the expectation was that students possess skills that were never deliberately taught. Rather, it was assumed that the skills and related knowledge were acquired either through socialisation or from basic education long before the student entered the accounting programme. A participant shared the following, which provides an example of a hidden curriculum:

> '[...] working smarter and not harder, which I think with a lot of black kids is a cultural thing. You learn to or you are taught to work hard. Something that I picked up early on is that a lot of my counterparts spent a lot of time in the student centre or the library, literally putting in the hours. But that wasn't necessarily translating into academic success.' (CA19, interview, n.d.)

The participant stated that the key to succeeding academically was having effective study skills. However, many black students appeared to lack these skills. On the other hand, students from working-class backgrounds had been taught that hard work leads to success, and they applied this mentality to their studies. Unfortunately, this approach did not always yield the desired results, causing much frustration. For example, some students struggled with group work because they did not understand how it worked or they were unsure how to apply critical thinking and exam techniques. Other frustrations included students' hesitancy to consult with their lecturers because they were unsure what would be discussed in private meetings rather than in the classroom. They were simply unaccustomed to the way things worked in HE settings. As a result, it becomes necessary for educators to explicitly explain these concepts and offer students direction on how to learn effectively and efficiently.

Earlier in the chapter, the author referred to compromised foundational education. For many black students, it is those foundations that impede achievement in HE. Literature notes how a formal curriculum is built around defined learning outcomes premised on 'knowledge, skills and attitudes', which academics teach in a deliberate manner. However, a hidden curriculum emanates from 'norms, values, and beliefs that are transmitted to students through the underlying structure of meaning' (Morrow 2009, n.p.). The skills are effectively transmitted in direct alignment with their exposure and levels of socialisation. In a country where exposure and socialisation are particularly limited by socio-economic constraints, it is the role of the academic within the HE environment to flatten the parameters and equalise the learning experience within the classroom setting by deliberately teaching and developing the skills necessary for students to succeed.

Language must be taught

The issue of language as a potential barrier to academic access is a topic that continues to be debated in literature (Aburous & Kamla 2022; Adonis & Silinda 2021; Ingram & Allen 2019, p. 723). However, in commerce programmes where language instruction is not commonly provided, there are few discussions about the impact of linguistic capital on academic attainment, which results in this issue being seen as insignificant. Interviews conducted on this topic revealed that language is a multifaceted construct that is acquired through socialisation but is crucial for academic success, even in commerce programmes. Students are assumed to have linguistic capital, again accumulated over the combination of basic education and life skills. One of the participants shared how coming from a disadvantaged community directly impacted her language experience in accounting:

> 'There are the black people who are able to go a Model C (former white) school and get proper education. Then there's this other black person who also is studying the same degree, but they were taught by a Tsonga (native tribe) teacher who was teaching them English in Tsonga. So, already, there is that barrier that I feel that you are not on the same level? Yes, we might have all passed and all made it, but already, a person who speaks English at home is already one step ahead of you who speak Tsonga, and you try and speak English at work or at school or whatever the case is.' (CA7, interview, n.d.)

The participant has rightfully concluded that she cannot have the same academic experience as a more privileged student because of the language barrier and the need for acculturation. While commerce subjects are often assumed to be focused on numbers, written language is actually the primary mode of communication. This means that it is the only way for students to showcase their skills and knowledge, as highlighted by prior research cited in the literature review section. A participant stated that their challenges with written language played a role in their perceived lower academic performance:

> 'There was a lot of writing skills that you had to sort of start learning how to articulate yourself on paper because things moved quite well away from the technical calculations, which again, as a black person, I struggled with more than sort of like the number side of it. Just articulating yourself well on paper I found to be difficult.' (CA19, interview, n.d.)

The participant's experience highlights the importance of written language skills for success in commerce despite not being explicitly taught. The lesson to be learnt is that even if one is competent in business-related skills, poor written language skills can hinder success. The concern is that these skills, which are often acquired through socialisation and cultural experiences, are incorporated into the assessment process, influencing the outcome of student's assessments. This practice of formalising such skills into assessments can be and is detrimental to students (Ingram & Allen 2019, p. 723).

To overcome this challenge, academics will need to formalise both language and comprehension as well as writing skills into commerce programmes as the demand for written expression persists. Commerce academics themselves have been trained as business professionals and may therefore lack the pedagogical skills to upskill students in this area (Lubbe 2016, pp. 60–82). Consideration can therefore be given to incorporating modules from social sciences. Commerce is also infiltrated with jargon specific to the industry, and, as such, supplementary material like glossaries defining business terms can be used to expose students to the vocabulary fit for use in the profession.

The digital divide is real

The coronavirus disease 2019 (COVID-19) pandemic has led to an increased use of technology in academia. Where it did not present as a probable cause of the poor performance of black students pre-COVID, technology is now starting to show as one of the primary concerns. While some literature portrays technology as a tool that enhances learning, the socio-economic conditions in the country mean that students from marginalised backgrounds may not have had equal access to the digital tools necessary for academic success (Lumadi 2020, pp. 113–127). Interviews with students have shown that, for some, university was the first time they were required to work on a computer, which had a significant impact on their academic performance:

> ‘So, if I look at it, a black child, and maybe a white child in contrast, a white child goes to a school where they are privileged to be using a laptop from a very young age. That’s already a disadvantage for a black child. Unless, if they went to your private schools where they’ve got these facilities, but a black child from a normal township is already disadvantaged in the sense that they can’t use the computer and the computer then becomes a key value in terms of your exams, because of the fastness [*sic*] that you type. So, your pace contributes to whether you’re going to actually pass or fail.’ (CA11, interview, n.d.)

The participant emphasised that the effective utilisation of technology determined whether a student succeeded or failed, shifting the focus of assessment away from the technical skills that should be evaluated. It is now widely recognised that the COVID-19 pandemic has exposed the extent of inequality in learning environments, leaving many socially marginalised students operating on the side-lines of numerous qualifications (Batisai et al. 2022; Combrink & Oosthuizen 2020). Higher education institutions and academics’ persistence to continue with modalities that perpetuate the marginalisation of students without the necessary resources and support is unjust (Lumadi 2020, pp. 113–127) and does not set a good example for socially responsible future leaders. In CA-focused programmes which are accredited by South African Institute of Chartered Accountants

(SAICA), for instance, technology has been embraced to the extent of formalising digital acumen as a competency required to obtain the qualification (SAICA 2021). Unless programmes are redesigned to facilitate access to technology and equal development of all students in the area, marginalised students will continue to be pushed to the periphery of the programme and, ultimately, the qualifications.

In supporting the development of their students, academics should make an effort to understand their digital capabilities. This can be done by gathering surveys on student access to resources such as digital media, platforms, electricity and Wi-Fi that enable online learning. This information can then be used to determine how technology can be incorporated into teaching and learning activities, as well as what kind of support is needed. For instance, if the data reveal that most students access course material through their cell phones while physically present on campuses, then lecturers should limit classroom and homework activities to what is feasible on a phone during campus time. The goal is to ensure that students with superior access to resources are not rewarded unfairly for their privilege. Platforms used for assessment, as well as the grading thereof, will have to consider student computer literacy levels and ensure a clear determination of which competencies are being assessed.

Managing perceptions around attrition

Academics do not have much motivation to closely monitor the academic progress of each student they teach, which means that many students are ejected from the HE system without much notice. It has been observed in previous studies that a disproportionate majority of these students are black. Commerce programmes have specific admission criteria that typically favour students with high aptitudes. For many black students, they have most likely had to overcome the worst of socio-economic challenges to even be able to compete with those coming from top schools in the country (Sartorius & Sartorius 2013, p. 401). A participant coming from an impoverished background shares as follows about the peers in the class:

> '[...] people were smart, so getting 100% and 90%. You know, so the moment I got there, I was like, these are the people I'm with. So, you know, it was competitive, but in a good way.' (CA1, interview, n.d.)

The student highlights her awareness of the aptitude of students accepted into the programme. She also places emphasis on her awareness of how competitive it is going to be. Another participant who attended a different institution echoes:

> '[...] we were like a group of very competitive people in the class because I remember when we started to get to know each other, then you find that someone came in with seven distinctions, someone got 100 in math or 100 in physics and

> you're like okay, I need to game up here. So, I guess I think that's when I also started now picking up this competitive nature and actually, I acknowledged that I can do better, you know, just because she got 100 in maths doesn't mean she's better than me or that kind of thing.' (CA14, interview, n.d.)

This realisation of other students' academic profiles was evidently highly motivational for the students as it incentivised them to work harder in pursuit of the qualification. With participant CA7, the words used were that she, in fact, 'studied overdose', which was great until failure started to impact her directly. The participant could not reconcile how it was that her peers who were equally high-performing suddenly could not make the appropriate grades. The same factor that motivated her now left her feeling despondent as it was clear that mainly a certain race was affected by the failures, namely, black students. Participant CA9 clearly supported this notion in his interview:

> 'Majority of the people that failed were from the English class, as opposed to the Afrikaans class [...] I came from a residence that mainly attracted black students, and specifically black students from disadvantaged backgrounds [...] we got to see on a regular basis people getting academically excluded [...].' (CA9, interview, n.d.)

Previous literature has shown that failure is often associated with black students. For instance, studies focusing on accounting qualifications have consistently identified black students as the lowest performers (Parsons et al. 2020, p. 161; Sartorius & Sartorius 2013, p. 401). As mentioned earlier, interventions designed to improve their performance are often offered outside of regular class hours, which can stigmatise the participating students and create a perception that they are not as capable as their peers (Van Rooyen, Ontong & Mitchell 2021, p. 254). The frequent publicising of low pass rates associated with black students further reinforces the stereotype that they are poor performers, which can negatively affect the academic performance of those who do pass and continue in the system. As a result, black students may focus more on avoiding failure rather than on passing and advancing, which creates a difficult environment for them to succeed in. This was well articulated by a participant who stated that:

> 'The discussion for me and my friends, my black friends, was always about how difficult it was. And not just difficult, but like difficult in a "I don't know if I am going to pass the year", whereas with the white counterparts it was different. It was just a matter of getting by, like, "I'm going to pass. It's just that I need to study so that I can pass" whereas with us, it was "How am I even going to make it into the exam?"' (CA4, interview, n.d.)

Academics need to urgently step in to protect and support students in the academic pipeline, and this statement alone should inspire them to do so with empathy. One way to intervene is to avoid publicising results and instead focus on shielding students whose performance may be hindered by systemic pressures. It is unjust to reward individual performance (through public praise of top performers who are hardly ever black) at the expense of others who are struggling because of external factors. Academic interventions should be mainstreamed for all students, with consistently high-performing students provided the option to accelerate out based on their progress (Lubbe 2016, pp. 60–82). Academics who focus on quantitative analysis should use student data, including biographical information, to identify patterns and factors that contribute to success or failure. Qualitative researchers can then use these findings to investigate the underlying phenomena that affect student performance. This will enable academics to create targeted interventions that address the challenges faced by already marginalised students and reduce attrition rates.

Collaborating to increase representation

Representation matters. In South Africa, HEIs, especially within commerce programmes, still reflect their racial past, which means that students are likely to come across lecturers from different racial backgrounds to their own. For example, if a student attends a HWI, they will probably have predominantly white lecturers. Conversely, if they attend a HDI, they are likely to have predominantly black lecturers. One participant who attended an HDI for her undergraduate and a HWI for her postgraduate year contrasts them as follows:

> 'I studied my honours at a HWI[4] but if I were to contrast it with the HDI, I found the HDI to be more [...] the environment was very good. The support structure was way better than the support structure you will get at a HWI. So even the way they lecture (i.e. teach) is different, their lecturing style is different. And I actually prefer the one at the HDI where you can see the passion in the lecturers [...] not that the lecturers at the HWI don't have passion, but they are more professional [...] than at the HDI. At the HDI you have brothers and uncles there to help you.' (CA11, interview, n.d.)

The student's perception of the programme is influenced by her interactions with the lecturers, emphasising the significance of the role of academics in her educational experience. She notes that the culture at the HDI, which has mostly white lecturers, differs from that of the HDI, where most of the lecturers are black. She even regards the lecturers at the HDI as family, which has undoubtedly contributed to a positive learning experience, as demonstrated in her memories of the events. Prior research confirms her experience by highlighting that students perform better when they are taught by academics who look like them (Smith et al. 2022, p. 35). Academics should therefore endeavour to make this representation possible.

4. The actual university names as quoted by the students are concealed.

The call for black CAs to join academic ranks is not novel. In attempting to transform commerce programmes, universities have, over the years, advertised for black professionals with business qualifications to join academic ranks. While some success has been enjoyed in recruitment, they still make up the minority. This is unsurprising as academia is contending with the transformation of the finance and economic industry where black professionals are being absorbed into prominent posts in government, private sector, professional accounting organisations and entrepreneurial pursuits. However, this presents an opportunity for collaboration to increase representation in both HWI and HDI classrooms. Incorporating black professionals in HWIs as regular guest lecturers enables black students to engage with educators who look like them and feel validated in their self-worth, leading to positive learning experiences, as prior research suggests. Academics, therefore, need to be innovative in their programme development by incorporating elements that allow for collaboration.

General recommendations

If the common purpose of all academics is to develop future-fit business leaders who are also socially responsible, then some innovative changes to teaching in commerce will have to be implemented. Here, the author suggests some interventions that may be easily implementable within the existing structures of commerce education. While not everything can be resolved by academics, they certainly are the faces of HE and can therefore contribute to making a significant difference.

Adopting dialogic pedagogical approaches

Each student has something unique to offer in the learning process, but they often feel like passive recipients waiting for knowledge to be imparted by academics. Critics of current teaching methods have pointed out that the focus is primarily on transferring knowledge through rote learning and memorisation (Wong, George & Tanima 2021, p. 525). To create a more inclusive and diverse learning environment, academics must encourage students to engage with socio-economic and political issues that have a direct impact on society. For instance, in South Africa's current economic context, students should be encouraged to debate sustainability and its reporting implications. By doing so, students from different socio-economic backgrounds can contribute multiple perspectives, sparking critical thinking and robust discussions. Academics can use these discussions to assist students in understanding sustainability standards, which is more valuable than simply teaching them the requirements for sustainability reporting. This approach will certainly lay the groundwork for developing future leaders.

Cultural exchange

Academic conferences should not be limited to merely sharing knowledge but should also be utilised as platforms for cultural exchange. Both HDI and HWI academics should participate in regular symposiums to share their experiences regarding the challenges highlighted in this chapter. Through these dialogues, a database can be compiled to document the best practices for navigating diverse environments. It is emphasised that the solution does not solely rely on one institution or individual but rather requires continuous dialogue between academics to develop and improve their skills.

Financial support

Academics can play a role in further researching the impact of finance on the academic attainment of students in commerce. The research can be used to lobby for less stringent terms and conditions on scholarships and even for a restructuring of funding students in HE, given the magnitude of financial constraints on many students.

Conclusion

The purpose of this chapter was to use the lived experiences of black commerce students to empower academics to deliver inclusive teaching practices as a means to rethink commerce education. It is clear from prior literature that the challenges faced by black students were largely systemic and manifested as challenges with foundational skills, scarcity of role models and finances, as well as difficulties of living as the stereotype of failure. The cohort that was interviewed brought to light the prevalence of a hidden curriculum where academics assumed that they possessed a predetermined skillset coming into commerce studies and therefore neglected to develop the skills required to succeed. The participants reported their challenges with written language and technology and how these challenges were used to undermine their academic capabilities. They confirmed the concerns around being the faces of failure but took it further to explain the ramifications thereof for those who remained in the pipeline. The scarcity of role models is also presented as a persistent feature.

Chapter 8

Digital transformation trends in commerce education influencing the future business professor: Skills, challenges and implications

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Introduction

The global digital transformation has challenged every aspect of life. The profound transformation of organisational processes, competencies and models is indicative of the technology mix and its accelerated impact on society (Gobble 2018). In addition, the coronavirus disease 2019 (COVID-19) pandemic accelerated the technological impact on our social, professional and educational domains. Globally, reassessments of the current educational system and delivery opportunities have taken place as the shift to online and cloud-based teaching, learning and assessment was necessitated by the COVID-19 pandemic (Marr 2022). This disruptive era has opened up numerous new opportunities that will reward innovative institutions (Clark, Selingo & Cluver 2023). Student enrolments at higher educational institutions (HEIs) have reached their peak, where the registration of traditional students has fallen behind demand (Clark et al. 2023). In this regard, institutions are contemplating new business models because of the large-scale digital transformation and heightened student needs. The accelerated demand for accessible education cannot be met through the current traditional educational offerings (Sun et al. 2022). Therefore, institutions need to leverage technological advancements to address educational access and utilise increased demand (Brasca et al. 2022).

The chapter provides an overview of the literature pertaining to technology-instilling trends in higher education, including that of up-skilling the digital acumen of commerce professors, followed by discussions on the research method, results and findings. Lastly, the conclusion reached based on the research conducted is presented.

Technology-instilling trends in higher education

In recent times, HEIs have been shifting from the full remote emergency response to the pandemic to the long-term adaptation and strategies incorporating hybrid and remote work learning (Caron & Muscanel 2023). The forced shift to remote and online learning resulting from the COVID-19 pandemic has seen various technologies introduced by lecturers to save the academic year and to continue with the transformed modalities according to industry needs (Marr 2022; Uerz et al. 2021). In this regard, lecturers engaged students in the virtual classroom using various digital tools (Brasca et al. 2022). The forced technology use changed teaching, learning and assessment in ways that will persist into the future (Brasca et al. 2022). Technology-infused trends that arose because of the COVID-19 pandemic include increased accessibility, personalised learning, using virtual reality (VR), cloud-based learning, incorporating the Internet of Things (IoT), digital device security, teaching digital citizenship and big data (Berguerand 2023; Brasca et al. 2022). Another driving emergence in online learning is micro-credentials that introduce new methods of learning designed to address the changing needs of businesses and employers (Marr 2022). In the current digitally enhanced environment, immersive learning technologies such as augmented reality (AR) and VR underpin engaged learning as part of the extended reality (XR) technological advancements influencing current and future practices (Marr 2022; World Economic Forum 2023). Artificial intelligence (AI) has already impacted human activity, while teaching and learning are being transformed by self-learning algorithms capable of performing tasks at unprecedented levels (Marr 2022). Artificial intelligence-powered personal assistants have already been deployed in schools to assist teachers with classroom management (Marr 2022). Likewise, AI and classroom automation are rapidly changing education through adaptive learning concepts, whereby courses are adapted according to students' needs and progress (Marr 2022; Uerz et al. 2021).

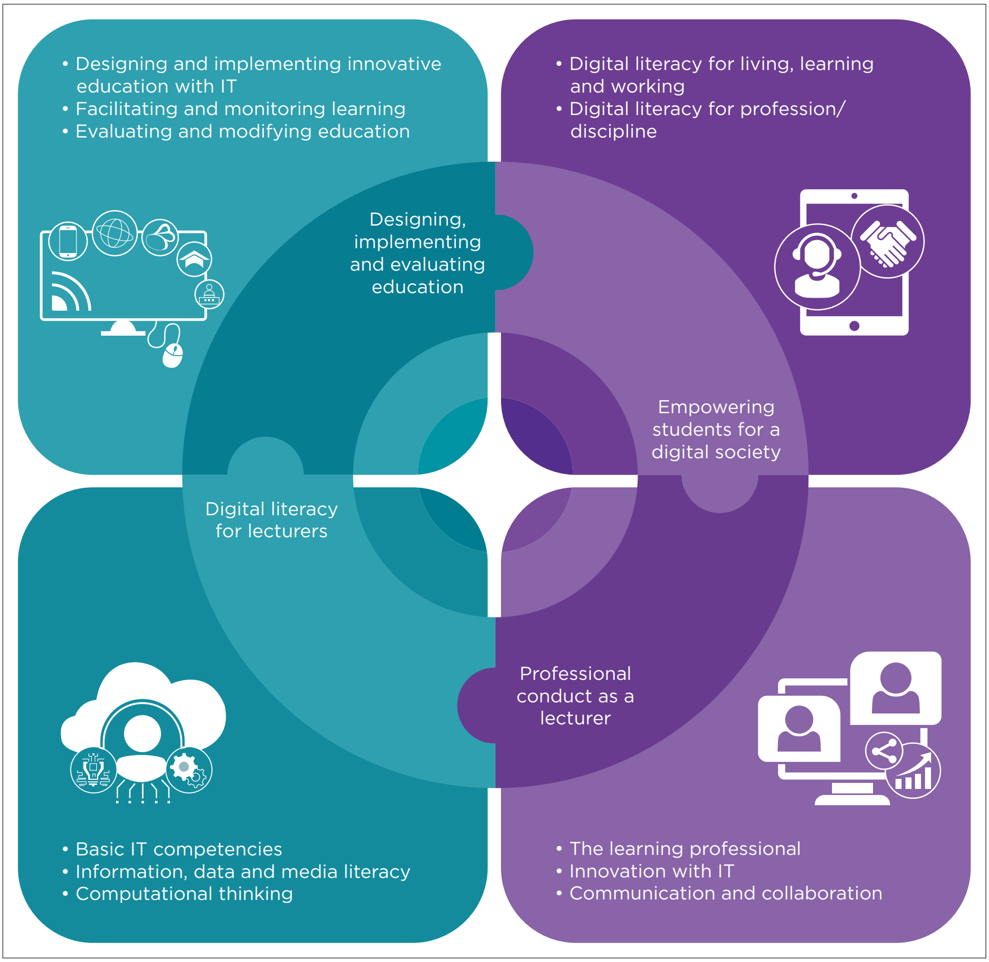
Undoubtedly, there are numerous trends within the digitally transformed higher educational context, and students can learn from anywhere in the world at their own pace (Clark et al. 2023). The flexibility that technology has provided to the provision and access of courses has amplified that learning can take place from everywhere (El-Azar 2022). Time- and location-independent teaching, learning and assessments are at the fingertips of millions of students, where choice and autonomy of learning are progressively setting the trends of future tertiary education (Sun et al. 2022). Formative, time- and location-independent and digital assessments are more readily explored to measure authentic learning rather than quantifying information retained at a point in time through high-stake summative assessments (Núñez-Canal, De Obesso & Pérez-Rivero 2022). It is evident that teaching, learning and assessment practices have already changed and will continue to change. The trends effected through the digital transformation were augmented by the COVID-19 pandemic, and, therefore, large-scale institutional and individual-level changes are necessary to ensure the continuation of effective university teaching, learning and assessments (Benavides et al. 2020). Not only will HEIs have to embrace digital transformation within their organisational and business operations, but individuals will also need to adapt to the technologically advanced ways of teaching (Ali 2020). Therefore, the future professor, as a technologically savvy researcher, lecturer and subject expert, will have to master new skills in line with the current and future trends within the HE landscape (Akpa et al. 2022).

Competencies of the future higher education professor

In commerce education, it has become critical for students to have the digital literacies to function in their future jobs. Oliver (2015) articulates that some of the basic skills for functioning include coding, internet searching, networking, word processing and using tools specific to the particular occupation. Moreover, it is the lecturers' responsibility to ensure that students are able to solve problems, develop curiosity, become resilient, and have the self-confidence to position themselves in a dynamic and highly challenging workforce environment (Ehlers 2020). In addition, students need to develop the digital skills required by the technology-disrupted work environment, and therefore, academic staff have to intentionally incorporate technology in teaching and learning (Wakkee et al. 2019). Therefore, it is critical that students' digital skills are developed by lecturers/professors who expose students to the technologies they will use in future (Núñez-Canal et al. 2022). To achieve students' digital literacy and skills development, lecturers need specific skillsets that will be essential for future classroom and online instruction (Núñez-Canal et al. 2022). In this regard, institutions often formally instil communities of practice (CoPs) where lecturers informally share best practices of technology use while experts in the field demonstrate the implementation of various innovative tools for commerce education (O'Sullivan et al. 2019). Several researchers are joining the discourse on the development of the skills needed by the future university lecturer/professor (Núñez-Canal et al. 2022; Uerz et al. 2021). One such study provides a framework for lecturers' digital competencies needed within the disrupted HE context (Uerz et al. 2021) and will be used as a theoretical framework in this study. The framework is discussed hereafter.

Theoretical competencies framework for future skilled professors

For the purpose of this study, the framework for digital competencies (FoDC) by Uerz et al. (2021) is used as the theoretical underpinning. The FoDC of lecturers consists of four dimensions and various subdimensions (Uerz et al. 2021). The main dimensions, as depicted in Figure 8.1, consist of designing, implementing and evaluating education, empowering students for a digital society, professional conduct as a lecturer, and digital literacy for lecturers (Uerz et al. 2021). The competencies framework is applicable and relevant to all universities as it is generic and relevant to the digital needs within the global HE landscape (Uerz et al. 2021). However, lecturer competencies need to be developed within the context of their teaching



Source: Uerz et al. (2021).

FIGURE 8.1: Digital competencies framework for lecturers in higher education.

activities (Uerz et al. 2021). The four dimensions, each with its subdimensions, will be discussed in detail.

☐ Designing, implementing and evaluating education

This dimension relates to competencies to design, implement and evaluate education using specific technological tools. Sub-components within this dimension include designing and implementing innovative education with information technology (IT), facilitating and monitoring learning, and evaluating and modifying education (Uerz et al. 2021). The lecturer needs the ability to redesign their own teaching practice to achieve a flexible and more personalised educational experience for the students.

Lecturers need to clearly justify the implementation of technology within a specific context while achieving constructive alignment between the learning objectives, learning activities, resources and assessments (Heitink et al. 2016). It is important that lecturers have the ability to create new digital resources and to modify and reorganise existing resources effectively (Cabero-Almenara et al. 2020). Lecturers have to consider the needs of students and ensure more flexible and personalised learning with student autonomy and self-regulation (Redecker 2017). Lecturers also need knowledge and competencies on the correct pedagogical and didactic approaches for face-to-face and online teaching modalities (Rapanta et al. 2020). Combinations of formative and summative assessments, using technology and providing high-quality feedback, is a necessary developmental focus area, where using analytics to optimise learning is included as a key competency (Viberg et al. 2018).

Empowering students for a digital society

The second dimension proposes that lecturers should have the necessary skills to empower students' skills for living, learning and working in a digital society (Uerz et al. 2021). Sub-components refer to digital literacy for living, learning and working for the profession or discipline. The technological advancements within the workforce necessitate students to acquire digital skills while at university, preparing them as future employees (Vuorikari et al. 2016). Lecturers are therefore required to develop students' digital literacy, which they will need in their profession or discipline (Vuorikari et al. 2016).

Professors' professional conduct

Professors as lecturers have to manage their professional teaching and learning skills development throughout their careers, and with the current digital transformation at hand, they need to develop specific innovative competencies relevant to industry demands (Ali 2020). Sub-components within this dimension include being a learning professional, innovation with IT, and communication and collaboration (Uerz et al. 2021). The ability to stay up-to-date with the technological developments within society and the specific industry discipline (Akpa et al. 2022) requires lecturers to be inquisitive and have a high degree of digital dexterity. Lecturers also need to critically reflect on their professional development and, in light of the digital transformative innovations at the forefront of HE, they need to share their ideas and collaborate with colleagues on the issues of incorporating advanced technologies for teaching and learning

(Uerz et al. 2021). In order to ensure that a culture of digital innovation is created among lecturers in an informal setting, a community of practice in faculties was established to bring lecturers together who incorporate technologies in their classrooms. During these sessions, lecturers share their ideas and collaborate with colleagues in various disciplines on technology integration (Mentis et al. 2016).

Professor digital literacy

Lecturers have to be digitally literate within current society and the technologically transformed HEI workplace. This dimension's sub-components include basic IT competencies, information, data, media literacy and computational thinking (Uerz et al. 2021). Lectures will only be able to enhance and develop the digital literacy of students if they themselves possess the knowledge and skills to positively leverage technology within teaching and learning practices (Tondeur et al. 2017). Lecturer literacy is regarded as a prerequisite for educational innovation (Uerz et al. 2021).

The theoretical competency framework was used to ascertain the digital literacy skills, challenges and implications of the future commerce professor.

Methodology

Research paradigm

This research is rooted in the functionalist paradigm, where functionalists assume that society has a systematic character and a real, concrete existence has a pragmatic orientation. It is concerned with analysing society in such a way that it produces meaningful information (Burrel & Morgan 1979). This research aimed to determine the current trends in HE because of the digital transformation experienced as well as the skills needed by the future commerce professor. In addition, challenges and future implications are investigated related to the digital competencies needed to remain effective and competitive within the technologically disrupted HE sector.

Research design and methodology

The mixed-method study followed a partially mixed concurrent equal status research design and methodology (Leech & Onwuegbuzie 2009). The typology indicates that the use of quantitative and qualitative methods for data collection and analysis occurred concurrently with equal status. The combination of a quantitative and qualitative approach allows for an in-depth understanding of the issue under investigation and according to the functionalist paradigm of research inquiry (Johnson, Onwuegbuzie & Turner 2007). Descriptive statistics provide an objective overview of the respondents' digital literacies, which were triangulated with the qualitative explorations (De Vos et al. 2005).

Target population

The target population comprised the full-time lecturers who teach (a) module(s) at the North-West University (NWU). Lecturers from the Faculty of Economic and Management Sciences (FEMS) were the primary focus of the research; however, the study was open to all lectures from any of the eight faculties to also participate. Ethics clearance to conduct the research was obtained from the NWU FEMS research ethics committee (ethics number: NWU-00084-21-A4). The research project was conducted in accordance with the FEMSs research guidelines as well as the NWU research ethics.

Sampling method

Quantitative and qualitative data collection comprised a purposeful sample of faculty who completed the institution's training for the new digital assessment training. These lecturers were selected as they were engaging with new high-quality technology and innovation in signing up for the digital assessment training. The quantitative sampling method commenced when a lecturer registered for the training via the online university training system bookings platform. The system generated an email with a standard response that was sent out, which informed the lecturer of the intended study and provided the link to the internet-based online survey using Google Forms. On the landing page of the questionnaire, the faculty members were informed about the purpose of the study and that certain information needed to be completed for reporting purposes as part of the government-funded guidelines. Faculty were also informed that the information would be used in aggregate form for research article purposes. The link to the Google Form was also posted on the schools' social media platforms, where lecturers could access it voluntarily. Lecturers were asked to partake in the survey voluntarily and anonymously. Likewise, lecturers received an invitation to participate in the online focus group interview via the training administrator. The administrator is not involved in the research and sent the purpose of the study and informed consent to the participants, and those who completed the consent form and returned it to the administrator were included in the interviews. The interviewees received the semi-structured interview schedule via email from the administrator to familiarise themselves with it before the online focus group interview.

TABLE 8.1: Interview schedule for the focus group interview.

Interview schedule for digital competency
Please elaborate on your design and implementation of innovative education using technology.
Explain how you facilitate and monitor your students' learning using technology.
Describe how you evaluate and modify your teaching and learning to incorporate innovative technology.
Describe your use of technology for everyday life and learning.
Elaborate on your digital literacy geared towards your professional career and discipline.
Provide examples of how you innovate in teaching and learning using various technologies.
Describe the basic IT/technology competencies lecturers currently need in their professional capacity.
Describe the basic IT/technology competencies students currently need to be successful in their studies.

Source: Authors' own work.
Key: IT, information technology.

Measurement instrument

Demographic data that were non-intrusive were included in the questionnaire, requesting the faculty, school, gender and number of years in higher education. The quantitative and qualitative instruments were aligned with the competencies framework of Uerz et al. (2021). In this regard, Uerz et al. (2021) developed a survey based on the four dimensions with sub-components as depicted in Figure 8.1. The items of the sub-components were measured on a four-point Likert scale ranging from strongly disagree = 1 to strongly agree = 4. For the qualitative exploration, the authors developed a semi-structured interview schedule based on the four main dimensions and the sub-components of the framework. The interview schedule (Table 8.1) was evaluated by an academic qualitative research peer to ensure face and content validity (Creswell 2012) and was finalised after minor language changes.

Data collection

Quantitative data collection

The quantitative research aimed to get an objective overview of the respondents pertaining to their digital literacy. Therefore, numerical data were collected to obtain an overview of their digital literacies (Cohen, Manion & Morrison 2011). The respondents voluntarily and anonymously completed the online questionnaire. As part of the pilot study, 35 lecturers from the FEMSs, which include the commerce programmes, completed the questionnaire.

Qualitative data collection

To obtain a more subjective overview of the lecturers' lived experiences and their use of innovative technologies to design, implement, monitor and evaluate the teaching and learning practices, a focus group interview was conducted (Creswell 2012). Probing questions were included for the interviewing of lecturers to share their input on digital literacies, skills needed, technology implemented and topics related to the competency's framework (Table 8.1). Two lecturers participated in the focus group interview.

Data analysis

The quantitative data were analysed using descriptive statistics. The qualitative data were analysed in Atlas.ti™ using a deductive approach aligned with the competencies framework (Cohen, Manion & Morrison 2007). The data were triangulated to provide a holistic overview of the current activities, technologies incorporated and digital skills of lecturers at NWU.

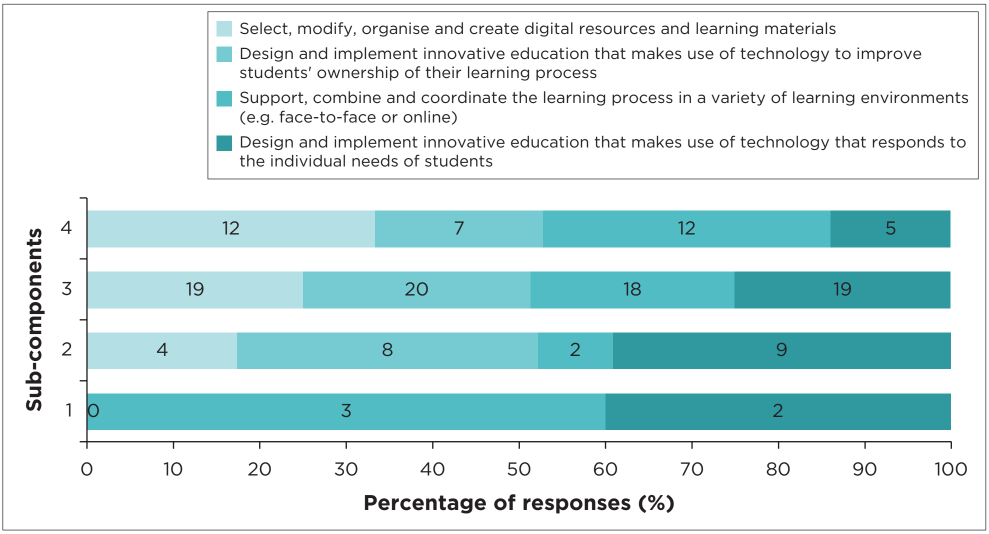
Results, findings and discussions

A small number of participants completed the questionnaire (35), where 22 lecturers had between four and eleven years' teaching experience, ten had in excess of eleven years' experience and three had one to three years' experience. All 35 respondents agreed or strongly agreed to often using technology in their teaching and learning, while 33 indicated they consider themselves skilled in using technology, with two indicating they do not perceive themselves as highly skilled. The following section concatenates the results from the survey and the constructs of the focus group interview to provide an overview of the technology integration and digital competencies of the commerce lecturers at NWU. The findings are discussed according to the four dimensions of the competencies framework by Uerz et al. (2021) as a theoretical foundation for the study.

Designing, implementing and evaluating education

Three sub-categories (Figure 8.2) formed part of the *design*, *implement and evaluate* dimension. The items in the questionnaire were clustered into three sub-categories: (1) designing and implementing digital education, (2) facilitating and monitoring learning and (3) evaluating and modifying education. The results are displayed as frequencies and percentages.

The majority of the respondents agreed (19) or strongly agreed (12) that they could design innovation education as well as select and modify resources, and only four of the respondents disagreed. The responses indicate that 89% could design innovative education and select and modify



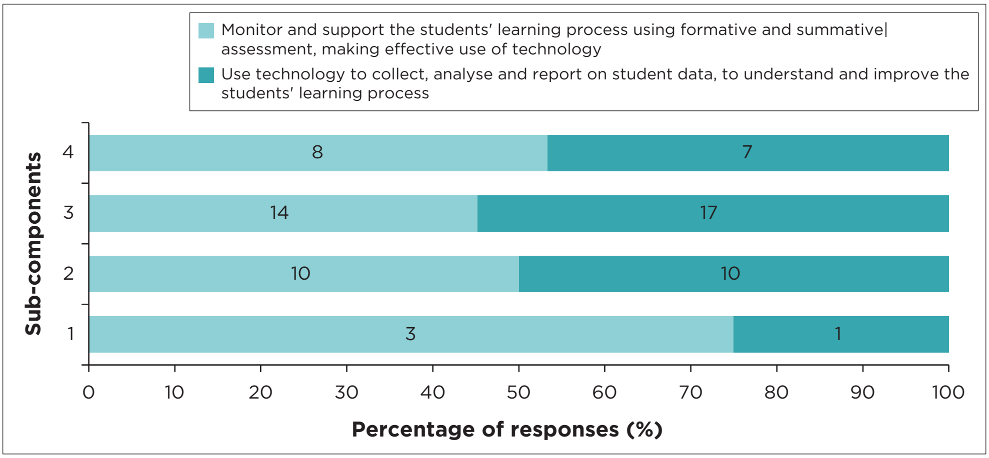
Source: Authors' own work.
Note: The items of the sub-components were measured on a four-point Likert scale ranging from strongly disagree = 1 to strongly agree = 4.
FIGURE 8.2: Responses on designing and implementing education.

technology-based resources. Many of the respondents strongly agreed (7) or agreed (20) that they are able to design and implement innovative education to improve students' ownership of their learning process. Eight of the respondents (23%) disagreed on this matter. The lecturers agreed (18) and strongly agreed (12) that they support, combine and coordinate the learning process. In addition, the lecturers strongly agreed (5) and agreed (19) that they design and implement innovative education to address the individual needs of the students.

During the focus group interviews, the participants confirmed the abovementioned responses:

> 'So, I try to use all the tools available for us like a checklist, and the lesson and test and quiz and the announcements (P2) [...]. So, we have a team who was responsible to design the site, and I adapted a little bit for my distance students. And then I tried to make use of the tools to its fullest capacity. So, I try to use all the tools available for us like a checklist, and the lesson and test and quiz and the announcements.' (P1, interview, n.d.)

The majority of the respondents agreed (14) or strongly agreed (8) that they monitor and support the students' learning process (see Figure 8.3). However, ten of the lecturers disagreed and three strongly disagreed on this matter. To collect, analyse and report student data, many lecturers strongly agreed (7) and agreed (17); however, ten disagreed or strongly disagreed on this matter. Therefore, 31% of the respondents indicated they were not able to facilitate and monitor learning.



Source: Authors' own work.
Note: The items of the sub-components were measured on a four-point Likert scale ranging from strongly disagree = 1 to strongly agree = 4.

FIGURE 8.3: Facilitating and monitoring learning.

This is confirmed and further elaborated on by the participants during the focus group interview:

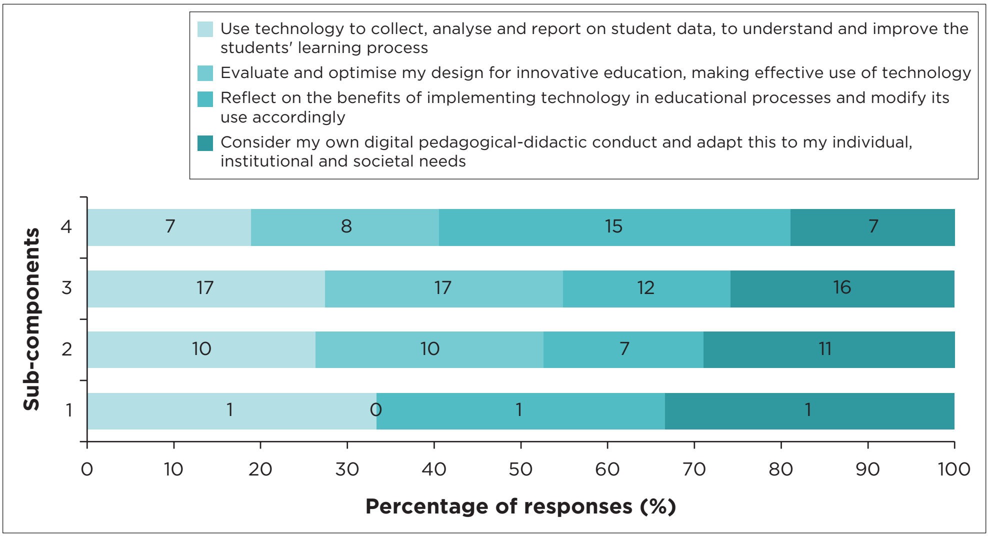
> 'I just want to say that, currently, the systems that we are using, it's not very user-friendly to monitor students' learning (P1) [...]. For example, the statistics on LMSs [*learning management systems*] and the pages, it provides you very broad ideas of access, but it doesn't give you what is its specific statistics on the engagement.' (P2, interview, n.d.)

According to the respondents, the existing student system at NWU does not make provision for extensive facilitating and monitoring of students' learning (see Figure 8.4).

Many respondents strongly agreed (8) or agreed (17) that they evaluate and optimise their design for innovative education; however, 29% (10) of the respondents could not execute this activity. Many respondents strongly agreed (15) or agreed (12) that they reflect on the benefits of implementing technology in education processes and modify its use accordingly. Many lecturers strongly agreed (7) or agreed (16) that they consider their own digital pedagogical-didactic conduct and adapt this to individual, institutional and societal needs. This was affirmed by the focus group participants:

> 'When I integrate external technologies, I do it quite slowly because I know that many of my students are not very computer literate. I think that design must definitely be different for the distance students, not only because everything needs to be delivered asynchronously.' (P1, interview, n.d.)

The three broad categories of competencies indicate that the future professor in commerce education needs specific pedagogical underpinning training specific to the online learning environment and to monitor and evaluate student learning, enabling them to modify aspects. The findings of this study are in line with other research that indicates the shift in



Source: Authors' own work.
Note: The items of the sub-components were measured on a four-point Likert scale ranging from strongly disagree = 1 to strongly agree = 4.

FIGURE 8.4: Evaluating and modifying education.

pedagogical approach to design and evaluate teaching and learning in the online or blended modality (Røe, Wojniusz & Bjerke 2022; Watermeyer et al. 2020). Challenges within the design, implementation and evaluation of online-based teaching include an outdated LMS that does not provide adequate learning analytic data. In addition, pedagogical training focused on the online or blended learning modality is a necessity. Furthermore, institutions need to refocus their professional development training offerings to develop and provide technology-based and pedagogical training for online and blended learning, which, according to research, holds its own challenges (Røe et al. 2022; Watermeyer et al. 2020). From the abovementioned data, it is clear that many commerce lecturers are able to design, implement and evaluate digital education; however, there is a clear gap in the accessibility of high-quality student system data to monitor and evaluate students' performance.

Empowering students for the digital society

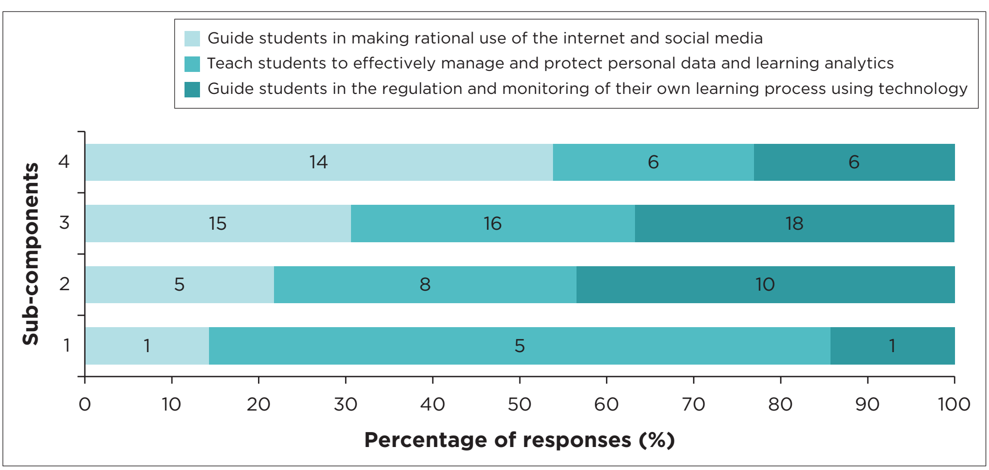
The items in the questionnaire were clustered into two sub-categories: (1) digital literacy for living, learning and working and (2) digital literacy for the profession or discipline.

Many respondents strongly agreed (14) or agreed (15) that they guide their students to make rational use of the internet and social media; however, 29% (10) of the respondents could not execute this activity. Many strongly agreed (6) or agreed (16) that they teach students to effectively manage and protect personal data and learning analytics. Thirteen of the respondents either disagreed (8) or strongly disagreed (5) that they do not teach their students to manage and protect their personal data and learning analytics (see Figure 8.5). Guiding students in the regulation and monitoring of their own learning seems of importance to lecturers – six indicating strongly agreed and eighteen agreed. During the focus group, the participants also highlighted the importance of digital literacies but the absence thereof with some students and within the current curriculum:

> ‘So usually, I’ll we have students who will, you know, say we struggled to open this, especially in the beginning of the year, it was very interesting to me to get emails from students that can’t cope (P1). It would be great if electric can [*sic*] start learning in communications can [*sic*] start learning how to do some coding and how to use different data.’ (P2, interview, n.d.)

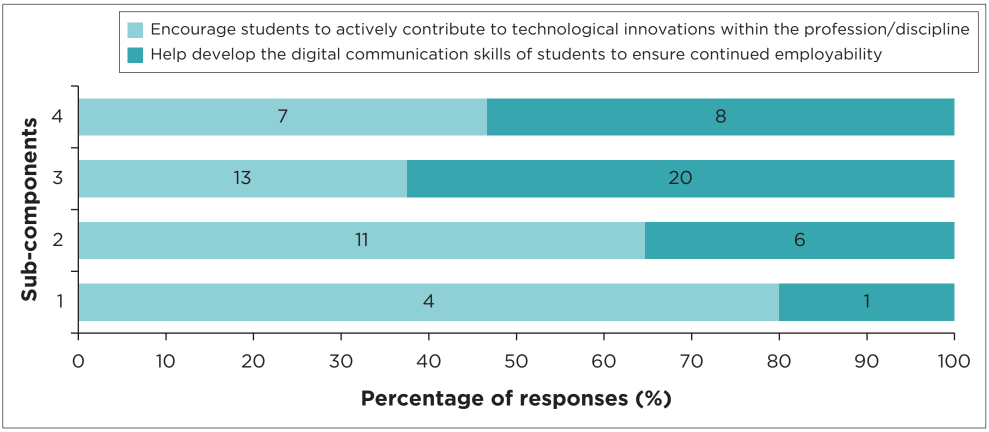
As shown in Figure 8.6, some lecturers strongly agreed (seven) and more agreed (thirteen) that they encourage students to actively contribute to technological innovations within their profession or discipline. However, a significant number of lecturers disagreed (eleven) and strongly disagreed (four) that they refrain from encouraging that. The absence of lecturer guidance on this aspect may have an impact on students’ digital readiness for their profession or discipline. However, respondents reiterated, during the focus group interview, that they try and develop the digital skills of students:

> ‘Also, look at how I can incorporate the graduate attributes into the design of the specific module (P1). It’s more of incorporating technology to supplement and support learning and to, to better equip students with the skills that they will need when they work in a walk into the profession (P2). New AI tools helping a person with academic writing, providing you have a list of what is it bridging sentences and stuff like that to just save time and energy and, and help you to improve your writing and stuff like that? But yeah, so it’s very profession, well, career orientated.’ (P1, interview, n.d.)



Source: Authors’ own work
Note: The items of the sub-components were measured on a four-point Likert scale ranging from strongly disagree = 1 to strongly agree = 4.

FIGURE 8.5: Digital literacy for living, learning and working.



Source: Authors' own work.
Note: The items of the sub-components were measured on a four-point Likert scale ranging from strongly disagree = 1 to strongly agree = 4.

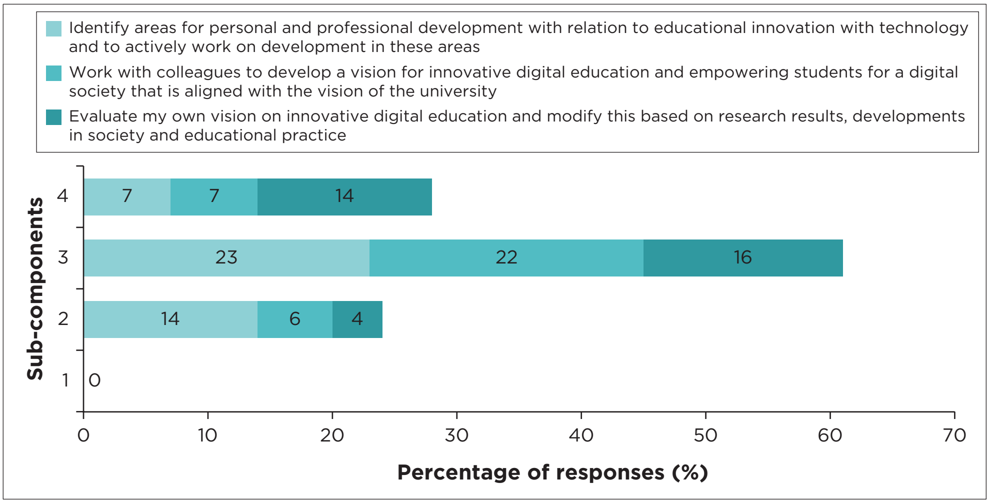
FIGURE 8.6: Digital literacies for the profession/discipline.

The findings indicate that commerce lecturers understand the importance of digital literacies for students, which is in line with other research (Spada et al. 2022). Commerce students need digital literacies to function in a professional business workplace. The lecturers should teach students skills to leverage technology for their professional advancement and knowledge to manage their data, monitor their own learning and guide them to contribute to the digital advancement of their discipline or profession. In this regard, the different subject groups within commerce faculties should evaluate the specific digital skills needed by their students according to industry needs. This recommendation from this study aligns with research by Spada et al. (2022), which necessitates the development of a variety of digital skills for graduates, such as exploring search engine usage and optimising and managing online content, the dissemination of information and social networking. While lecturers are focused on empowering students in the changed digital workforce, they also need to focus on their own professional conduct.

Professional conduct of the lecturer

The items in the questionnaire were clustered into three sub-categories, i.e. (1) the learning professional, (2) innovation with IT and (3) communication and collaboration (see Figure 8.7).

Some respondents strongly agreed (7) and many agreed (23) that they identify areas for personal and professional development pertaining to technology innovation; however, 40% (14) of the respondents indicated that they did not identify personal or professional development initiatives to enhance their digital skills. Many agreed (22) or strongly agreed (7) that they work with colleagues to develop a vision for innovative digital



Source: Authors' own work.
Note: The items of the sub-components were measured on a four-point Likert scale ranging from strongly disagree = 1 to strongly agree = 4.
FIGURE 8.7: The learning professional.

education and empowering students for a digital society. Fourteen of the respondents strongly agreed and 22 agreed that they evaluate their own vision of innovative digital education and modify it based on research results, developments in society and educational practice. This is a very positive direction, which will have a positive effect on lecturers' digital skills, and respondents echoed their sentiments:

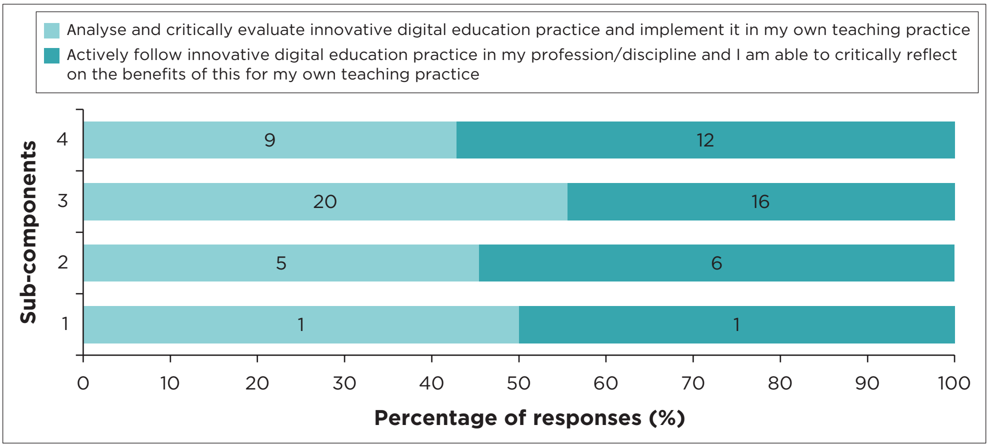
> 'So, we are busy, myself and one of my colleagues, are busy with unravelling all the problems and getting to know the Cirrus software.' (P1, interview, n.d.)

> 'Working with the Centre for Teaching and Learning, multimedia designer, Instructional Designer, as well as the educational technologist to basically see how everything that I am planning to do with my specific students can work together to facilitate learning.' (P2, interview, n.d.)

Many of the lecturers agreed (20) or strongly agreed (9) that they analyse and critically evaluate digital education practice and implement it in their own teaching. Many (12) strongly agreed and sixteen agreed that they actively follow innovative digital education in practice in their professions (Figure 8.8).

> 'When I integrate external technologies, I do it quite slowly. I try and keep that in mind when I do something new.' (P1, interview, n.d.)

Thirty of the respondents either strongly agreed (11) or agreed (19) that they follow and experiment with developments in educational innovation. Many agreed (21) or strongly agreed (8) that they also collaborate in the design and evaluation of digital education. They also participate in professional online networks to strengthen professional



Source: Authors' own work.
Note: The items of the sub-components were measured on a four-point Likert scale ranging from strongly disagree = 1 to strongly agree = 4.
FIGURE 8.8: Innovation with technology.

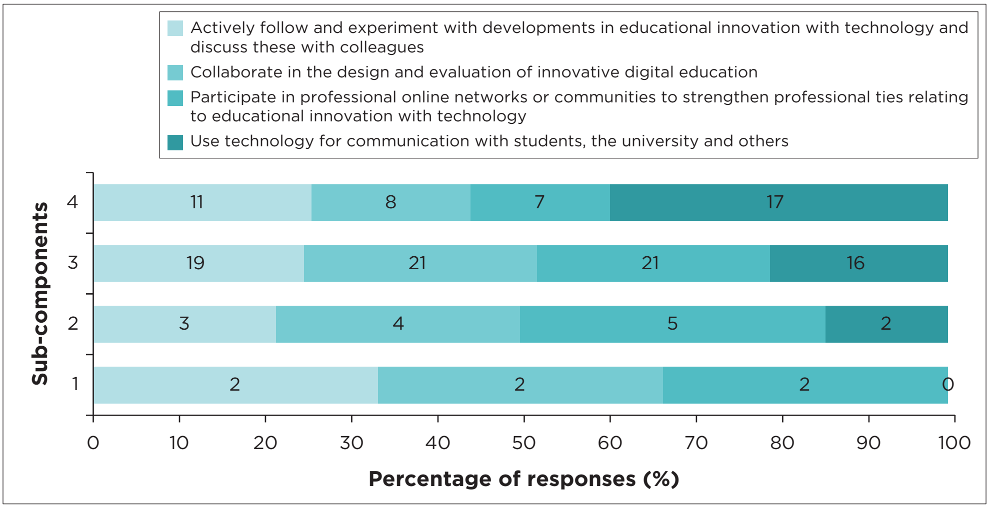
ties (33 of the respondents). Only two of the lecturers indicated they do not use technology to communicate with students, the university, and others (Figure 8.9).

> 'I know that, well, we are a couple of people came together with the ITLT community of practice.' (P1, interview, n.d.)

The lecturers in general take ownership of their professional development and realise they have to embrace and explore the technologies in an innovative manner. However, it is evident that the institution needs to provide high-quality professional development opportunities to lecturers in the development of competencies using technology for their subject group. This is in line with up-to-date research that indicates the role of the institution and the individual in the up-skilling of future professors (Røe et al. 2022; Spada et al. 2022). The lecturers within this study collaborate with their peers to share best practice and experts to ensure that the technologies incorporated for teaching and learning are fit for purpose. This is in line with other institutions' strategies to develop lecturers' technology-based skills resulting from the digital transformation acceleration (Reaburn & McDonald 2017). Lectures' professional development greatly hinges on basic digital literacy as the next dimension of discussion.

Professor digital literacy

The items in the questionnaire were clustered into three sub-categories, including (1) basic IT competencies, (2) information, data and media literacy and (3) computational thinking.



Source: Authors' own work.
Note: The items of the sub-components were measured on a four-point Likert scale ranging from strongly disagree = 1 to strongly agree = 4.

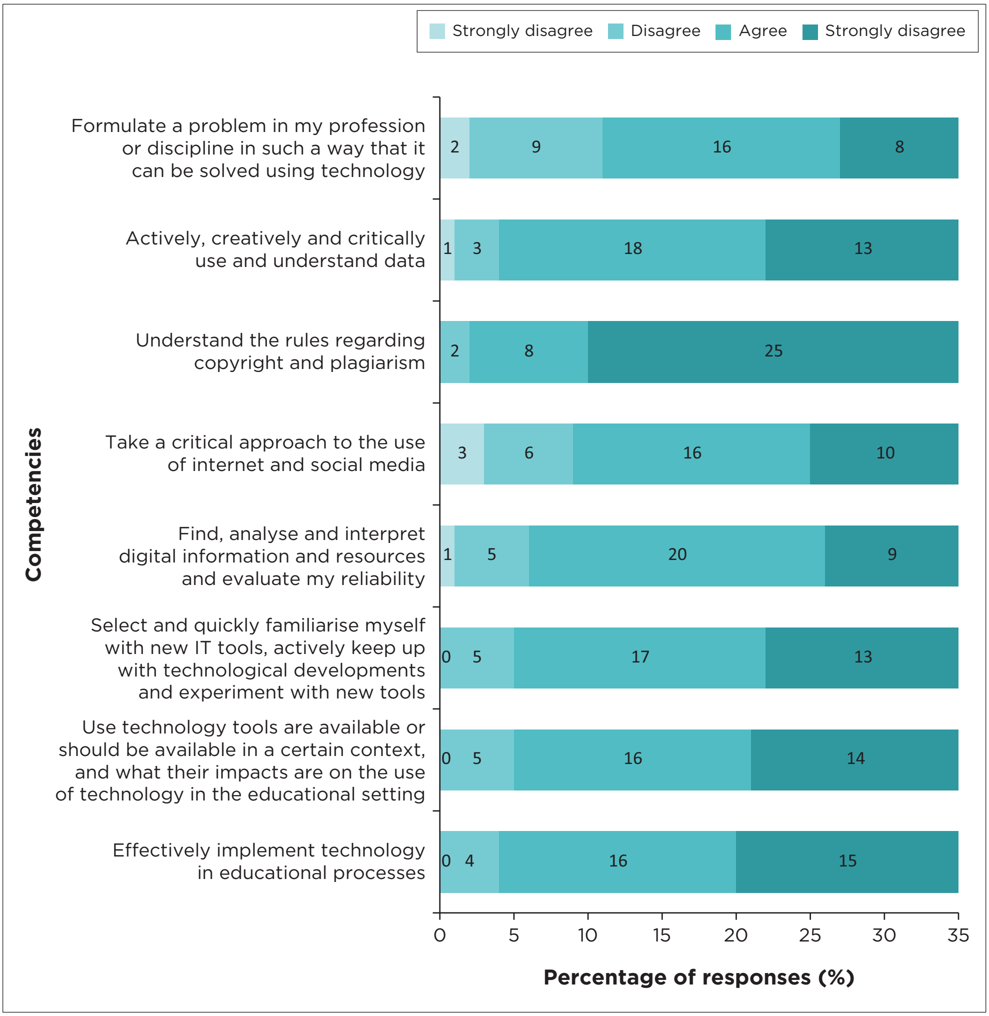
FIGURE 8.9: Communication and collaboration.

From the illustration (Figure 8.10), there is a clear indication that the majority of the lecturers have the basic IT competencies to be able to function successfully in HE spaces. Some (five) did indicate that they do not find, analyse and interpret digital information and resources, select and familiarise themselves with new tools, or use the technology tools that are available, nor are they aware of what their impacts are on the use of technology within their setting. However, during the focus group, the participants also highlighted that the lecturers need to enhance their digital competencies:

> 'But I think more can definitely be done to empower the lecturers so that they, in turn, can assist the students to really function in this new world that we are entering way technology is absolutely a necessity.' (P2, interview, n.d.)

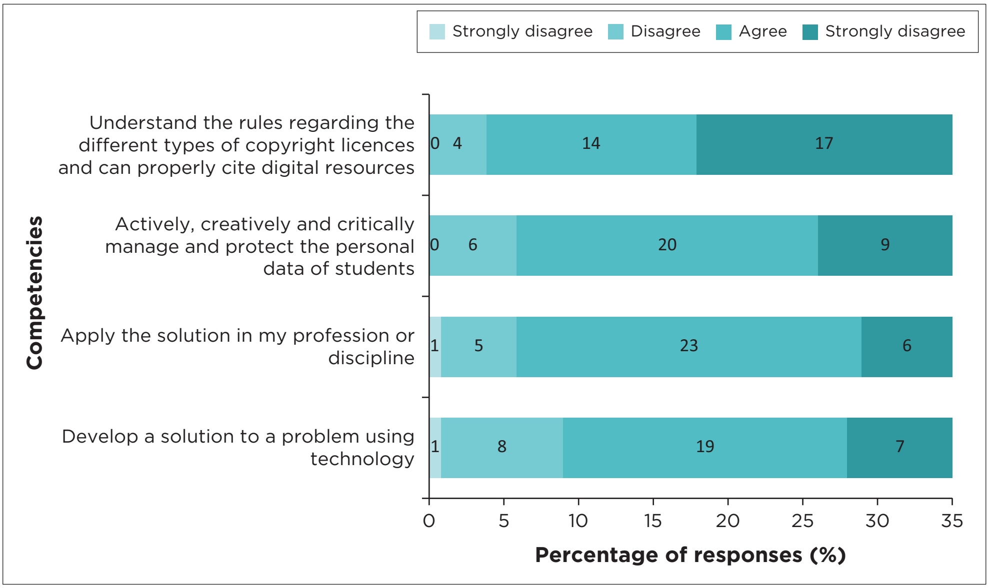
Figure 8.11 reflects that many lecturers strongly agreed (seventeen) and fourteen agreed to having an overarching idea regarding the different types of copyright licences and can cite digital resources. They are aware (20 agreed and nine strongly agreed) of the importance of protecting the personal information of their students. Some did indicate that they do not have adequate knowledge of these aspects. The lecturers agreed (nineteen) or strongly agreed (seven) that they use technology to develop a solution to a problem. The participants in the focus group were also eager to explore the latest AI technologies:

> 'But I do want to expand my knowledge on ChatGPT. And how we can empower students to use it within an ethical and responsible manner because I do think that will be increasing (P2). I think to use technology a lot because it just makes life easier. For example, I stopped using or spending energy on typing on menial stuff by using things like ChatGPT.' (P2, interview, n.d.)



Source: Authors' own work.
FIGURE 8.10: Basic information technology competencies.

Respondents within this study showed a positive inclination towards the adoption of new technologies, such as the AI-powered ChatGPT. The openness of lecturers towards the disrupted technology environment provides ample room for exploration and skills development. Lecturers need guidance and support from institutional teaching and learning specialists, which may be a challenge as not all institutions employ specialists at the forefront of mastering and sharing cutting-edge technologies. The trend of new disruptive technology incorporation into the current curricula delivery provides a challenge in itself. The findings of this study corroborate recent findings, where lecturers find the adjustment to new, digitised content and online or blended teaching and



Source: Authors' own work.
FIGURE 8.11: Computational thinking.

learning approaches to be challenging, increasing their workload and intensifying their training to overcome their technological deficiencies (Watermeyer et al. 2020).

Conclusion

In general, a commerce professor needs specific subject matter expertise attained through cutting-edge research. In addition, future professors have to incorporate research on the scholarship of teaching and learning to inform their pedagogical and didactical teaching approaches, which is in line with other research, such as Røe et al. (2022). However, the digitally transformed higher education environment necessitates professors as subject experts to also become highly skilled with technology within the disrupted educational delivery system (Børte, Nesje & Lillejord 2023). In this regard, the findings of this study corroborate current research that indicates that professors will have to develop specific technology-based competencies to function within the augmented digital teaching and learning space. Because of the current educational trends in HE, where a shift to more online teaching and learning and the use of technology for enhanced student engagement experiences are the focus, lecturers must be able to design and implement content within the online environment. The online environment differs greatly from the face-to-face environments most professors were used to before the onset of the COVID-19 pandemic.

In this regard, the online learning space necessitates lecturers to design and implement in a different way compared to the face-to-face modality. Professors as lecturers also need to monitor and support student learning through learning analytics. Likewise, training within the evaluation and modification of teaching and learning practices is necessary. The findings in this study align with previous research that indicates that the up-skilling of lecturers and professors will be the primary focus at institutions in the near future (Røe et al. 2022; Watermeyer et al. 2020).

Lecturers indicated that they focus on the development of students' digital literacy; however, focused research on the different subject groups within commerce must determine the specific digital competencies needed by students. The identified digital skills then need to be incorporated into the various commerce subject groups, while generic digital literacy also remains a focus for students' skills development. For lecturers to effect the needed digital skills development of students, they themselves need specialised and focused professional development. In this regard, current research indicates the need for the specific digital skills development of lecturers, and the responsibility for this up-skilling lies with the individual and institution. Collaboration with institutional teaching and learning specialists and commerce subject matter experts will facilitate this action needed to address not only the up-skilling of lecturers but also the development of students' digital literacy. The competency development process that the future commerce professor has to undertake to stay up-to-date with disruptive technological advancements is a huge undertaking. Lecturers may feel overwhelmed by the pace and acceleration of their technological deficiencies, and apart from their teaching and research load, they have to spend a substantial amount of time on professional development and technology implementation. The focus on digitally transforming commerce education necessitates a strong strategic intent to up-skill professors who are able to instil and develop students with the necessary knowledge and digital skills to be successful within the technology-infused workforce.

Chapter 9

Re-thinking doctoral education for future commerce academics and business leaders

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Introduction

The context for doctoral education in South Africa is well-known to those who work in postgraduate spaces. The highly differentiated higher education sector is under strain as it attempts to address increased demand and greater student diversity despite reduced resources (Boughey, Van den Heuvel & Wels 2017). The national imperative to increase the number of doctorates has placed higher education institutions (HEIs) under pressure to make doctoral education more efficient (Cloete, Mouton & Sheppard 2015). The wider HEI context is one of accelerating technological development, economic inequality and social insecurity (McKenna 2021).

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The only certainty is that education at all levels needs to prepare students for unimaginable change. Whether doctoral graduates join the professoriate, work in government or the private sector, they need to be flexible, critical and creative thinkers who can manage 'supercomplexity' and unpredictability (Barnett 2004, p. 249) in order to lead society in solving intractable problems. For this reason, it is crucial to pay more attention to the educational provision and academic support that is available to doctoral candidates to ensure efficient completion and also to develop candidates' capacity and desire to deliver on the intended outcomes of a doctoral education, which include graduate attributes and making a positive impact post-graduation.

Approximately 60% of South African doctoral candidates are part-time students, the majority of whom stay with the same employer after graduation (Mouton & Van Lill 2022, cited in Faller et al. 2023, p. 95). The authors' experience at one metropolitan business school suggests that the majority of doctoral candidates in commerce education contexts are unlikely to be pursuing an academic career. Typically, they are mid-career professionals who are motivated by the possibility of professional advancement, younger professionals who have recently obtained good results in an MBA or similar professional qualification and older career professionals who are aiming to change career direction and would like to share their experience more widely or solve a problem in the workplace. Many who choose to pursue doctoral studies in commerce fields might be better served by a professional doctorate, which has a 40% coursework component and is more practical or applied in nature. In the Global DBA Survey (DBA Compass 2023), 80% of Doctorate in Business Administration (DBA) or professional doctorate programmes surveyed indicated growing demand, with the highest demand coming from students from Asia, the Middle-East and Africa. However, as only two South African HEIs currently offer a professional doctorate, and it may be considered an inferior option by potential candidates (Council on Higher Education [CHE] 2022, p. 5), it is a realistic assumption that students will continue to register for the research doctorate. For this reason, it is worth strategising to make the research doctorate in commerce fields more achievable and valuable without compromising standards.

The chapter takes as a starting point the report on the national review of doctoral qualifications, specifically, the findings and recommendations pertaining to doctoral attributes and the educational provision and support doctoral candidates need. It explores the tensions brought about by conflicting imperatives and teases out questions and debates emanating from the report. The second part of the chapter makes suggestions for doctoral programme planning and design, placing emphasis on the need to pay attention to curriculum and pedagogy. These suggestions are informed by global scholarship on doctoral education, as well as consideration of the challenges specific to the South African higher education context. The chapter also touches on the growing call by international business school accreditation agencies and business-education-related bodies for business qualifications, including Doctor of Philosophy degrees (PhDs) and DBAs, to prepare graduates to impact positively on society.

Findings and recommendations emanating from the national review of doctoral qualifications

The report on the national review of doctoral qualifications (CHE 2022), Doctoral Degrees National Report (DDNR), which draws on both the self-evaluation reports (SERs) submitted by the universities that offer doctoral qualifications and CHE panel reports, offers a comprehensive picture of the state of doctoral education in South Africa. Produced by the national quality assurance body, the CHE, and drawing on national best practice, the recommendations in the DDNR can be seen as providing authoritative direction for future planning. In the review process, institutions reported on their performance against the National Standard for Doctoral Qualifications (henceforth, the Standard), which the CHE set down in 2018. The first part of this chapter should be read in conjunction with both the DDNR[5] and the Standard.[6] Only the findings and recommendations related to educational provision and academic support in doctoral education are discussed.

According to the Standard, the minimum performance required for obtaining a doctoral qualification is the achievement of the doctoral graduate attributes. The doctoral attributes can be seen to represent the 'intended' doctoral curriculum, defined here as 'formal statements of purpose, aims, or intended outcomes' (Gilbert 2009, p. 56). The DDNR does not discuss the relationship between the doctoral attributes and the ten descriptors for Level 10 on the National Qualifications Framework (NQF) (Department of Higher Education and Training [DHET] 2013), there being substantive overlap between them.[7] Noted as a 'significant concern' in the DDNR is a 'general lack of awareness and understanding' of these attributes (CHE 2022, p. 71) – not just among students but also among staff. Also noted is ignorance about how these attributes should be monitored and measured. As suggested earlier, doctoral learning is not

5. See https://www.che.ac.za/sites/default/files/inline-files/CHE%20Doctoral%20Degrees%20National%20Reporte.pdf.

6. All page numbers referring to the Standard are from the DDNR, where the Standard appears as Annexure B.

7. The NQF Level 10 descriptors are listed in the DDNR as Annexure C (p. 95).

just about producing a thesis or new knowledge; it is also about scholarly identity development. As the attributes are expected to guide development, as well as to be taken as evidence of learning, it is worth focusing on how they are described and viewed.

The graduate attributes are set out in two categories: *knowledge* and *skills*.[8] Of the five *knowledge* attributes, the three that are most closely related to the unique research that candidates undertake are: 'Broad, well-informed, and current knowledge of the field or discipline', 'Expert, specialised, and in-depth current knowledge of a specific area of research', and 'An original contribution to the field of study' (CHE 2022, p. 89). It is typically assumed that these attributes are developed primarily through independent study and within the supervisory relationship. Interestingly, theory is not mentioned in the description of the doctoral *knowledge* attributes and is only touched on in Level 10 descriptor 'b', although theory is one of the 'threshold concepts' (Kiley 2015) that candidates must grapple with in order to produce work at the doctoral level. Although theory is bound up with disciplinary knowledge, the research on threshold concepts in research education suggests that special attention needs to be paid to theory as a threshold concept in order to help candidates overcome the cognitive challenges that are part of the learning process.

The other two *knowledge* attributes, 'Insight into the interconnectedness of one's topic of research with other cognate fields' and 'Ethical awareness in research and professional conduct' (CHE 2022, p. 89), are not as closely tied to any specific research study. Arguably, they are more generic and may not feature adequately during either independent study or supervisory engagement. Regarding ethical awareness and professional conduct, the DDNR notes: of the two dimensions of ethics, professional conduct, which refers to academic integrity issues such as avoiding plagiarism and data manipulation, received inadequate attention (CHE 2022, p. 27). In addition to the recommendation that institutions provide ethics and research integrity training (CHE 2022, p. 40), it recommends that they promote 'critical citizenry' and 'consciousness of social responsibility' (CHE 2022, p. 74). Although decoloniality and Global South perspectives are not directly addressed in the Doctoral Standard, it is also suggested that research that addresses the 'social and economic well-being' of the African region and 'locally constructed knowledge' be encouraged (CHE 2022, p. 75). The broad interpretation of this attribute encompasses a concern that research should contribute to the 'public good' (Burton et al. 2022, p. 2). These suggestions are in line with international trends. Globally, the

8. For a detailed discussion of the knowledge and skills attributes, see pp. 24–27 and pp. 28–31, respectively (CHE 2022).

accreditation standards of the major business school accrediting bodies (AABS,[9] AACSB,[10] AMBA[11] and EFMD[12]), the World Bank-funded Global Business Schools' Network[13] (GBSN), the UN Global Compact's Principles for Responsible Management Education[14] (PRME) initiative, and the Times Higher Education[15] (THE) Impact Rankings all emphasise the need for graduates (as well as schools and their faculty members) to have a positive impact on the organisations in which they work and on broader society. In particular, there is a growing urgency in the call for all business education to ensure that its graduates are able to contribute positively in the areas of ethics, sustainability and governance (ESG) as seen, for example, in an AACSB position paper that highlights the responsibility to "prepare students to impact the bottom line while tackling the major issues of our time" (2023).

Of the four *skills* attributes, the only one that is directly related to research is 'Evaluation, selection and application of appropriate research approaches, methodologies, and processes in the pursuit of a research objective' (CHE 2022, p 90). Attainment of this attribute requires sufficient overall knowledge of research design and methodology to make appropriate choices. This attribute is particularly important for future academics who will guide students' methodological choices and continue to engage in research themselves. Although most HEIs report that the development of this attribute is addressed in short courses or workshops, it is doubtful that

9. The Association of African Business Schools (AABS, 2022) accreditation standards for business schools include a focus on impact on africa, relevance to the african context, and sustainability.

10. Association to Advance Collegiate Schools of Business International (AACSB, 2020) includes accreditation standards that measure impact of scholarship and engagement and societal impact.

11. The Association of MBAs (AMBA) is the global accreditation body that accredits MBAs and DBAs. Its DBA accreditation criteria require that schools make an impact on society through their programmes, research, and faculty.

12. The European Foundation for Management Development (EFMD Global) accredits business schools and specific programmes, including doctoral programmes. They host annual conferences on doctoral programmes with specific focus on the doctoral curriculum.

13. The Global Business School Network (GBSN) was established in 2003 by the World Bank. It is a non-profit organisation whose role 'is to ensure that the developing world has the management talent (leaders, managers, and entrepreneurs) it needs to generate prosperity'. This is done through partnerships with business schools, industry, foundations and aid agencies. https://gbsn.org/about (viewed 22 May 2023).

14. United Nations-supported and founded in 2007, it provides a platform to raise the profile of sustainability in business schools globally. Commitment to PRME's Six Principles ensures signatory business schools develop future leaders with the skills needed to balance economic and sustainability goals through the UN sustainable development goals (SDGs). https://www.unprme.org/about (viewed 22 May 2023).

15. The Times Higher Education (THE) Impact Rankings include over 1,400 universities from 106 countries. The rankings assess university performance against the UN SDGs. https://www.timeshighereducation.com/impactrankings (viewed 22 May 2023).

candidates learn more about research design and methods than their own projects demand. Therefore, doctoral graduates who go on to supervise others may need further educational opportunities if they are to develop broader expertise in research design and methodology. Doctoral graduates who do not become academics may also be expected to lead evidence-based decision-making through research in their organisations. They may be deferred to as informed consumers of research and, therefore, be responsible for commissioning research or expected to make decisions about what research to draw on. As such, they would require a deep, broad and critical understanding of research methods. For these reasons, research design and methodology training deserves special attention in doctoral education.

The other three *skills* attributes are: 'Reflection and autonomy', 'Communication skills, including relevant information and digital literacy skills' and 'Critical and analytical thinking for problem-solving' (CHE 2022, p. 90). All three can be seen as relatively generic in that they are not directly related to research or disciplinary knowledge and are widely relevant beyond the research context. Because these attributes may also be neglected in both independent study and in supervision feedback and interaction, they deserve more attention and are discussed in the paragraphs that follow to highlight considerations that institutions, faculties, schools and departments would have to grapple with if they are to take seriously the need to develop these attributes.

As reflection and autonomy are presented as one attribute, these attributes were generally addressed together in the SERs, with the reflection component being neglected (CHE 2022, p. 29). This neglect is not surprising: the conflation of two different concepts, conceivably loosely related, would likely result in confusion. Scrutiny of the description of the performance of this *skill* reveals that only two words in the description, 'work independently', describe autonomy, while there is no description of what is entailed in reflection, or how it can be developed or observed. The other wording in the description of this attribute, 'arrive at defensible conclusions and solutions, based on appropriately-substantiated and defensible premises and analysis' (CHE 2022, p. 90), is more appropriate to the description of the separate attribute of critical and analytical thinking. As the concepts used in the wording of this attribute are not clearly described or elaborated on, in planning for educational provision, it would be worth treating them as completely separate attributes and expanding on what kind of performance each would entail as evidence of having attained it.

The ability to reflect as a skill for postgraduate research is seldom explicitly addressed in research on doctoral education. An exception is an article by a research team that worked intensively to support the progress of cohorts of doctoral candidates, which elucidates the value of reflection for metacognition (Wisker et al. 2004):

> Reflection aids meta-learning, enabling both a clear focus on the research and articulation between its parts as well as articulation of its arguments and achievement, using the metalanguage of research itself (words such as 'conceptual framework)'. (p. 477)

Researchers' awareness of their own learning and development (meta-learning) is essential in order for them to evaluate their progress and to change or adapt their strategies if necessary. Reflection is also important for identity development.

Following on from the DDNR's suggestion that it would be good practice to encourage students to reflect on 'their "becoming" and "being", as part of the process for realising the graduate attributes' (CHE 2022, p. 31), it is worth exploring the ways that reflection on *becoming* links to scholarly and professional identity development, which is a significant aspect of doctoral learning. Although Kamler and Thomson (2006) focus on writing, their work provides a useful theorisation of identity that has been widely influential in doctoral education, making a substantial contribution to postgraduate pedagogy. Identity is 'always in formation', which means that candidates move through stages entailing 'change in identity, self-narrative and behaviour' as they transition from novices to confident scholars (Kamler & Thomson 2006, p. 17). Their identities are performed in action, and these performances, be they in speech or in writing, are 'discursively-formed': that is, in their self-making, candidates draw on the languages and discourses that are available to them. Another key insight is that knowledge and identity are entwined and develop simultaneously: 'Writing [...] becomes the exercise of choices about what is written/known, and the text becomes the medium through which both knowing and knower are made together' (Kamler & Thomson 2006, p. 17).

Regarding the *skills* attribute centred on communication and information and digital literacy, it is unsurprising that there was general agreement in the SERs that these skills are important and present a challenge for some students; however, institutions make assumptions that they are 'acquired without deliberate intervention' (CHE 2022, p. 29). Most HEIs reported that communication skills are 'nurtured at the beginning stages of a doctoral journey' (CHE 2022, p. 30), but it appears that institutions do not recognise that doctoral research requires the development of very advanced literacy over the whole period of candidacy and that a diverse array of skills are needed, requiring deliberate planning for their development at all stages of the process, not just in the early stage of candidature.

The review panel expressed concern about the assumption that students acquire critical and analytical thinking skills for problem-solving during the research process without deliberate intervention or engagement (CHE 2022, pp. 30–31). A commentary article building on the DDNR argues that South African doctoral education does not necessarily ensure the development of 'intellectual depth' (Burton et al. 2022, p. 3). It calls into question the ability of doctoral graduates to think critically, proposing that curricula be revised for deliberate focus on broad critical thinking that encompasses social responsibility and research for the public good (Burton et al. 2022). This suggestion chimes well with a consideration that is not addressed in the Doctoral Standard, the decolonial project, which calls for engagement with Southern perspectives and epistemologies (CHE 2022), as well as with the global focus on positive impact and ESG mentioned earlier.

Interestingly, in the DDNR, writing centres are singled out as sites for the development of critical and analytical skills (CHE 2022, p. 31). We would argue that while a more explicit focus on writing can lead to the development of critical and analytical skills, it is not clear how writing centres would be expected to do this. Without questioning the value of the writing centres that are set up for consultation with doctoral candidates, ideally, writing centres should be only one aspect of a more encompassing strategy that acknowledges that writing and critical thinking cannot be developed as decontextualised skills but rather as part of the process of doctoral learning. These skills are best developed through the feedback candidates receive on the presentation of their ideas. The primary source of feedback is the supervisor, although peers, other academics and writing specialists can also offer valuable feedback.

It appears from the DDNR that the requirement that institutions as doctoral educators relate their performance to the attributes in the Standard was not free of critique from some institutions. We suggest that a narrow focus on attributes without developing a philosophical underpinning to guide postgraduate pedagogy is likely to result in a mechanistic approach that does not support the transformative educational experience that a doctorate should offer. However, the focus on attributes is in keeping with developments globally, where transferable or work-related skills have been prioritised (Cardoso et al. 2022). There is some overlap between the South African doctoral attributes and those identified in other skills frameworks, such as the Researcher Development Framework (RDF),[16] which is well-established in the United Kingdom (UK). This comprehensive framework includes 63 attributes that teams of academics

16. See https://www.vitae.ac.uk/vitae-publications/rdf-related/researcher-development-framework-rdf-vitae.pdf/view.

and researchers have identified as desirable for researchers. It is organised within four domains: 'knowledge and intellectual abilities', 'personal effectiveness', 'research governance and organisation' and 'engagement, influence and impact', which are further divided into twelve sub-categories. Given that there is no guidance in the Standard for assessing candidates' progress towards attaining the doctoral attributes, reference to the RDF document, which outlines five possible stages of development for each of the 63 attributes, may be helpful for those focusing on how to develop pedagogy and assessment criteria for measuring the doctoral attributes.

In light of the criticisms levelled at the concept of skills attributes, and in an effort to understand how attention to graduate attributes could be viewed in terms of a more encompassing and holistic integrative framework, it may be helpful to consider the perspective of an eminent higher education scholar, Ronald Barnett. In response to the generic skills discourse in education (Barnett 2004), he argued that education needs to do more than teach knowledge and skills; it needs to facilitate the development of a particular disposition to the world that is connected with 'matters of will, energy and being' (Barnett 2004, p. 254), and that promotes an orientation in the world that is characterised by qualities such as 'carefulness, thoughtfulness, humility, criticality, receptiveness, resilience, courage and stillness' (Barnett 2004, p. 258). In a similar vein, Mowbray and Halse (2010, p. 662) suggest that in the doctoral education process, candidates acquire an 'interdependent suite of skills' that should be seen in terms of 'intellectual virtues' that enable both their personal growth and their ability to contribute to the well-being of their communities. Rather than viewing the focus on doctoral attributes as a mechanistic exercise driven by a utilitarian agenda, these perspectives could provide possible philosophical grounding to make the skills development process meaningful.

In the DDNR itself, it is acknowledged that 'doctoral studies encompass broader development and require further academic growth than what can be achieved through the research project alone' (CHE 2022, p. 46). This consideration is taken up in the second part of this chapter.

■ Considerations to inform doctoral programme planning and design in the commerce field

The findings of the DDNR leave no doubt that there is a need to re-envision doctoral education to improve it and ensure the quality of South African qualifications. Any review of current doctoral education needs to pay much more attention to issues of curriculum and pedagogy than has been the case up to this point. As the term *curriculum* is strongly associated with coursework, the doctoral curriculum is seldom debated. However, if the term is defined as ‘systematic selection and articulation of experience in order to produce the intended outcomes of doctoral research training’ (Gilbert 2009, p. 56), discussions about curriculum are crucial. In light of the need to develop doctoral attributes and give attention to global business education imperatives, HEIs should be engaging more explicitly with the doctoral curriculum and relate it to their perspective on the purpose of doctoral education in order to develop clear guidelines for directing supervisors. Furthermore, such explicit engagement should also involve those providing academic support on the periphery of doctoral education, such as librarians, statisticians and writing specialists. In the context of commerce education, such engagement should be in part at the faculty level, and where there are schools, such as business schools, primarily at the school level.

In this section, we take up the argument that the kind of person who emerges at the end of their doctoral journey and what they can contribute, whether it be as academics or, more likely, as leaders in the private sector or government, is crucial. For this reason, it is worth paying considerably more attention to identity as a part of the learning process and the qualities and dispositions doctoral candidates can draw on when they graduate. One way of doing so is to take more seriously the development of the doctoral attributes. As discussed in the previous section, these attributes may not feature adequately in the course of either independent study or supervisory engagement. Without deliberate nurturing, many of the attributes may never fully develop.

We suggest that the best way of addressing many of the DDNR’s recommendations is to make doctoral programmes more structured than they currently are. Bringing more structure to doctoral programmes is in keeping with a significant global trend. A scoping review, which drew on 81 articles, concluded that there is an ‘increasingly curriculated approach to doctoral education that is both structured and collaborative’ (McKenna & Van Schalkwyk 2023, p. 5). A systematic review that explores the transformation of doctoral education also noted the introduction of more structure in the form of a ‘curricular component’, especially in the first year of study, as well as the creation of institutional structures, such as doctoral schools, to regulate and manage doctoral education (Cardoso et al. 2022, p. 898).

Given the limits of this chapter, the discussion that follows concentrates on the introduction of structure in curriculum and the learning process rather than on institutional structures. Structure could be provided through the introduction of coursework, which is required in North America and increasingly in Europe too (Kiley, Luca & Cowan 2014, p. 124). In Australia, as in South Africa, the research doctorate does not involve coursework; however, it is worth noting developments there that bring structure to the doctorate. The Australian doctoral curriculum has become increasingly structured over the last 30 years (Ayers et al. 2018, p. 249), and there have been significant moves towards including coursework. Research at two Australian universities showed that despite concerns that if coursework were to be introduced it would increase time to completion, with consequent additional demands on teaching resources and funding, both academic staff and doctoral candidates envisioned many benefits. Perceived benefits included the formation of peer networks to counter isolation, exposure to different disciplines and research approaches, improved efficiency for supervisors, 'more equitable' experiences for students when learning is not entirely supervisor-dependent, and opportunities to develop generic skills (Kiley et al. 2014, p. 127).

Contrary to what many academics may think, there is no policy restriction on the introduction of coursework in the South African research doctorate. According to the Standard, coursework 'may be required as preparation or value addition to the research', although there is no provision, aside from in the professional doctorate, for coursework to count towards qualification credits (CHE 2022, p. 82). Coursework components could be designed to allow those who find that they are not suited to pursue the qualification an opportunity to exit with a certificate or diploma (Kiley et al. 2014, p. 128). The first stage of the doctorate, during which a viable proposal needs to be written, is the obvious one for a course component, which could be assessed. Typical course components to consider would be ethics, research integrity, and research design and methodology. For students whose previous studies have been general, such as an MBA, there could also be disciplinary content coursework to allow for the teaching of necessary specialist knowledge. In addition, coursework with a specific focus on ESG, decoloniality and Global South perspectives could be appropriate during this phase of the doctorate to bring focus to and support the development of the doctoral graduate attributes.

Initial coursework could also include a component that enables students to understand how scholarly knowledge is constructed. Students from practical commerce fields are likely to experience difficulty in making the shift from consultancy research, which entails finding solutions to real-world problems, to scholarly research, which requires them to articulate a knowledge problem. Such students could benefit from a basic understanding of the differences between Mode 1, Mode 2, and what Huff refers to as Mode 1.5 knowledge production (Huff 2000). Consideration and discussion of research-related cross-disciplinary 'threshold concepts', such as 'argument, theory, framework, analysis and research paradigm' (Kiley 2017, p. 551), and how such concepts relate to their own proposed research could also be helpful. Because, in commerce doctoral programmes, many of the doctoral candidates are mature-age or established professionals, they may have more difficulty with these concepts because of over-reliance on their professional experience or a preference for practice as opposed to theory (Kiley 2017, pp. 553–554).

The complexity of introducing a curricular or taught component in the doctorate and the length of time it would take to become a reality should not preclude implementing interim strategies to address learning needs and add value to the postgraduate experience. Indeed, interim strategies would allow for the trialling of learning components that could be formalised later as courses. Some HEIs currently offer pre-registration courses, with doctoral registration allowed only once an acceptable proposal has been written. However, the DDNR notes concerns about the status of students in these courses (CHE 2022, pp. 36, 72). Such courses may be good from an income-generation and postgraduate management point of view but may not serve the interests of the majority of self-funded students, who would have to find funding for an additional year of study before they could commence the doctorate.

A concern expressed in the DDNR is the 'lack of programmes and measures to support the development of doctoral students during their studies' (CHE 2022, p. 72). Whether institutions or faculties opt for formal courses or more informal support, consideration could be given to what kind of educational provision should be implemented in addition to that taking place in the supervisory relationship. Three categories that could be considered are: 'enabling', designed to give candidates a good introductory foundation for research; 'enriching', which would be value-adding; and 'articulating', which would focus on skill development for employment (Kiley et al. 2014, p. 128). A combination of enabling and enriching components is desirable.

To address students' developmental needs, most HEIs offer workshops and seminars; however, the DDNR notes that such *ad hoc* offerings are not compulsory, are taken up inconsistently, and that there is no monitoring of participation or evaluation of the impact of such supplementary support (CHE 2022). A substantial source of funding for *ad hoc* academic support has come from University Capacity Development Programme funding from the DHET (CHE 2022, p. 21). As there is no certainty that this grant funding will be available in the future, there is a pressing need to find more sustainable long-term funding sources. In this respect, business schools may be better off than other university structures, as corporates may be a source of potential funding. Given the limited funding for such activities in the resource-scarce South African context, a more efficient approach is called for. This would mean instituting *curriculated* offerings, even if they are not formal courses, with mandatory participation in, at the very least, a substantial proportion of the activities.

A further motivation for introducing more formal *curriculated* offerings is that it would be the most efficient way to address the development of the five doctoral graduate attributes that were identified in this chapter as being more generic. Indeed, many of the attributes would be more effectively addressed in the context of a course or class that brings students into the same space. For example, it is difficult to see how students will grasp the 'interconnectedness' between their work and that done in similar fields if they focus exclusively on their own research and do not engage with the other students' research. Given the demands being made on supervisors, and bearing in mind that in the commerce education context, many supervisors are drawn from industry and have no training in teaching or supervision, supervisors may not have the capacity to provide the more comprehensive educational experience that doctoral education calls for. One solution may be to identify disciplinary staff with an interest in education who are able to collaborate with staff who specialise in postgraduate development and support, such as postgraduate writing and research methodology specialists, to design and facilitate programmes that explicitly address the doctoral attributes that may not be given sufficient attention in the research supervision process.

As not all doctoral candidates have the same needs and motivations, a strategy that is employed in the UK and Australia is the implementation of individualised learning plans. These plans are developed after a learning needs analysis, which entails reflecting on current knowledge and skills in relation to the doctoral degree exit-level outcomes (Ayers et al. 2018). This individualisation strategy addresses the diversity of the student body and allows for the exercise of student agency, which is an important factor considering that autonomy is one of the graduate attributes. Learning plans could be used to facilitate reflection on the part of doctoral candidates and also as opportunities for supervisors to engage with their students about their developmental needs. However, it should be noted that this strategy is combined with referral to appropriate formal learning opportunities, which should be available if learning plans are expected. If structured learning opportunities, such as short courses, workshops and seminars, are in place, the implementation of learning plans could explicitly accommodate differentiation.

It has been found that one of the most important factors in student success and well-being is an enabling and supportive environment that facilitates the socialisation of doctoral candidates (Sverdlik et al. 2018, pp. 372–375). An increasingly popular model for doctoral education is a cohort approach, which takes a group of students through the stages of doctoral research as a collective. While there are many forms and names for this model, all involve the development of a community of students and 'increased structure in the doctoral curriculum' (McKenna & Van Schalkwyk 2023, p. 5).

Through the provision of regular engagement in structured communities for doctoral candidates, conditions are set up for peer support networks to form. Although such networks may develop naturally, there is more likelihood that they will develop if there is institutional support for such interaction. There is substantial research on the benefits for research students of belonging to scholarly communities, and many articles highlight the peer learning opportunities that such communities present (Boud & Lee 2005; Brown 2021; McKenna 2017; Parker 2009). Such communities can also play an important role in the development of graduate attributes (Stracke & Kumar 2014). Formal programmes of regular events that bring students to a shared space facilitate the engagement and interaction that doctoral students need to be successful (Bitzer 2011, p. 434). While such community-building activity may be offered at an institutional level, it should also take place at the departmental, school or faculty level, depending on the context. The provision of such activity may need to be faculty-led and may require the appointment of additional staff who are dedicated to the support of postgraduate students.

Writing the thesis is widely acknowledged to be challenging (Kamler & Thomson 2006). For this reason, it is worth considering this aspect in more depth. It may be helpful to distinguish between the *development* and the *support* of writing, with writing centres better placed to address the latter. While the DDNR recommends that writing centres be used to address the problems students have with writing (CHE 2022, p. 31), it also hints at the limitations of writing centre provision, pointing out that it cannot replace supervisory input that allows students 'to develop and practice their skills in writing and presenting arguments throughout their doctoral studies' (CHE 2022, p. 47). Suggesting that writing is best addressed outside of the doctoral learning process is problematic, as it reveals a fundamental misunderstanding about the role of writing in doctoral research. Firstly, a focus on writing should not be seen as remedial: all doctoral candidates find writing challenging and benefit from guidance aimed at helping them communicate more effectively. Secondly, much of the writing that students produce is writing for learning and thinking as they grapple with difficult concepts and 'write [their] way to understanding' (Kamler & Thomson 2006, p. 4), so correctness and adhering to the formal conventions of academic writing should not be the focus until candidates are working on later drafts. Lastly, it is also in the writing that the candidate writes a new scholarly self into being (Kamler & Thomson 2006). For these reasons, writing development activities need to be carefully integrated into the doctoral learning process. Ideally, such activities should be led by specialists who understand the complexity of the disciplinary writing demands made at the doctoral level, and writing development and support should be integrated into structured programmes rather than being offered *ad hoc* in decontextualised spaces. Appropriate differentiated support should be offered at different stages, up to and including the final stage, when many HEIs require submission of a journal article before students can graduate (CHE 2022, p. 52).

Regarding the skills of public communication within the specialist area, these skills become more important for candidates towards the end of the doctoral learning process. Few HEIs use the *viva voce* or formal oral presentation as part of assessment (CHE 2022, p. 30), and very few use such presentations as a learning opportunity. Given rising concerns about academic integrity and the additional threat that the explosion of artificial intelligence (AI) applications presents, it is likely that more institutions will turn to the *viva voce* as a measure to ensure students present their own work. Whether the *viva voce* gains ground or not, creating opportunities for candidates to share their work orally in order to engage with others about their research before final examination would be a developmental strategy worth implementing. Oral presentations with a developmental orientation could provide valuable opportunities for peer learning if candidates in the cohort are encouraged to provide feedback to each other.

While more structured and collaborative models in doctoral education do have the potential to contribute to doctoral success, McKenna and Van Schalkwyk (2023, p. 12) caution against a uniform approach to implementing such innovative models: planning needs to take account of the specific context. They also highlight the importance of a 'culture of collegiality and supportive criticality' (McKenna & Van Schalkwyk 2023, p. 12) to support such change. There is no doubt that the implementation of these models needs to be planned carefully. Given the predominance in South African commerce education of one-to-one supervision, with doctoral education typically taking place in the private space of the supervisory relationship, there is bound to be resistance to change from academics, especially senior staff. Although some supervisors may welcome certain supervision responsibilities, such as onboarding and information-sharing, being taken over by programme coordinators, they may not respond favourably to the expectation that they be involved in courses or doctoral cohort seminar sessions. Implementing any form of educational provision and academic support over and above supervision and the tracking, monitoring and evaluation of impact would require both a high degree of coordination and cooperation within faculties and schools. The success of such innovations would require not only collaboration and value alignment across different sectors in the institution but also strong vision and leadership.

Conclusion

Bearing in mind that the doctorate is the apex qualification, achieved by very few, and the growing weight of expectation on what doctoral graduates, particularly in the business and commerce fields, can achieve and contribute to broader society, surely it is worth making changes to improve and enrich doctoral education? Although meaningful change would require both a shift in mindset by HEIs, academic staff and supervisors and substantial investment, both in terms of time and resources, there is potential to increase subsidy income through improved throughput and additional research publications, which could offset some of the costs. Through a focus on doctoral graduate attributes, this chapter has proposed strategies that would contribute to the making of doctoral graduates who have the qualities 'for standing up to the world and engaging with it and in it purposefully' (Barnett 2004, p. 260).

The chapter has suggested ways that the doctoral curriculum could be revised to introduce more structure in the learning process, which is in line with developments in other parts of the globe. If institutions offer more structured learning opportunities that are focused on developing doctoral attributes, they are more likely to be able to provide assurance that doctoral graduates have developed these attributes. It has been argued that rather than seeing the development of doctoral attributes as a compliance exercise, this imperative should be viewed as an opportunity to embrace a pedagogy of 'human being and becoming' (Barnett 2004) that promotes greater collaboration, openness and sharing, among candidates and the academic staff who work with them.

Rethinking the curriculum and classroom

Chapter 10

The future of commerce education: Utilising generative artificial intelligence for effective teaching and learning

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Introduction

A group of individuals, including Elon Musk, Sam Altman, Greg Brockman, Ilya Sutskever, John Schulman and Wojciech Zaremba, launched the artificial intelligence (AI) research organisation OpenAI in December 2015 (Brockman, Sutskever & OpenAI 2015). OpenAI aims to ensure that artificial general intelligence (AGI) advances humankind. Artificial general intelligence describes highly autonomous systems that can carry out the same intellectually challenging task that any person can (Lutkevich 2023).

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At the end of 2022, OpenAI revolutionised how society experiences AI with the release of ChatGPT. The GPT series, which consists of large-scale language models that can comprehend and produce human-like prose in response to a given prompt, is among OpenAI's most well-known AI models. These models have been applied to numerous tasks, including text production, analysis and natural language processing in various fields and industries. The GPT series is a technology in a new paradigm called generative AI, which uses trained data to create new and unique content, including text, music, images and even videos (Aydın & Karaarslan 2023).

Commerce as a field can benefit from technologies such as ChatGPT, which (Dwivedi et al. 2023):

> [*P*]roduce complex writing indistinguishable from the human-written text. Technology offers advantages and frequently causes moral and legal difficulties, and it can have good and bad effects on organisations, society, and individuals. (p. 26)

As AI becomes increasingly relevant to the workforce (Gozalo-Brizuela & Garrido-Merchan 2023), commerce students must understand generative AI's role in business and the economy. Integrating generative AI in commerce education can give students the necessary skills and competencies to succeed in the fast-changing job market.

The fact that commerce students already use AI tools in their studies is not disregarded. For example, students frequently use technology to coordinate projects, apply scientific methods in context and conduct literature searches in open-access sources (Resch & Yankova 2019).

This chapter presents an overview of the role of generative AI and education. Then, the focus is turned to the student's environment as part of their educational journey and the potential use of generative AI in programmes, which will prepare commerce students for the world of work.

Overview of generative AI and education

The algorithms and models that make up AI education (AIEd) are the foundation of a fundamentally human endeavour, although some people may find the concept of AIEd unsettling (Luckin, Holmes & Griffiths 2016). Artificial intelligence education provides a more individualised, adaptable, inclusive and interesting learning opportunity (Tapalova & Zhiyenbayeva 2022). It can give educators and students the resources to respond to what is being learned, how it is being learned and students' feelings. It can assist students in acquiring the knowledge and abilities employers value while also assisting educators in building more complex learning environments than would otherwise have been possible. Artificial intelligence education, for instance, can facilitate collaborative learning – a challenging task for one lecturer to complete alone – by ensuring that the appropriate group is established for the task at hand or by giving targeted support at precisely the right time (Luckin et al. 2016).

Generative AI can support different aspects of commerce education (Table 10.1), including better pedagogical and technology-driven practices.

The global digital transformation of all spheres of socio-economic life has given rise to a trend in the educational system called *personalised* or *customised learning*. Artificial intelligence technologies have made it possible to improve the effectiveness and standard of instruction according to the wants and needs of pupils. Social networking sites and chatbots can be used in the classroom to make education more efficient and available around the clock, as well as improve student engagement while saving time (Tapalova & Zhiyenbayeva 2022). Customised learning includes *adaptive assessment*. Any assessment customised for an examinee based on how they performed in prior assessment items is called adaptive assessment. Item response theory (IRT) and innovations form the foundation of most adaptive assessments. In IRT, item features like item difficulty and examinee ability estimates are scaled along the same continuum (Papanastasiou 2014).

The mission of AIEd is to give students a *personalised learning* experience within an AI environment that supports knowledge acquisition and offers individualised feedback because every student has different learning needs (Tapalova & Zhiyenbayeva 2022). The growth of AI in education is viewed as having the potential to sour the interaction between students and lecturers. As a result, it is understandable that lecturers have viewed AIEd with apprehension and a sense of inevitable change. Lecturers should not,

TABLE 10.1: Aspects supported by generative AI.

Better pedagogical practices	Technology-driven practices
Customised learning	Simulation and scenario-based learning
Adaptive assessment	Learning analytics
Personalised feedback	Intelligent tutoring systems
Increased student involvement	-
Collaborative learning	-

Source: Author's own work.
Key: AI, artificial intelligence.

however, view AIEd as 'the adversary'. The fear that AIEd will disrupt student–lecturer interactions can be alleviated by understanding where AIEd should take the lead and where the human instructor should lead in developing that relationship. Working jointly with AIEd could increase attempts to reconnect students and lecturers and stimulate *increased student involvement*.

Generative AI can significantly improve *collaborative learning* by enhancing student collaboration, coordination and idea development (Walker, Rummel & Koedinger 2014). Real-time ideas facilitate successful communication, identify students' strengths and shortcomings through supportive AI, encourage active involvement and organise and summarise group work, enabling generative AI to assist in collaborative learning.

One of the fields in which generative AI has a great deal of potential is *simulation and scenario-based learning*. Lecturers in teaching and learning environments successfully use simulation and scenario-based learning in high-risk environments such as aviation and health care. Generative AI can create realistic business simulations or scenarios with which commerce students can engage, allowing them to apply their knowledge practically and develop problem-solving skills.

Linked to the use of simulations or scenario-based learning is *intelligent tutoring systems* (ITSs), which offer personalised, one-on-one instruction to commerce students, guiding them through complex concepts and providing real-time support when needed. An ITS has two objectives. The first is to 'develop models of cognitive processes involved in instruction' (Sedlmeier 2001). The second is to 'provide sophisticated instructional advice on a one-on-one basis that is superior to that achieved with traditional computer-aided instruction and comparable to that of a good human tutor' (Sedlmeier 2001). The use of AI techniques in four interconnected components gives the ITS its 'intelligence'. The student model represents the student's current knowledge state. The pedagogical module contains suitable instructional measures that are dependent on the student model's content, the user interface facilitates an efficient dialogue between the ITS and the student, and the knowledge base houses the domain knowledge (Sedlmeier 2001).

It is impossible to think about the potential of generative AI without referring to the potential of *learning analytics* (LA). The desire to measure our accomplishments and failings is human nature and is most definitely bureaucratic (Shum & Luckin 2019). All institutions, including educational institutions, have long struggled with the tension that comes with the powerful abstractions provided by quantitative analysis and the loss of essential information as context is removed. This is why creating measures to evaluate the value of complex human activities and results (like teaching and learning) is debatable. Mavrikis et al. (2019) discuss how LA can be used to improve lecturers' knowledge of their students' progress in exploratory learning tasks by tackling the issues of pedagogy and lecturer automation.

Generative AI supports educators

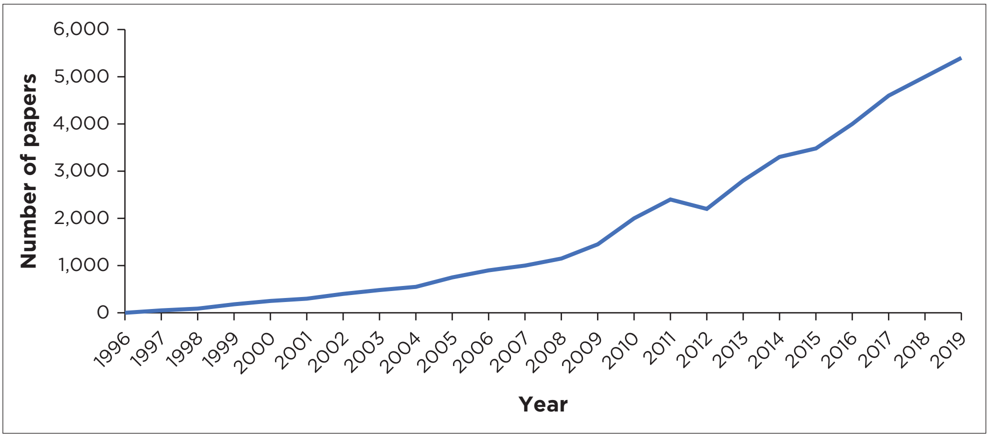
The application of generative AI may alter how we conduct business and, importantly, for the discussion in this chapter, how we are involved in educational practices. Generative AI can support educators in various ways, enhancing their teaching effectiveness and helping them manage their classrooms more efficiently. A chatbot is one of the most common application areas (Aydın & Karaarslan 2023). A chatbot is a software program that converses with users and interprets their natural language input (Huang, Hew & Fryer 2022). Joseph Weizenbaum created ELIZA, the first chatbot, over 50 years ago in 1966.

ChatGPT, a highly popular chatbot, has the potential to revolutionise our interaction with the extensive knowledge repositories contained within large language models. This chapter aims to investigate the use of generative AI, including chatbots, and its potential in commerce education. From this perspective, I have used ChatGPT in examples to illustrate the potential of the technology.

Personalised learning

Personalised learning is a topic that started to receive more attention as technology enhanced and enabled students to experience a richer learning experience. In Figure 10.1, Shemshack and Spector (2020) illustrate the growth of the number of papers on personalised learning from 1996.

The educator can use technology such as generative AI (specifically chatbots) in the classroom to support personalised learning. If the educator has a diverse group of students with different needs, a chatbot can assist by generating content to be used in the classroom according to the needs of the students. For example, ChatGPT can assist in developing summaries, explanations or examples that cater for a student's specific needs and level of understanding. The educator can request students to interact with chatbots in class to ask questions, seek clarifications or request additional information on a topic they are struggling with. Each



Source: Adapted from Shemshack and Spector (2020).
FIGURE 10.1: The number of published papers on personalised learning.

student will then be able to interact with technology and ask questions tailored to their specific needs. Chatbots have the advantage of providing information immediately on demand – this can assist students during homework assignments when used as a supporting tool (obviously, no learning will take place if the chatbot completes the work for the student). Furthermore, the educator can use generative AI to provide personalised feedback by identifying areas for improvement and offering suggestions for further learning.

Real-time feedback

The mission of AIEd is to give students a personalised learning experience within an artificial learning environment that supports knowledge acquisition and offers individualised feedback because every student has different learning needs (Tapalova & Zhiyenbayeva 2022). Diverse learning needs are based on the student's prior knowledge of the subject, social background, financial situation and emotional condition. It is most successful when instruction is customised for these shifting settings (Chaudhry & Kazim 2022).

Generative AI can provide instant feedback on student assignments, quizzes and projects, allowing educators to track progress more effectively and promptly address any learning gaps or misunderstandings. A case study analysis is unquestionably a viable task for which a commerce student could use a bot such as ChatGPT to obtain feedback quickly.

Consider a scenario in which a student must assess a case study on a company that encountered a specific challenge and make suggestions on how the business might handle the issue. ChatGPT may give the student immediate feedback on the coherence and applicability of their ideas, highlighting any areas that need development. The student can submit their analyses and recommendations to ChatGPT, which can examine the student's writing and assess the relevance of their recommendations to the case study, their arguments' coherence, and their views' clarity. It can also point out particular areas for development, such as the need for additional justification or more explicit language to express their ideas. Additionally, the student can edit their work and improve its effectiveness using the feedback offered by ChatGPT. Educators may better target and personalise student feedback using AI-powered tools like ChatGPT to aid their quicker skill and knowledge improvement.

Lesson planning and content generation

The primary focus of modern information technology (IT) in education is on the instructor rather than the student. Modern IT is not taught to students – its products are used as a technical teaching tool. The lecturer's objective is to integrate the highest level of computerisation of IT into the educational process to improve academic content. The lecturer uses contemporary technologies to prepare for the lesson, plan the class and monitor the pupils' knowledge (Olimov & Mamurova 2022).

By recommending appropriate resources, exercises and content, AI models can assist lecturers in creating interesting lesson plans. Furthermore, generative AI can develop fresh cases, activities or examples that fit the syllabus and the learning objectives. For example, a module in the University of Pretoria's (2023) EKN110 module has the following description:

> EKN110: This module deals with the core principles of economics. A distinction between macroeconomics and microeconomics is made. A discussion of the market system and circular flow of goods, services and money is followed by a section dealing with microeconomic principles, including demand and supply analysis, consumer behaviour and utility maximisation, production and the costs thereof, and the different market models and firm behaviour. Labour market institutions and issues, wage determination, as well as income inequality and poverty are also addressed. A section of money, banking, interest rates and monetary policy concludes the course. (n.p.)

When a case from ChatGPT (2023b) was requested that explained the difference between macroeconomics and microeconomics, it generated the following:

> Case study: Macro vs. micro in the smartphone industry
>
> Let's consider the smartphone industry, which is a massive global market. In order to understand how the industry operates, we need to examine both macroeconomic and microeconomic factors.
>
> On a macroeconomic level, we can look at the overall performance of the smartphone industry, such as its size, growth rate and contribution to the global economy. We might consider questions such as: What is the total revenue of the smartphone industry? How much does it contribute to global GDP? What factors are driving its growth or decline?
>
> On a microeconomic level, we can examine the individual firms that operate within the smartphone industry, such as Apple, Samsung and Huawei. We might consider questions such as: How do these firms compete with each other? What strategies do they use to differentiate themselves and gain market share? How do they price their products and allocate resources?
>
> To illustrate the difference between macroeconomics and microeconomics, let's consider a hypothetical scenario: Suppose the global economy experiences a recession, leading to a decrease in consumer spending on luxury goods like smartphones. This would be a macroeconomic factor that affects the entire smartphone industry, as demand for smartphones declines.
>
> However, the individual firms within the smartphone industry would respond differently to this macroeconomic factor, depending on their own microeconomic factors. For example, Apple might respond by increasing its marketing efforts and launching new product lines to maintain its market share. Samsung might respond by cutting costs and offering discounts to attract price-sensitive consumers. Huawei might respond by expanding into new markets to diversify its revenue streams.
>
> By analysing the macroeconomic and microeconomic factors that shape the smartphone industry, we can better understand how the industry operates and how individual firms respond to changing market conditions. This is a fundamental difference between macroeconomics and microeconomics.

A knowledgeable lecturer in the field of Economics will now be able to evaluate the case study and make an informed decision on the value of the case study to use as part of the course content. But this content was generated by ChatGPT 4.0 in less than a second. I went further and asked ChatGPT 4.0 to give me a question that could be used related to the concepts of the case study. The software provided me with the following (ChatGPT 2023a):

> Question: How does the difference between macroeconomics and microeconomics manifest in the smartphone industry? Provide an example of macroeconomic and microeconomic factors that affect the industry, and explain how they might impact the sector differently. (n.p.)

What was interesting is that ChatGPT also provided me with an answer to the question, although I only requested a question and not the answer. I excluded the question in the text here because of space constraints. The following are three key benefits of using ChatGPT for lesson plans and course content:

1. **It saves time:** ChatGPT can swiftly develop concepts, offer definitions and respond to inquiries about various topics. The quick response can help lecturers save time when drafting lesson plans or course material. Instructors can use ChatGPT to develop pertinent knowledge and ideas in a few minutes rather than spending hours researching and writing.
2. **It is personalised:** ChatGPT can be trained on specific subjects and can be tailored to the requirements of different instructors and classes. The training of ChatGPT entails lecturers creating content customised to their pupils' particular needs, enhancing engagement and learning results.
3. **It is convenient:** ChatGPT can be reached with an internet connection from any location. As a result, educators can create content using ChatGPT while they are on the move or at home. To create their thoughts or responses to questions, students can also use ChatGPT, promoting a more independent and self-directed learning environment.

Classroom management

In university settings, where individualised attention may be restricted, AI solutions can be beneficial to track and enhance student engagement in large classrooms. One illustration is the deployment of a lecture capture system driven by AI, which not only records the lecture content but also evaluates the involvement of the virtual or actual audience through facial expressions, body language and interaction with digital objects. When a student's involvement wanes, the system can give the instructor real-time feedback. In response, the instructor can modify their approach to teaching, ask insightful questions or give audience-relevant examples. The instructor can tweak their lectures and presentation style to improve student engagement and learning outcomes by using the data obtained by AI technology to spot trends and patterns.

University professors may deliver more dynamic and engaging lectures by utilising AI technology, guaranteeing that students benefit fully from their education, even in big, impersonal classrooms.

Assessment and grading

ChatGPT can be used as an efficient AI-driven evaluation tool to help with assessment and grading in numerous ways. One illustration is its capacity to assess the writing quality and content of written projects like essays or reports. Here is how it might be put into practice: Students may be required to present a report that analyses a company's financial performance, makes suggestions for improvements and offers suggestions for plans in a commerce course that focuses on financial management. The lecturer can establish clear standards and procedures for judging the report, such as the thoroughness of the research, the correctness of the financial calculations and the viability of the suggested solutions.

ChatGPT can learn the standards and principles, which will then be taught to assess each student's input. The AI-powered assessment tool may examine the text for clarity of reasoning, logical coherence and the suitable application of financial terminology. It can also assess the overall quality of the text, including grammar, punctuation and organisation.

Conclusion

Integrating generative AI into curricula for commerce students provides students with a crucial preparation and development path to deliver an AI-driven workforce. Notably, models like ChatGPT from the GPT series give companies strong capabilities to improve consumer communication and develop original content, opening up interesting opportunities for innovation. However, this integration also presents ethical and legal dilemmas for students that they should master to enable them to navigate the shifting environment successfully.

Students can acquire the knowledge and abilities necessary to realise the full potential of generative AI in business when this is integrated into commerce education. They will understand AI's creativity and personalisation capabilities, enabling them to investigate novel approaches to interact with customers and enhance, for instance, online purchasing experiences. Students will simultaneously learn about the legal frameworks governing AI usage in commerce and be prepared to face important ethical issues, including algorithmic biases and privacy concerns.

In essence, including generative AI in commerce curricula equips students with the skills they need to prosper in a society dominated by AI and strike a balance between promoting innovation and respecting moral and legal principles. They will be able to make wise business decisions based on this enriched education, which will ultimately benefit both businesses and society.

Chapter 11

How blended learning can be used to stop the convenient excuse of not innovating because of large classes and resource constraints

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Introduction

In tertiary education, large classes are commonplace, and the number of academic staff is limited. This resource constraint is not unfamiliar to academics. However, the large classes and limited teaching resources become a convenient excuse not to introduce innovations which could enrich the teaching and learning environment (Chow, Lam & King 2020; Masland 2021; Schwartzman 2020).

Small classes provide an environment in which innovations can be effectively implemented. As an example, activities within Laurillard's Conversational Framework (LCF) could be used to improve students' literacy skills in relation to a certain topic or module, enriching the teaching

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and learning environment. However, academics will often state that because of the large class size, this is not possible. This chapter introduces an innovation grounded in resilient pedagogy, LCF and blended learning, which creates small classes that enrich the teaching and learning environment. Such innovation can allow academics to focus on a variety of areas, such as where students have difficulty with interpreting module content or require soft skill development.

This innovation was introduced in a class of 1,000 students with thirteen academic staff. The module is Auditing II at Wits University. What has been observed is an improvement in the cognitive, behavioural, social and affected engagement of students.

This chapter is structured to first introduce resilient pedagogy and how it relates to improved student engagement. The activities found in LCF are then described. Resilient pedagogy and LCF formulate a well-grounded innovation. The chapter then discusses the resource constraints which create difficulty in introducing the innovation into large classes. Blended learning is introduced as a method that can be used to address resource constraints. The chapter concludes with how the innovation can be adapted to a variety of different circumstances in the delivery of commerce programmes and modules.

Resilient pedagogy and student engagement

According to Masland (2021), '[r]esilient pedagogy is a [module] design strategy that helps make classes, assignments, and assessments as resistant to disruption as possible'.

This pedagogy shifts the focus from courses being designed to deliver content to courses being needs-centred. If such needs of learners are met, then the teaching and learning environment is enriched (Schwartzman 2020). To be needs-centred, student engagement needs to be the focus of module design (Masland 2021). The four pillars of effective student engagement are behavioural, cognitive, social and affected engagement (Bowden, Tickle & Naumann 2021). The sections that follow discuss what is meant by each form of engagement.[17]

Behavioural engagement

The behavioural dimension of engagement is defined as the observable academic performance and participatory actions and activities

17. These sections are based on Lay-Hwa Bowden, Tickle and Naumann (2021).

(Bowden et al. 2021; Dessart, Veloutsou & Morgan-Thomas 2015). Behavioural engagement can be measured by way of academic performance, including how students conduct themselves in classes and while engaging with content; attendance at all teaching and learning activities; participation in class discussions; time spent on work; and perseverance when faced with challenging tasks (Bowden et al. 2021; Kahu et al. 2015). Behaviourally-engaged students proactively participate in university life and extracurricular citizenship activities (Bowden et al. 2021; Khademi, Piryaei & Kamelifar 2018). The behavioural dimension is the most frequently measured dimension of the student experience (Bowden et al. 2021; Zepke 2015).

Cognitive engagement

The cognitive dimension of engagement reflects the set of enduring and active mental states experienced with respect to focal objects of engagement (Vivek et al. 2014). This can include the level of positive attention and interest that students have towards communication from teaching staff and the content pertaining to the course. In addition, it includes the time spent planning and organising pursuits in academia (Bowden et al. 2021; Zepke, Leach & Butler 2010). Students who are cognitively engaged demonstrate an increased understanding of the value and importance of academic work through their perceptions, beliefs, thought processing and strategies employed during academic tasks (Bowden et al. 2021; Kahu et al. 2015; Khademi et al. 2018). Cognitively engaged students are more likely to demonstrate higher-order thinking given their ability to be cognisant of the content, meaning and application of academic tasks as well as commit to lifelong learning (Bowden et al. 2021).

Social engagement

The social dimension of engagement considers the bonds and belongingness formed between students and their peers, academic staff, administrative staff and other pertinent figures in their tertiary experience (Pekrun & Linnenbrink-Garcia 2012). It generates feelings of inclusivity, belonging, purpose, socialisation and connection to the tertiary education provider (Bowden et al. 2021; Eldegwy, Elsharnouby & Kortam 2018; Vivek et al. 2014). In the learning environment, social engagement is characterised by listening to others, attending class on time and maintaining a balanced teacher–student power structure (Pekrun & Linnenbrink-Garcia 2012). Social engagement strengthens the sense of achievement students gain from their university experience (Bowden et al. 2021; Finn & Zimmer 2012). Students who lack social engagement are more likely to experience loneliness and isolation, leading to reduced well-being (Bowden et al. 2021; Macintyre et al. 2018).

Affected engagement

The affective dimension of engagement relates to the enduring levels of emotions experienced by students and captures the degree of passion students feel towards the tertiary experience (Bowden et al. 2021). Affective engagement manifests through heightened levels of positive emotions during on-campus and off-campus activities, which may be demonstrated through happiness, pride, delight, enthusiasm, openness, joy, elation and curiosity (Bowden et al. 2021). Emotionally engaged students can identify the purpose and meaning behind their academic tasks and social interactions (Bowden et al. 2021). These positive emotions were also found to correlate with behavioural engagement (D'Errico et al. 2018). Students' emotions are closely linked with their learning, achievement and health (Pekrun & Linnenbrink-Garcia 2012). Feelings of optimism, pride, joy and enthusiasm can create a sustainable and lifelong interest in the university experience (Bowden et al. 2021).

Laurillard's Conversational Framework

In Section 11.2 of this chapter, the concept of resilient pedagogy and improved student engagement was introduced to enrich the teaching and learning environment, making it more student-needs-centred. This section of the chapter introduces LCF, which identifies six activities that need to be present in a module design to ensure the teaching and learning environment is needs-centred and enriched (Laurillard 2013; Schwartzman 2020). Therefore, this is the framework used to bring the pedagogy into practice in the teaching and learning environment. LCF's six activities are summarised in Table 11.1.

Laurillard's Conversational Framework places the learner at the centre of the learning experience and makes use of the six activities above to drive the students' understanding between module concepts or content and their application in assessments or practice. Students can learn, in an environment such as this, from both teachers and other students. Acquisition traditionally takes the form of formal lectures, which are present in any academic module (Laurillard 2013; Schwartzman 2020). The remaining five activities are usually not made use of or are used to a limited extent.

Discussion is often found in smaller learning sessions, such as tutorials, where the tutor will stimulate discussion with students whereby questions are asked directly to students and a conversation takes place. Such questions and discussions are informal, and not all students are prompted

TABLE 11.1: Activities in Laurillard's Conversational Framework.

Activity	Description
Acquisition	Learning through this activity is what learners do when they are listening to a lecture or podcast, reading from books or websites and watching demos or videos
Discussion	Learning through this activity requires learners to articulate their ideas and questions, as well as to challenge and respond to ideas and questions from the teacher and peers
Practise	Learning through practise enables the learner to adapt their actions to the task goal by using feedback to improve. This may come from self-reflection, peers, their teacher or from the activity itself.
Production	Learning through production is the way the teacher motivates the learners to consolidate what they have learned by articulating their current conceptual understanding and how they used it in practise
Collaboration	Learning through collaboration embraces mainly discussion, practise and production. Building on investigations and acquisition, it is about taking part in the process of knowledge building itself
Investigation	Learning through investigation guides the learner to explore, compare and critique the texts, documents and resources that reflect the concepts and ideas being taught

Source: Adapted from https://teaching.london.edu/exchange/applying-design-frameworks-digital-learning/.

or required to discuss (Van Wyk et al. 2020). This does occur in teaching and learning environments; it is just not a formalised practice.

Practice occurs when students receive feedback from the lecturer or tutor on the way they may have worded an answer. From this feedback, the student reflects and develops a more informed approach to wording answers in future. This is not something that explicitly occurs in teaching and learning environments (Laurillard 2013; Van Wyk et al. 2020).

Production and collaboration are not commonly found in teaching and learning environments. Production could take the form of the lecturer prompting students to put together a portfolio of learning to consolidate their understanding of the content (Laurillard 2013; Van Wyk et al. 2020). This may be a product of the discussions and practices that occurred in the teaching and learning environment. Often, students' self-reflection on their engagement with the module content forms part of production (Laurillard 2013; Van Wyk et al. 2020). As collaboration is a function of production, discussion and practise, the lack of these three in teaching and learning environments means collaboration is not commonly found (Laurillard 2013).

Collaboration is the cornerstone to improved student learning. Laal and Ghodsi (2012) and Bowden et al. (2021) find that in any learning environment, cognitive, social, affected and behavioural engagement is improved because of collaboration among learners. In addition, collaboration breaks down socio-economic boundaries between students, decolonising the teaching and learning environment (Uleanya, Rugbeer & Olaniran 2019). The absence of collaboration in a module will lead to it being considered as lacking academic rigour and will often present unfavourably in the opinion of students and teachers alike (Bowden et al. 2021; Lespiau & Tricot 2022).

Without the presence of the first five activities, students will never be able to investigate as their engagement with the module is not effective, and the teaching and learning environment is not enriched (Laurillard 2013). This is why issues such as students' surface learning content instead of deep learning arise (Wilmot & Merino 2015). The lack of activities present in a module does not stimulate effective engagement; therefore, the students rote-learn in an attempt to pass the course and hopefully move on. A further issue is that critical thinking and lifelong learning around module content are developed by activities of collaboration and investigation (Laal, Laal & Aliramaei 2014). The absence of such activities leads to a module that does not enable these critical skills to be developed (McPeck 2016).

Generally, students in a South African context come from a dysfunctional basic education system that is more focused on surface learning than deep learning (Mdepa & Tshiwula 2012; Pretorius & Spaull 2016; Wilson-Strydom 2015). This means that students often lack the necessary literacy and numeracy skills required of them at a tertiary level (Toska et al. 2019). At the tertiary level, teaching and learning environments do not assist students with reversing the poor habits inherited (Toska et al. 2019). It must be noted, though, that students are responsible for their studies and for ensuring they maximise the benefit received from their tertiary experience (Romi & Roach 2012).

However, if the teaching and learning environment is not enriched by LCF's activities, it limits many students from deep learning content, which limits their lifelong learning as well (Wilmot & Merino 2015). In addition, the majority of students' critical thinking skills are not being developed (Everaert, Opdecam & Maussen 2017). The compounding effect is that graduates lack a variety of technical and soft skills when entering the professional space. In addition, they appear unwilling to obtain skills they do not possess, as they have never been encouraged to develop lifelong learning skills (Villarroel et al. 2018). This is because the teaching and learning environments from which they have come do not promote the development of these skills (Everaert et al. 2017). Therefore, the onus is on academics to promote such skills through the use of activities (Bowden et al. 2021; Laurillard 2013). Innovations in teaching can introduce such activities into a module design (Van den Berg & Verster 2022).

Resource constraints

The innovations introduced can only be effective if taught in small classes (Ramchander & Naude 2018; Saha & Dworkin 2009). This is because student engagement can only be improved in smaller class sizes where the activities can be executed effectively. A discussion with a class of 1,000 students with one or two teachers will yield very little value. However, if such a class can be split into small classes of 20 students, for example, then the innovation introduced can be effective.

The issue that arises is that in commerce education in South Africa, large classes of students in excess of 200 individuals are commonplace (Singh 2015). To compound this issue, venues to teach students as one class are limited. There currently is a venue capacity crisis at tertiary institutions. The venues do not have the capacity to accommodate large classes, so classes often have to be broken down into smaller classes to accommodate the weekly timetable. These smaller groups, unfortunately, still tend to exceed the ideal norm of 20 students per group.

Further to this, Singh (2015) also indicates that the ratio of academic staff to students is of concern. There are not enough teaching resources to meet the needs of students. This makes the effective implementation of innovations difficult (Ramchander & Naude 2018; Saha & Dworkin 2009; Turner et al. 2017). The weekly timetable is also rigid and used to full capacity to accommodate the venue crisis (Singh 2015). As a result, there are simply not enough resources to place students into small classes where activities from LCF can be used to enrich the teaching and learning environment (Laurillard 2013; Schwartzman 2020).

Unfortunately, the latter has become the convenient excuse as to why academics do not innovate in their taught modules. It is easier to state that the innovation simply will not work as the class is too large.

Blended learning

Blended learning is defined as a combination of mixed modes of web-based technology to accomplish an educational goal (Boelens et al. 2015). It encompasses various pedagogical approaches to produce an optimal learning outcome with or without instructional technology (Hrastinski 2019). It also makes use of any form of instructional technology with face-to-face instructor-led training and a mix or combination of instructional technology with actual job tasks to create a harmonious effect of learning and working (Armellini et al. 2021).

There are three important ways of describing any form of instruction: media, method and modality (Graham 2013; Picciano et al. 2021). Media describes the physical tools or technology used to deliver and instruct content. The modality describes the physical environment in which the teaching and learning take place. Finally, the method refers to the teaching strategies and practices used in instruction (Graham 2013; Picciano et al. 2021). Blended learning is observed as having two interwoven layers: the physical layer and the pedagogical layer. The physical layer represents the surface of the design and may be described using modality and media, i.e. switching between in-person activities and online activities (Picciano et al. 2021).

The COVID-19 pandemic accelerated the use of blended learning, and the lessons learned should not be disregarded. There are a variety of advantages to blended learning, and one key element is present (Picciano et al. 2021). This key element is that the time allocated to online learning and face-to-face learning should not exceed the notional hours for the module. It is therefore unreasonable to give students a four-hour video to engage with, as well as being required to attend face-to-face lectures during normal lecture time. The use of an online resource must substitute the time that would have been spent face-to-face. If this is not done, students will experience information overload, reducing their cognitive engagement (De Jong 2010).

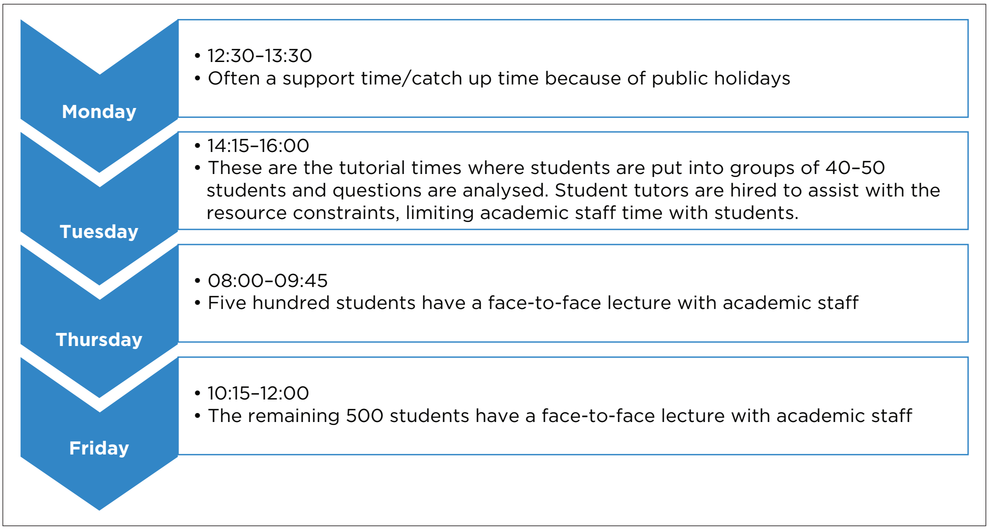
There are many advantages to blended learning. The one advantage relevant to this chapter is that blended learning can be used to make the timing of learning schedules more flexible. Armellini et al. (2021) suggest that the establishment of a flexible timetable can be used to mitigate such issues as resource constraints with large classes.

Resolving the constraint through blended learning

Using blended learning, the timetable for a traditional academic week can be manoeuvred to enable the capacity to introduce an innovation grounded in resilient pedagogy and LCF, all of which can be carried out in small classes. This will lead to better cognitive, behavioural, social and affected engagement. Figure 11.1 summarises what a traditional academic timetable consists of for a class of 1,000 students.

As can be observed from Figure 11.1, with a class of 1,000 students, there is difficulty in finding the necessary capacity to bring the innovations grounded in resilient pedagogy and LCF into effect. By using blended learning, the academic timetable can be manoeuvred to create capacity, and such capacity can allow for small classes to be created. Figure 11.2 indicates how this can be achieved.

The author teaches Auditing II, and Figure 11.2 was used to implement an innovation referred to as a high-performance lecture (HPL). This was introduced because, in prior academic years, students had to watch ethical framework videos developed by the School of Philosophy at the University of the Witwatersrand (Wits). Students did not engage with the online videos or the tutorials based on these questions. The various



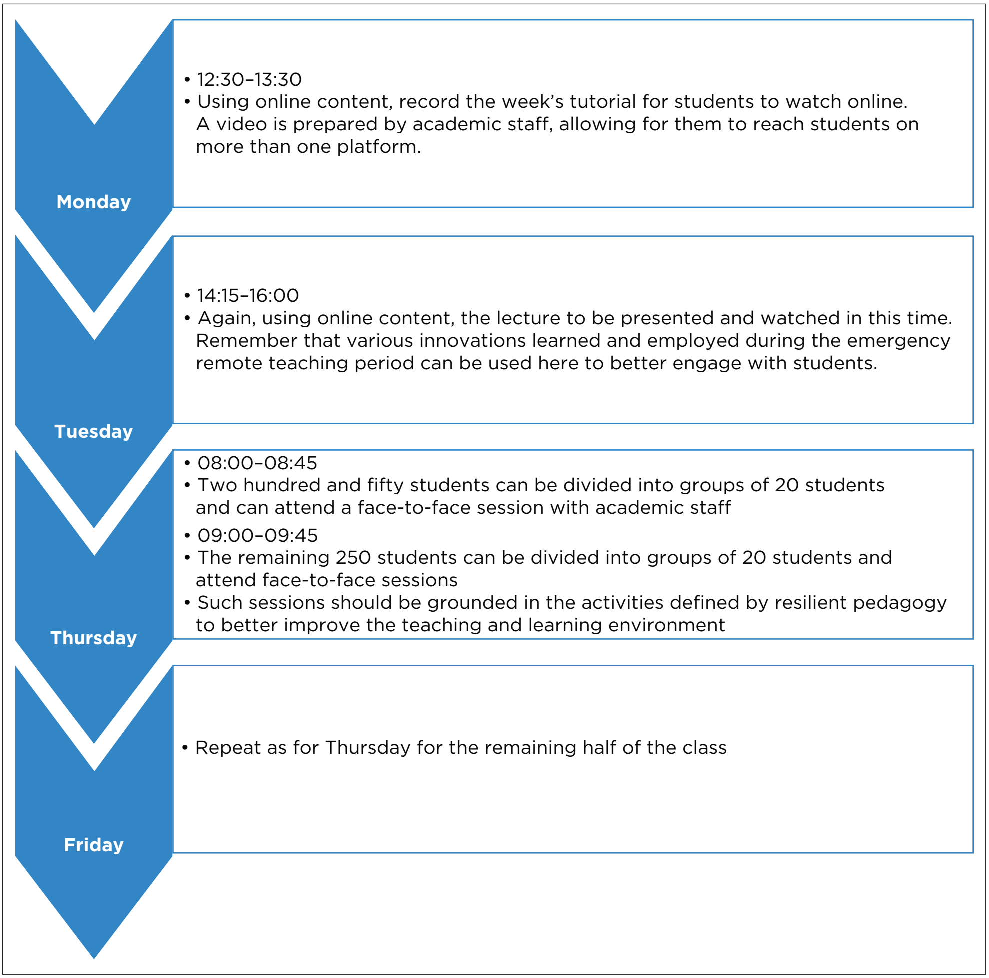
Source: Author's own Work.
FIGURE 11.1: Traditional academic week.[18]

ethical frameworks were tested in all Auditing II assessments, including the group project. The average mark across all assessments was below 40%. This highlighted an area that needed to be focused on and developed further. To respond to the issues at hand, such problems had to be identified. What was observed by academic staff was that the philosophical discussions students would use in assessments were subjective and anchor-biased towards their own personal opinions. Therefore, the relevant philosophy was not applied to the facts and circumstances of the scenario in the relevant assessment.

In the current academic year, students' tutorial for the week was online and moved to Monday times, as noted in block two in Figure 11.2. On a Tuesday, students used the usual tutorial time to listen to the online videos produced by the School of Philosophy. The students needed to engage with the content, understand it and then read through the scenario for their respective HPL. In doing so, they needed to read it in the context of all ethical frameworks. This is because the exact framework that needed to be applied was only revealed in the students' respective HPL session.

The first learning outcome was to take an objective stance in arguing ethical dilemmas. This meant weighing up the facts and applying the required ethical framework to the facts and circumstances (Flanigan 2018).

18. Please note that this is specific to the author's academic week. In the author's case, there are no lectures on Wednesdays. This can be adapted to the readers' timetable at their respective academic institution.



Source: Author's own work.

FIGURE 11.2: Manoeuvred timetable.

This develops an argument and avoids the most common errors made by students. They immerse themselves in the situation and give a subjective opinion on their part, which is often anchor-biased. This means they only argue towards one side of the argument and so do not develop an informed, objective discussion (Flanigan 2018).

The second learning objective was to then understand that both sides to the argument are what make up an appropriate philosophical debate in that they analyse both the moral rightness and wrongness of an action (Flanigan 2018). The facilitator concluded the session by reinforcing this fact. Students were graded based on their ability to discuss the issue at hand in the correct context.

The activity used to develop the HPL was that of discussion and collaboration (Laurillard 2013). Students were given an ethical dilemma beforehand and had to prepare this scenario, not knowing what was required of them other than that they were going to discuss the dilemma as a group of 20 students. The exact context (i.e. ethical framework) was given on the day in the HPL. Therefore, students had to engage with all the online content of the various ethical frameworks and develop an understanding of these and how they would apply to the given scenario (Wilmot & Merino 2015). The purpose of students then discussing the scenario in the HPL was to demonstrate how diverse points of view and thinking can lead to a more informed answer around ethical dilemmas. Students argued as to whether the action was morally right on one side and wrong on the other. This led to students learning from each other by introducing collaboration as part of the activity (Laurillard 2013; Wilmot & Merino 2015). The facilitator of the HPL then summarised the students' debates and explained the learning outcomes for the session (Wilmot & Merino 2015).

After the HPL, the facilitators put together a reflection recording that discussed the two learning objectives and analysed how they should be applied to the given scenario (Laurillard 2013; Wilmot & Merino 2015). The commonly made mistakes were also discussed, and students had to add this recording to their notes kept during the session to develop a portfolio of learning (Villarroel et al. 2018). To ensure students listened to this recording and added it to their portfolio of learning, they would only receive their marks after presenting evidence of this fact.

In order to increase capacity and split a class of 1,000 students into groups of 20, blended learning was used to manoeuvre the timetable.

On either Thursday or Friday, instead of having a lecture, the class is divided into two groups. The first group is then divided into groups of 20 students. What is required is around 25 groups, 12 for the first 45-minute session and then 12 or 13 for the second 45-minute session. This means that only 12 or 13 members of staff are required across two days. These include six academic trainees, all three auditing course coordinators, the head and deputy head of the auditing division and any other lecturing staff who have capacity to assist. What is created is an intimate session in which students and academic staff can have a discussion about content that caused many academic issues in the prior academic year (Ramchander & Naude 2018; Saha & Dworkin 2009; Turner et al. 2017).

Finally, it must be noted that the manoeuvred timetable does not need to be used on a weekly basis. It can be used from time to time and can be used as a form of assessment if need be. The result is that academic staff can now implement innovations that previously were not achievable because of large classes, thereby creating an enriched teaching and learning environment for students and preparing them for the requirements of their working environment (Chow et al. 2020; Masland 2021; Schwartzman 2020).

Adapting this innovation for other commerce disciplines

As described in the preceding part, the innovation was used in accountancy. However, it can be adapted to a variety of other disciplines in the commerce field. The questions below will assist in identifying areas where an innovation grounded in LCF and resilient pedagogy can be developed. In order for the innovation to be implemented effectively, blended learning should be used to manoeuvre the academic timetable. This reduces the rigidity of one's own mindset and allows for more creative and free thinking, which will lead to an enriched teaching and learning environment. The thought process to identify what areas would form the basis for an innovation such as the HPL described above would be:

- What activities in terms of LCF will be the best manner in which students can engage with the module content? For example, the first innovation could involve discussion so that it breaks the ice in the class as students interact with each other.
- What are the areas or content of the module that students have difficulty in understanding? The innovation provides an opportunity to focus on content that students find challenging. The activity for a session where this is the focus could involve collaboration, as students' diverse views on the topic will lead to the formation of an integrated and well-informed understanding of the content.
- Where feedback from practice identifies various underdeveloped soft skills and technical skills, these could form the learning outcome of the innovation. Where certain soft skills are a concern in practice, the innovation can put together small classes with a narrow and well-defined objective. The focus of this session can be to develop a variety of soft skills through discussions, collaborations and investigations.
- What are the areas that students find difficult in assessments? For example, the next HPL used by the author was designed to teach students the difference between identifying a risk and discussing a risk. This is because such a distinction is not made, and students have the perception that by identifying a risk they are discussing it and do not understand why their answer is incorrect.
- Do you have a module wherein students' perceptions are poor? The innovation of discussion in small classes with academic staff can lead to

better engagement between the student body and the lecturers. Stereotypes such as lecturers not being approachable can be dismissed as they engage with students on a more personal level in a smaller and less intimidating setting than a class of 500 students.

Finally, in the context of the South African tertiary environment, there is a need to decolonise the syllabus (Absolon 2019). One way in which this can be achieved is through changing the manner of instruction from traditional lectures to more facilitated teaching and learning sessions. Facilitation is observed as one technique to decolonise a syllabus in that the manner of instruction is no longer a lecturer giving a lecture to a large class of students but is now engaging on a more personal level with students (Absolon 2019). The innovation discussed in this chapter is more facilitation-driven and, hence, could assist in decolonising the syllabus.

■ Conclusion

The use of activities grounded in LCF and resilient pedagogy to drive how a module is designed leads to better student engagement in terms of cognitive, behavioural, social and affective engagement. The pandemic forced academics into engaging with blended learning, and the lessons learned should not be disregarded, resulting in a return to the way things were done before.

Improved engagement means that there is a student-needs-based environment. This is also a teaching- and learning-enriched environment. The justification of large classes preventing innovations to enrich the environment can no longer be used as a convenient excuse. As this chapter has demonstrated, blended learning is the key to manoeuvring timetables to free up capacity and divide a large class into small, intimate sessions which improve the learning experience.

The innovation sessions do not need to run on a weekly basis, and they can contribute towards students' formative assessments of the module. They can also serve a variety of other objectives, one of which is that if the sessions are facilitated by academic staff, the environment becomes decolonised as the manner of instruction changes.

This innovation serves a multitude of socially responsible practices, better student engagement and enriches the teaching and learning environment. Lastly, it is malleable by its very nature, as it is grounded in resilient pedagogy. Therefore, it can be used across various commerce subjects and degrees, and if another pandemic or crisis were to arise, the modality of the session could change with little disruption to the academic programme.

Chapter 12

Developing ethics competence of future business leaders: Challenges in higher education

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Introduction

Ethical behaviour in the context of future business leaders involves making choices based on the consequences of alternative actions (Adams, Malone & James 1995). According to Harasym, Tsai and Munshi (2013, n.p.), ethical 'decision-making is a complex process, which involves the interaction of knowledge, skills, and attitude'. These three elements are brought together to form the concept of competence. Competence, as a concept, is a combination of certain skills, knowledge, attitudes and values that enable a person to perform a specific activity to a specified standard (Ghiaţău 2015). The International Federation of Accountants (IFAC) groups professional

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values, ethics and attitudes under the umbrella term 'professional competence'. Professional competence is the ability to perform a role to a defined standard and goes beyond mere technical knowledge (International Accounting Education Standards Board [IAESB] 2019, p. 59).

The concept of ethics competence, or the more often quoted ethical competence, is mostly observed as part of ethics research in other professions such as the nursing profession (Cannaerts, Gastmans & Dierckx de Casterlé 2014; Eriksson, Helgesson & Hèoglund 2007; Kulju et al. 2016), the teaching profession (Ghiațău 2015) as well as other vocations such as public administration (De Schrijver & Maesschalck 2013; Meine & Dunn 2013).

The concept of ethics competence in the economic and management sciences (EMS) context is fairly new but has been explored by a few researchers (Kavathatzopoulos & Rigas 2006; Pohling et al. 2016). A more descriptive definition, providing a better understanding of which aspects to consider in the assessment of ethics competence, was proposed in 2016 after using a group of undergraduate students from various faculties as a research group (Pohling et al. 2016). Ethics competence was defined as 'conscious decisions and actions within a given responsibility situation' (p. 451). It 'implies to feel obliged to one's own moral principles and to act responsibly taking into account legal standards as well as economical, ecological, and social consequences' (p. 451). Ethics competence 'requires normative knowledge and the willingness to defend derived behavioural options against occurring resistance' (p. 451).

It is thus clear that ethics competence is a complex process in which different components and personal characteristics are involved (Pohling et al. 2016; Rest 1982). Thus, for the purposes of this chapter, the concept of ethics competence is used instead of mere ethics in order to present a more comprehensive view of what is required for the ethical behaviour of future business leaders to change.

Prior research and literature indicate that fraud, corruption and unethical behaviour of business leaders are increasing (Marchant & Mosiana 2020; PwC 2022). On the other hand, prior research and literature exploring ethics interventions in business education are also increasing. Research includes the study of various approaches to ethics training (Armstrong, Ketz & Owsen 2003; Cameron & O'Leary 2015; Dobie & Plant 2014; Ghaffari, Kyriacou & Brennan 2008; Gray, Bebbington & McPhail 1994; Jackling et al. 2007; Langlois & Lapointe 2010; Liu, Yao & Hu 2012; Massey & Van Hise 2009; O'Leary 2012; Rossouw 2013; Spurgin 2004; West & Buckby 2020), as well as various studies that assess the impact that the timing, duration, faculty of the presenter, training methods, underlying ethics theories, different learning outcomes, etc. (Blanthorne, Kovar & Fisher 2007;

Christensen, Cote & Latham 2018; Collins, Weber & Zambrano 2014; Harasym et al. 2013; Loeb 1991; Madison & Schmidt 2006; Mintz 1995; Peursem & Julian 2006; Preuss 1998; Sedaghat, Mintz & Wright 2011; Sorensen, Miller & Cabe 2017) have on the effectiveness of the training.

Although ethics education has been proposed as a possible solution to enhance ethics competence if implemented correctly (Adkins & Radtke 2004; Blanthorne et al. 2007; Lau 2009; Madison & Schmidt 2006; Schlaefli, Rest & Thoma 1985; Taylor 2013), challenges still remain. The purpose of this chapter is therefore twofold: firstly, to explore various ethics competence development frameworks used in ethics education and, secondly, to identify key challenges in ethics education in developing future business leaders. Ethics education for future business leaders is discussed with reference to the accountancy profession, but it is argued that professional accountants often fulfil various roles as business leaders in business and society (Siegel, Sorensen & Richtermeyer 2003).

Ethics education: A global perspective

The IFAC (n.d.b) was founded in 1977 with the main purpose of strengthening:

> [*T*]he global accountancy profession in the public interest by developing high-quality international standards in auditing and assurance, public sector accounting, ethics and education for professional accountants and supporting their adoption and use. (n.p.)

This support is provided in order to promote uniformity of professionalism standards among professional accountants across the globe. This objective is important in the context of the need to develop the ethics competence of the global profession as a whole. The International Federation of Accountant's membership consists of more than 170 professional accountancy organisations across 130 countries. They represent more than 3 million professional accountants across the globe (IFAC 2018); thus, their guidance and prescriptions have a significant impact on the global profession and the resultant perception of the public relating to the ethical competence of professional accountants.

For this purpose, various standard-setting boards have been formed over the years, with the IAESB being responsible for professional accountancy education standards that prescribe technical competence and professional skills, values, ethics and attitudes (IFAC n.d.a). In International Education Standard (IES) 4, the IAESB provides a list of minimum prescribed learning outcomes relating to professional values, ethics and attitudes that aspiring professional accountants are required to achieve by the end of the Initial Professional Development (IPD) stage; the same learning outcomes are applicable for qualified professional accountants as continuing professional development (CPD) (IAESB 2019, p. 55). Each member body can determine its final list of learning outcomes, but the member body should include the list provided by IFAC (IAESB 2019, p. 55). It appears that IFAC member bodies such as the Association of Chartered Certified Accountants (ACCA), the Chartered Institute of Management Accountants (CIMA), the South African Institute of Chartered Accountants (SAICA) and the South African Institute of Professional Accountants (SAIPA) have considered the IES 4 in their respective competency frameworks (by including ethics competence as part of the qualification requirements), but insufficient details are provided on their respective websites to determine how the ethics competence is developed and what exactly is assessed (ACCA 2024; CIMA 2024; SAICA 2020a, 2020b, p. 33; SAIPA 2024, p. 60).

The learning outcomes prescribed by IES 4 have been mapped against several other research studies' outcomes in order to facilitate the identification of the overall framework utilised by these studies and the IES 4, using the James Rest four-step model (Rest 1982) as the point of departure (see Table 12.1). Table 12.1 and the studies included therein are discussed below.

Rest and International Education Practice Statement 1 comparison

Firstly, columns 1 and 2 of Table 12.1 are compared. International Education Practice Statement (IEPS) 1 was last published in 2010 and has since been withdrawn, with only the IES 4: *Initial professional values, ethics and attitudes*, remaining relevant. In column 2, the four stages of the withdrawn ethic education continuum (EEC), contained in the withdrawn education standard IEPS 1, have been listed. These four stages are in line with the four-component model of James Rest. It can be noted that the last step, namely, moral action, is not included in the IEPS 1 development framework. For the purposes of this study, the Rest model is used as a framework for ethics competence development to which other learning outcomes are compared.

The EEC has also prescribed eight subject areas which had to be addressed by IFAC member bodies in their ethics education programme for the IPD, as well as for CPD periods for professional accountants (IAESB 2010, p. 110). This IEPS standard was accompanied by an ethics education toolkit containing video materials and online modules to aid member bodies with the application of the IEPS (Cooper et al. 2008). This was, however, withdrawn and currently, only IES 4 is prescribed by IFAC and the ethics education toolkit has been reduced to four separate ethical dilemma scenarios (role-play videos) and a workbook for each (available on the

TABLE 12.1: Comparison of various learning outcomes for ethics education.

Rest's four-component model (Rest 1982)	IEPS 1 Ethics Education Continuum (IAESB 2010, p. 105)	Seven goals set by Loeb (Loeb 1988)	Seven goals have, however, been criticised more recently (Mintz 2016)	IFAC learning outcomes IES 4 (IAESB 2019, p. 56)	Kidwell knowledge areas (Kidwell et al. 2013)
Ethical awareness and sensitivity (identify ethical issues)	Enhancing ethics knowledge	Appreciate and understand the history and composition of all aspects of business ethics and their relationship to the general fields of ethics	-	*Explain* the nature of ethics	Classical ethics theories
				Explain the advantages and disadvantages of rules-based and principle-based approaches to ethics	-
	Developing ethical sensitivity	Relate commerce education to moral issues	Relate accounting education to moral issues	*Explain* the role of ethics in relation to business and good governance	Corporate governance
		Recognise issues in business that have ethical implications	Recognise issues in accounting that have ethical implications	*Identify* ethical issues and determine when ethical principles apply	Code of ethical conduct
Moral judgement	Improving moral judgement	Develop the abilities needed to deal with ethical conflicts or dilemmas	Develop moral reasoning skills to analyse ethical issues and deal with conflicts or dilemmas	*Analyse* alternative courses of action and determine the ethical consequences of these	Decision models
				Apply the fundamental ethical principles of integrity, objectivity, professional competence and due diligence, confidentiality and professional behaviour to ethical dilemmas and determine an appropriate approach	Moral development
				Apply the relevant ethical requirements for professional behaviour in compliance with standards	

Table 12.1 continues on the next page→

TABLE 12.1 (cont.): Comparison of various learning outcomes for ethics education.

Rest's four-component model (Rest 1982)	IEPS 1 Ethics Education Continuum (IAESB 2010, p. 105)	Seven goals set by Loeb (Loeb 1988)	Seven goals have, however, been criticised more recently (Mintz 2016)	IFAC learning outcomes IES 4 (IAESB 2019, p. 56)	Kidwell knowledge areas (Kidwell et al. 2013)
Moral intent	Maintaining an ongoing commitment to ethical behaviour	Develop a 'sense of moral obligation' or responsibility	Cultivate a sense of moral obligation to the public interest	*Explain* the role of ethics within the profession and in relation to the concept of social responsibility	The accounting profession
Moral courage and action	-	Learn to deal with the uncertainties of the role of a business leader	Develop the ability to voice one's values to counteract reasons and rationalisations	*Analyse* the interrelationship of ethics and law, including the relationship between laws, regulations and the public interest	The accounting profession
		'Set the stage' for a change in ethical behaviour	Develop leadership skills to carry out ethical decisions with ethical action Reflect on one's actions	*Analyse* the consequences of unethical behaviour to the individual, the profession and the public	-

Source: Author's own work.

Key: IEPS 1, International Education Practice Statement 1; IFAC, International Federation of Accountants; IAESB, International Accounting Education Standards Board; IES, International Education Standard.

IFAC website [IAESB 2015]), focusing mainly on decision-making models to apply when studying the ethical dilemmas in the videos.

Loeb and Mintz comparison

Next, columns 3 and 4 of Table 12.1 are compared and the similarities are discussed. Some researchers treat the main goal of ethics education as incontestable and obvious – it is assumed that ethics education should improve the ethical behaviour of future business leaders (Tormo-Carbó et al. 2019). This stance, however, is not the most popular and most researchers acknowledge the fact that while it seems the most noble goal – it is not realistic to set that as the main goal of an ethics course – as such an outcome is almost impossible to assess and too ambitious a goal to achieve with one ethics course (Dellaportas 2006; Kidwell et al. 2013).

Different goals have been proposed for ethics education. The first reference to goals for ethics education that many scholars refer to are 'the seven goals set by Loeb' (Loeb 1988) (refer to Table 12.1, column 3). These seven goals have, however, been criticised recently (Mintz 2016), and a revised set of goals has been proposed. The main changes suggested by Mintz (2016) are the exclusion of the first goal set by Loeb: 'Appreciate and understand the history and composition of all aspects of business ethics and their relationship to the general fields of ethics' and the added goals of:

- develop the ability to voice one's values to counteract reasons and rationalisations
- reflect on one's actions
- develop leadership skills to carry out ethical decisions.

Mintz clearly places more emphasis on the required values/attitudes for ethics competence.

Both Loeb's and Mintz's goals have been mapped alongside the learning outcomes of IES 4 and Rest's four-component model. The four stages (ethical awareness, moral judgement, moral intent and moral action) proposed by Rest's four-component model are clearly aligned with the seven goals set by both Loeb and Mintz (compare columns 1, 3 and 4 in Table 12.1, where the four stages are indicated).

International Federation of Accountants International Education Standard 4

The IFAC currently prescribes two main competence areas as part of its educational standard for the development of ethics, namely: 'Ethical principles' and 'Commitment to the public interest' (IAESB 2019, p. 56).

International Federation of Accountants supports a framework approach to education and prescribes ten main learning outcomes linked to the competence areas (refer to Table 12.1, column 5). The IFAC learning outcomes have been linked to the Rest model, and the alignment is observable through the use of colours. The words marked in red indicate the verb that signifies the level of learning required by IFAC. This clearly corresponds with Bloom's taxonomy.[19]

Kidwell

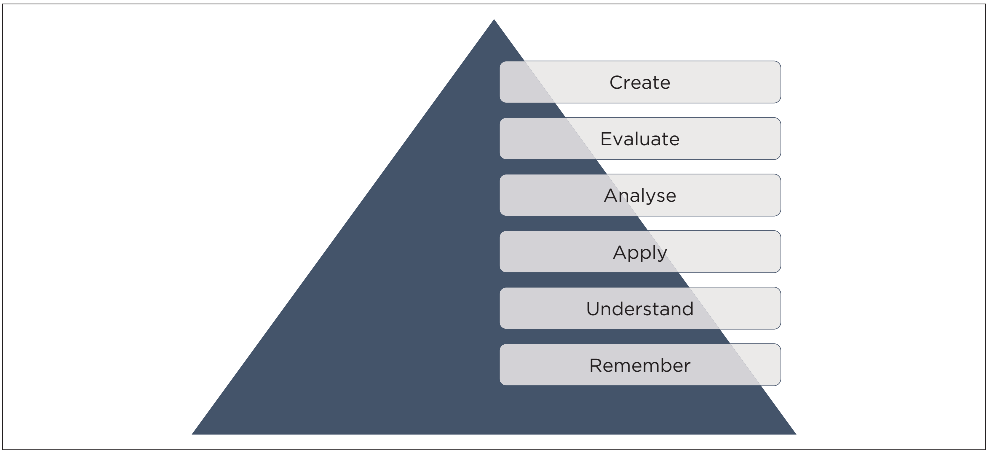
Kidwell et al. (2013) proposed an ethics development framework consisting of six main knowledge areas (see column 6 of Table 12.1). In their research, Kidwell et al. (2013) expanded each of the six knowledge areas into six learning outcomes, which were, in turn, linked to the six levels of Bloom's taxonomy. In so doing, the researchers also provided pedagogical support. This framework developed by Kidwell et al. (2013) applies Bloom's taxonomy by first providing students with a solid foundation at the lower levels to enable them to reach higher levels. When exploring the detailed learning outcomes, clear alignment can be observed between the six knowledge areas and the Rest model (see Table 12.1). It is therefore important to discuss the six levels of Bloom's taxonomy and the relevance thereof in the context of ethics competence development.

Bloom's taxonomy of learning

Bloom's taxonomy is a well-established model that illustrates the various levels of learning and is used by educators to indicate the level of learning expected for each topic under review (Bloom et al. 1956, p. 2; Kidwell et al. 2013). Bloom's taxonomy consists of three domains, namely the cognitive domain (knowledge), psychomotor domain (skills) and affective domain (attitudes/values), as illustrated in Figure 12.1 (Bloom et al. 1956, p. 7). Bloom's cognitive domain, as revised by Anderson and Krathwohl (2001, p. 31), consists of six progressive levels of learning: *remembering*, *understanding* (*explaining*), *applying*, *analysing*, *evaluating* and *creating*.

Kidwell explains Bloom's taxonomy by taking each knowledge area and designing learning outcomes aligned to the six levels of learning. Kidwell's example of the knowledge area, 'code of ethical conduct', explains the various levels of learning (Kidwell et al. 2013). For illustration purposes, at the lowest level of learning, the remembering level, a student will only be required to *remember* certain information. In the context of ethics competence for future business leaders, this would typically include

19. Bloom's taxonomy is a model used by educators and illustrates the various levels of learning.



Source: Kidwell et al. (2013).
FIGURE 12.1: Bloom's taxonomy.

the principles and practices contained in the King IV Report on Corporate Governance (2016). At the second level (understanding), the student will seek to *understand* principle-based vs compliance-based approaches to corporate governance. At the third level, students will be required to *apply* the principles of King IV to business scenarios. At the fourth level, students would need to *analyse* scenarios where business leaders had to apply the King IV report. When moving into the fifth level of learning, a student will be required to *evaluate* an organisation's adherence to the principles of King IV. Lastly, the sixth level of learning would expect a student to be able to *create* a code of ethical conduct for a student entity. (Examples listed above are adapted from the learning outcomes provided by Kidwell et al. 2013).

International Education Standard 4 prescribes the learning outcomes that professional accountants are required to achieve for professional values, ethics and attitudes and IFAC member bodies should use this education standard as a guide to develop ethics education programmes for their members (IAESB 2019, p. 54). It is therefore important that these learning outcomes should be at the appropriate level of learning to ensure the appropriate level of ethics competence of professional accountants. Table 12.2 contains the ten learning outcomes from IES 4 (as illustrated in Table 12.1, column 5), and the Bloom's taxonomy level is identified by bolding the verb in the sentence, which indicates the level of learning required of the professional accountant.

When analysing the IFAC learning outcomes included in IES 4 (Table 12.1, column 5) against Bloom's taxonomy (Table 12.2), it is cause for concern to note that the highest level of Bloom's learning prescribed by IFAC for the

TABLE 12.2: International Federation of Accountants learning outcomes based on Bloom's learning levels.

IFAC learning outcomes IES 4	Bloom's taxonomy learning level
Explain the nature of ethics	Understand (Level 2)
Explain the advantages and disadvantages of rule-based and principle-based approaches to ethics	Understand (Level 2)
Explain the role of ethics in relation to business and good governance	Understand (Level 2)
Identify ethical issues and determine when ethical principles apply	Understand (Level 2)
Analyse alternative courses of action and determine the ethical consequences thereof	Analyse (Level 4)
Apply the fundamental ethical principles of integrity, objectivity, professional competence and due diligence, confidentiality and professional behaviour to ethical dilemmas and determine an appropriate approach	Apply (Level 3)
Apply the relevant ethical requirements to professional behaviour in compliance with standards	Apply (Level 3)
Explain the role of ethics within the profession and in relation to the concept of social responsibility	Understand (Level 2)
Analyse the interrelationship of ethics and law, including the relationship between laws, regulations and the public interest	Analyse (Level 4)
Analyse the consequences of unethical behaviour to the individual, the profession and the public	Analyse (Level 4)

Source: Adapted from IAESB (2019, p. 56).
Key: IFAC, International Federation of Accountants; IES, International Education Standard.
Note: The Bloom's taxonomy level is identified by bolding the verb in the sentence.

development of ethics competence is level 4. Another important observation is Bloom's level for step 1 in Rest's four-step model, namely, moral awareness and the ability to identify moral dilemmas. This key step's learning outcome is limited to level 2 of Bloom's taxonomy.

Knowledge, skills and attitudes

As mentioned in Section 12.3, Bloom's taxonomy consists of three domains, namely: the cognitive domain (knowledge), psychomotor domain (skills) and affective domain (attitudes and values) (see Table 12.3) (Bloom et al. 1956, p. 7). These three domains represent the elements of competence (Ghiaţău 2015). When looking at the IFAC learning outcomes (column 5 in Table 12.1), the majority of the learning outcomes focus on the cognitive domain of Bloom's taxonomy (ethics knowledge), and limited learning outcomes from the psychomotor domain (ethics skills such as ethical decision-making). Learning outcomes related to the affective domain would be values such as *social responsibility*, which have been limited to *explaining* the concept. By focusing mostly on the cognitive domain and

TABLE 12.3: Three domains of Bloom's taxonomy.

Bloom's levels of learning for the Cognitive domain (*knowledge*) (Anderson & Krathwohl 2001, p. 31)	**Bloom's levels of learning for the Psychomotor domain (*skills*) Bloom 1956)**	**Bloom's levels of learning for the Affective domain (*attitudes*) (Hoque 2016, p. 49)**
1 Remember 2 Understand 3 Apply 4 Analyse 5 Evaluate 6 Create	1 Imitate (pattern behaviour after someone else) 2 Manipulate (perform by following instructions/from memory) 3 Precision (accurate without help) 4 Articulation (adapt and modify to address different problems) 5 Naturalisation (skill becomes second nature, intuitive, unconscious)	1 Receiving (being aware of or sensitive to the existence of certain phenomena) 2 Responding (is committed to the phenomena by complying with, to follow, to commend) 3 Valuing (is willing to be perceived by others as valuing certain ideas by participating in debate, to support) 4 Organisation (to relate the value to those already held and bring it into an internally consistent philosophy by discussing, theorising, formulating and examining) 5 Characterisation by value – to act consistently in accordance with the values you have internalised

Source: Author's own work.

limiting the development of ethics values and attitudes to Bloom's second level, IFAC is limiting the ethics competence development of professional accountants. This is in line with Gray et al. (1994), who found that accounting educators are to blame for the lack of ethics of professional accountants owing to the excessive focus on technical abilities and commercialism. This is in line with South African research that found that accounting education practices in South Africa position technical skills as the essence of being an accountant; consequently, critical thinking, ethical decision-making and creative problem-solving are neglected (Gloeck 2007/8; Gouws & Slabbert 2006).

When looking at columns 3 and 4 of Table 12.1, it can be noted that the Loeb and Mintz learning outcomes have some additional skills, such as *reflect on one's actions*, *leadership skills* and some attitudes and values have also been incorporated, such as *voice your values* and *cultivate a sense of moral obligation*. These learning outcomes can be developed using Bloom's taxonomy for the affective domain.

It is evident that IFAC does not give clear guidelines on how ethics education should be facilitated by its member bodies to ensure the most effective development of ethics competence. The withdrawn IEPS 1 standard provided guidance to IFAC member bodies by suggesting various teaching methods such as lectures, ethics discussions, small-group and collaborative learning, case studies, role-play, guest speakers, practitioner participation and e-learning, but as previously mentioned, this standard is no longer applicable for member bodies (IAESB 2010, pp. 124–125). However, it appears that several challenges remain in the effective implementation of ethics education.

Challenges to the effective implementation of ethics education

Research suggests that most role players (including educators, business education students and professionals) agree that ethics education is a key part of the professional development of an accountant (Adkins & Radtke 2004; Blanthorne et al. 2007; Lau 2009; Madison & Schmidt 2006; Schlaefli et al. 1985; Taylor 2013). Several challenges to the effective implementation of ethics education as an enabler of ethics competence development for accountants as future business leaders have been identified:

- Disagreement among educators on the ethics education content to be taught to effectively increase ethics competence (Apostolou, Dull & Schleifer 2013; Blanthorne et al. 2007; Comer & Schwartz 2017; Loeb 1991; Ritter 2006; West & Buckby 2018).
- Lack of consensus on the objectives and goals of ethics education (Cameron & O'Leary 2015; Kidwell et al. 2013; Loeb 1991; McPhail 2001; Mintz 2016; Rossouw 2002) and the specific techniques that should be employed to meet the objectives. A similar lack of consensus exists in the medical profession, whose two main points of view are: firstly, that ethics education is meant to create virtuous physicians and secondly, that ethics education equips physicians with the necessary skills for dealing with ethical dilemmas effectively (Eckles et al. 2005).
- Disagreement among educators on whether ethics should be taught as a stand-alone course or integrated with other subjects (Blanthorne et al. 2007; Ghaffari et al. 2008; Kidwell et al. 2013; Swanson 2005; West & Buckby 2018). The majority of educators tend to integrate ethics education with other subjects, such as business management and financial accounting, which limits the impact that the ethics education programme has (Ballantine, Guo & Larres 2018; Gunz & McCutcheon 1998). Dedicated courses on ethics and professionalism have been found to have positive effects on moral development (Dellaportas 2006; Mohamed Saat, Porter & Woodbine 2012; Welton & Guffey 2009; Welton, Lagrone & Davis 1994), together with ethical

cases integrated across various disciplines (Earley & Kelly 2004; Ponemon 1992; West & Buckby 2018).

- Disagreement on which faculty ought to present ethics education to business students, for example, the Accounting, Philosophy or Theology departments (Massey & Van Hise 2009). The question of who should present the course is heavily impacted by the learning outcomes of the course (Cameron & O'Leary 2015; Kidwell et al. 2013; Loeb 1991; McPhail 2001; Mintz 2016). Educators not formally trained in ethics typically shy away from philosophical ethics topics and theories, and therefore, a course presented by the accounting department typically does not value the inclusion of such theories. However, it has been found that foundational knowledge and application of ethics theories and philosophical ethical principles are vital building blocks required to enable effective ethical decision-making based on structured moral reasoning capacity (Kidwell et al. 2013). The opposite is also true, in that the philosophy department is often unable to integrate ethics concepts effectively into commercial concepts, and thus, students are often left to do the integration on their own. The decision as to who is best to present the ethics course remains a challenge affected by the availability of resources, as well as politics, and thus, this study does not aim to solve this dilemma (Gunz & McCutcheon 1998).
- Amount of time allocated to ethics in the curriculum is not sufficient to ensure ethics competence is cultivated (Albrecht, Hill & Albrecht 2006; Blanthorne et al. 2007; Gunz & McCutcheon 1998; Madison & Schmidt 2006).
- Accounting academics do not seem to be committed to accounting ethics education (Adkins & Radtke 2004; Gunz & McCutcheon 1998).
- Traditional lecture methods of ethics education do not seem to be effective and alternative methods ought to be explored by educators to improve the ethics competence of future business leaders (Albrecht et al. 2006; Christensen et al. 2018; Christensen, Barnes & Rees 2007; Duska 1991; O'Leary 2012).
- Despite the recognition that ethical decision-making in commerce is partially a values-driven and internal construct (Francis 1990), ethics education courses apply mostly compliance-driven and external constructs (Dean & Begg 2006; Dean, Beggs & Fornaciari 2007; Lail et al. 2017).
- Rest's four-component model of ethical behaviour is often used as a framework to teach ethics (Bailey, Scott & Thoma 2010). The emphasis of ethics education often seems to be on the development of ethical awareness and ethical judgement (Bailey et al. 2010; Schlaefli et al. 1985), but limited or no development of moral intent and moral courage (Christensen et al. 2007; Comer & Schwartz 2017).

Conclusion

In this chapter, the development of the ethics competence of accountants as business leaders was explored. Firstly, ethics competence was defined as the ability to use the knowledge, skills and attitudes (as related to ethics) that an individual developed or gained to demonstrate ethical behaviour effectively (to an accepted standard). Secondly, various cognitive moral development frameworks were explored in the business ethics context. Various ethics competence development frameworks were compared and aligned to Bloom's taxonomy. From the comparison, it is clear that existing frameworks focus on cognitive competence development at lower learning levels.

However, challenges to the effective implementation of ethics education in higher education for future business leaders remain. These include disagreement among educators on the content of ethics curricula, duration of ethics programmes, required qualifications of ethics educators and whether ethics ought to be taught as a stand-alone course or integrated across other subjects.

It is therefore concluded that ethics educators in higher education should take cognisance of the various frameworks for ethics competence development as well as the challenges in developing ethics competence. This entails an increased focus on the higher learning levels for developing ethics competence, namely analysis, evaluation and creation.

Chapter 13

The role of education curricula in creating ethical business leaders for the future

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Introduction

There has been a growing demand for ethical behaviour and social responsibility in the business world. In the wake of corporate scandals and increasing societal and environmental concerns, stakeholders are demanding that businesses operate in a more ethical and sustainable manner. For instance, a survey by the Edelman Trust Barometer in 2021 found that 86% of respondents believed that companies should take action to address societal issues (Edelman 2021). Similarly, a report by the United Nations (UN) Global Compact found that 64% of chief executive officers (CEOs) believe that corporate sustainability is important for their business's success (UN Global Compact 2019).

Stakeholders, including customers, investors and employees, are increasingly holding companies accountable for their actions and expecting

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them to operate with transparency, fairness and ethical values (Tetrault Sirsly 2019). This demand for ethical behaviour is reflected in the rise of socially responsible investing and corporate social responsibility reporting (Kilian, Hennigs & Gollnhofer 2021). Businesses that fail to meet these expectations risk losing trust and credibility, which can have significant consequences for their reputation and bottom line.

South Africa has undergone significant changes in the business environment, leading to an increased demand for ethical behaviour and social responsibility among businesses. This demand is driven by various factors, including changes in legislation and related regulations, consumer preferences, and the need to address social and environmental challenges. As a result, businesses are increasingly expected to operate in a socially responsible manner, incorporating ethical considerations into their decision-making processes.

One of the key drivers of this demand is the introduction of the *Companies Act 71 of 2008*, which requires companies to act in a responsible and ethical manner. The Act imposes duties on directors to act in the best interests of the company and to promote the company's long-term sustainability while considering the interests of stakeholders, including employees, customers, suppliers and the broader community (RSA 2008). This requirement has placed a greater emphasis on ethical behaviour and social responsibility among businesses in South Africa.

Another important factor driving the demand for ethical behaviour and social responsibility is the *King IV Report on corporate governance for South Africa*, which was published in 2016. The report provides guidance on best practices for corporate governance, including principles and guidelines for ethical leadership, effective governance structures and sustainable development (King IV Report 2016). The report emphasises the importance of corporate social responsibility, stating that companies have a responsibility to contribute to the social, economic and environmental development of the communities in which they operate.

Another factor driving the demand for ethical behaviour is changing consumer preferences. Consumers are becoming increasingly conscious of the impact of their purchasing decisions and are demanding that companies operate in a socially responsible manner. A survey by Nielsen (2019) found that 73% of South African consumers are willing to pay more for products and services from companies that demonstrate a commitment to social and environmental responsibility.

Furthermore, South Africa faces significant social and environmental challenges, such as poverty, inequality and climate change. Businesses have a role to play in addressing these challenges, and their failure to do so can result in reputational damage and lost business opportunities. A report by PricewaterhouseCoopers (PwC) (2020) found that companies that prioritise social and environmental responsibility are better equipped to attract and retain customers, employees and investors.

Therefore, to meet the increasing demand for ethical behaviour and social responsibility, businesses in South Africa are adopting various strategies, such as implementing sustainable business practices, engaging with stakeholders, and reporting on their social and environmental impact. For instance, Woolworths, a leading retailer in South Africa, has implemented sustainable sourcing practices and reduced its carbon footprint, among other initiatives (Woolworths Holdings Limited 2022). Similarly, Standard Bank, one of the largest banks in South Africa, has implemented various initiatives to promote financial inclusion and support small businesses (Standard Bank 2022).

The need for universities and business schools to prioritise ethics education in their curricula

To meet this growing demand for ethical behaviour, universities and business schools need to prioritise ethics education in their curricula. This is supported by various studies and reports. For example, a survey conducted by the Aspen Institute Business & Society Programme found that 94% of MBA students believe that business schools should incorporate ethics and social responsibility into their curricula (Aspen Institute 2018). Furthermore, research from the EY Beacon Institute and Harvard Business Review Analytic Services found that 90% of executives believed that long-term success depends on behaving ethically (EY 2015). Thus, by prioritising ethics education, universities and business schools can help prepare students for the ethical challenges they will face in the business world.

Modern business leaders face numerous ethical challenges, ranging from environmental sustainability to corporate social responsibility and ethical decision-making. Globalisation and technological advances have only served to exacerbate these challenges. Recent corporate scandals such as the Volkswagen emissions scandal and the Wells Fargo fraudulent account scandal highlight the need for ethical leadership in the business world. Research from the Ethics Resource Center found that 41% of employees witnessed misconduct in the workplace, underscoring the importance of ethical behaviour in organisations (ERC 2020). In this context, ethical leadership is crucial for ensuring that businesses operate with integrity and uphold ethical values in their decision-making.

According to Trevino and Nelson (2020), modern business leaders are facing increasing pressure to operate in a socially responsible and ethical manner. One of the main ethical challenges facing business leaders is environmental sustainability. Businesses are increasingly expected to minimise their environmental impact and adopt sustainable practices. According to a report by the World Business Council for Sustainable Development (WBCSD) (2020), businesses must take action to address climate change, reduce waste and promote resource efficiency.

Another ethical challenge facing business leaders is social responsibility. Business leaders must consider the impact of their actions on a range of stakeholders, including employees, customers and local communities. This includes promoting diversity and inclusion, protecting human rights and addressing social issues such as poverty and inequality. According to a study by the *Harvard Business Review* (Eccles & Serafeim 2013), companies that prioritise social responsibility are more likely to have long-term financial success.

Data privacy and security is another ethical challenge facing modern business leaders. Businesses are collecting and storing vast amounts of personal data, and there is increasing concern about how this data is being used and protected. Business leaders must ensure that appropriate measures are in place to protect data from unauthorised access and misuse. According to a report by the European Data Protection Supervisor (EDPS 2020), businesses must comply with strict data protection regulations and ensure that they are transparent and accountable in their use of personal data.

Corporate governance is another area where business leaders face ethical challenges. Business leaders must ensure that their organisations operate in a transparent and accountable manner. This involves establishing effective corporate governance structures, maintaining accurate and transparent financial reporting, and ensuring that ethical conduct is embedded throughout the organisation. According to a report by the Institute of Business Ethics (IBE 2020), businesses must prioritise ethical leadership and ensure that they have effective mechanisms in place for reporting and addressing ethical concerns.

■ Purpose and scope

The purpose of the chapter is to delve into the critical role of educational curricula in creating ethical business leaders for the future. The chapter argues that ethical leadership is essential in the modern business landscape, where stakeholders are increasingly demanding that businesses uphold ethical standards and social responsibility. It emphasises that business schools and universities must prioritise ethics education in their curricula to prepare future business leaders for the complex ethical challenges they will face.

The chapter explores effective pedagogical strategies for teaching ethics, such as active learning, case studies and community engagement, and discusses how cognitive learning theories can inform ethical leadership development. It also provides best practices for designing ethical curricula and discusses the role of universities and business schools in promoting ethical leadership and fostering a culture of ethical behaviour in the business community. Finally, the chapter provides recommendations for educators, policymakers and business leaders on how to integrate pedagogical and cognitive learning strategies into their ethics education efforts.

Pedagogical strategies for teaching ethics

There are various pedagogical strategies for teaching ethics in business schools and universities. One effective strategy is active learning, which involves engaging students in hands-on activities that promote critical thinking, collaboration and ethical decision-making. Research has shown that active learning can enhance students' ethical awareness and prepare them for the ethical challenges they will face in the workplace (Hartman, DesJardins & MacDonald 2015a).

Case studies are another popular pedagogical strategy for teaching ethics. Case studies provide real-world examples of ethical dilemmas and allow students to analyse and debate different approaches to resolving them. This approach is effective in helping students develop ethical reasoning skills and learn how to apply ethical theories to practical situations (Gonzalez & Freeman 2010). Thus, case studies have been found to be an effective tool for improving students' ethical decision-making abilities and their ability to apply ethical principles to real-world situations (Jones, Reichard & Mokwa-Tarnowski 2019).

Incorporating experiential learning opportunities into ethics education is also an effective strategy. This can include internships, service-learning and community engagement projects that allow students to apply their ethical knowledge and skills in real-world settings (Shah, Anwar & Irani 2017). This approach can help students develop a deeper understanding of ethical issues and foster a sense of social responsibility. Community engagement is an effective pedagogical strategy for teaching ethics. This approach involves partnering with local organisations or businesses to provide students with opportunities to work on ethical projects or volunteer in the community. Research has shown that community engagement can enhance students' understanding of ethical issues and promote their development as responsible, ethical leaders (Walters & Schmitz 2019).

Another pedagogical strategy for teaching ethics is the use of ethical codes and standards. According to De los Reyes, Kim and Weaver (2017), ethical codes and standards can be used to provide students with a framework for understanding ethical principles and guidelines for ethical behaviour in specific professions or industries. This can help students to understand the importance of ethical conduct in their chosen fields and to develop the skills necessary to navigate ethical challenges in their professional lives.

Recent studies have also emphasised the importance of integrating technology in ethics education. Simulation games are becoming an increasingly popular pedagogical strategy for teaching ethics. Simulation games provide a virtual environment in which students can practice making ethical decisions and experiencing the consequences of those decisions. This approach is effective in promoting students' engagement with ethical issues and helping them develop skills for ethical decision-making (Vinkenburg, Velazquez & Weatherby 2015). In addition, the use of online platforms and social media can facilitate discussions and engagement on ethical issues among students (Wang 2016).

☐ Challenges and limitations of different pedagogical approaches

While pedagogical approaches can be effective in teaching ethics, they can also present various challenges and limitations that need to be addressed to ensure their effectiveness. This section discusses some of these challenges and limitations and potential ways to overcome them.

Active learning, for instance, can be time-consuming and may require additional resources to implement, which can be a limitation for educators. However, research has shown that educators can overcome this limitation by incorporating active learning strategies into existing course materials (Hartman, Whitman & Matten 2015b). By doing so, educators can create more interactive and engaging learning experiences without increasing course time or workload.

Case studies may present challenges in terms of selecting appropriate cases and providing sufficient background information for students to understand the context and ethical dilemmas presented. However, one potential solution to this challenge is to involve professionals in the selection and development of cases to ensure their relevance and authenticity (Jones, Goddard & Walker 2019). Additionally, providing pre-reading materials and structured discussion prompts can help students better understand and analyse the case.

Community engagement may pose logistical challenges, such as identifying appropriate partners and managing student schedules. However, establishing clear expectations and guidelines for student involvement and partnering with organisations that have experience working with students can help overcome these challenges (Walters & Schmitz 2019). Furthermore, incorporating community engagement into the course curriculum from the outset can allow for better planning and coordination.

Technology-based approaches, such as simulation games, may require technical skills or access to specialised software, which can be a limitation for some educators and students. However, with the increasing availability and accessibility of educational technology, educators can find resources and support to implement these strategies (Vinkenburg et al. 2015). Additionally, providing clear instructions and technical support can help ensure that all students have the opportunity to engage with these tools.

The importance of faculty development to promote effective pedagogy

Faculty development is critical for promoting effective pedagogy in teaching ethics. Effective faculty development programmes provide educators with the necessary knowledge, skills and resources to implement innovative pedagogical strategies in their teaching practice. These programmes can also help faculty members stay up-to-date with current research and best practices in ethics education.

One study found that faculty development programmes can positively impact the quality of ethics education. The study found that faculty who participated in a faculty development programme that focused on ethics education were better equipped to address ethical issues in the classroom and more likely to use active learning strategies and case studies (Pellegrino et al. 2020). Another study found that faculty development programmes that focused on integrating technology into ethics education led to increased student engagement and improved learning outcomes (Vinkenburg et al. 2015).

Faculty development programmes can also address common challenges and limitations of pedagogical approaches. For instance, faculty development programmes can provide educators with guidance on how to incorporate active learning strategies into their courses without increasing workload or course time (Hartman et al. 2015b). Additionally, faculty development programmes can provide educators with resources and support for selecting appropriate cases and developing pre-reading materials for case studies (Jones, Wicks & Freeman 2019).

Moreover, faculty development programmes can help educators address issues related to community engagement, such as identifying appropriate community partners and managing student schedules. Faculty development programmes can provide educators with resources and support for developing clear expectations and guidelines for student involvement and partnering with organisations that have experience working with students (Walters & Schmitz 2019).

Overall, faculty development is essential for promoting effective pedagogy in teaching ethics.

Cognitive learning theories and ethical leadership development

Cognitive learning theories emphasise the role of mental processes in learning and development. In the context of ethical leadership development, these theories suggest that individuals can learn ethical leadership skills and behaviours through the acquisition and application of knowledge, as well as through reflection and feedback.

One prominent cognitive learning theory is social cognitive theory, which emphasises the importance of observational learning, or learning through observing the behaviour of others. In the context of ethical leadership development, this theory suggests that individuals can learn ethical leadership behaviours through observing and modelling the behaviour of ethical leaders (Bandura 1986).

Another cognitive learning theory relevant to ethical leadership development is constructivism. Constructivism emphasises the role of individual interpretation and meaning-making in learning and development. In the context of ethical leadership development, this theory suggests that individuals can construct their own understanding of ethical leadership through reflection, self-assessment and dialogue with others (Bruner 1990).

According to Rest's four-component model of moral behaviour (1986), ethical decision-making involves four components: moral sensitivity, moral judgement, moral motivation and moral character. Cognitive learning theories can be used to develop these components by promoting self-reflection and critical thinking. For example, the use of case studies and other experiential learning activities can help individuals develop their moral sensitivity by exposing them to ethical dilemmas and challenging them to consider multiple perspectives. The use of reflective writing and discussion prompts can also help individuals develop their moral judgement by encouraging them to articulate their own ethical beliefs and values and to evaluate the ethical implications of their decisions (De los Reyes et al. 2017).

Research has supported the applicability of cognitive learning theories to ethical leadership development. For example, a study of ethical leadership development programmes found that programmes that included observational learning and feedback were more effective in promoting ethical leadership development than programmes that did not include these components (Peng & Wei 2020). Another study found that reflective activities, such as journaling and self-assessment, were effective in promoting ethical leadership development in MBA students (Sankarapandi & Gandolf 2016).

Furthermore, cognitive learning theories suggest that ethical leadership development is an ongoing process that involves continuous learning, reflection and feedback. This idea is supported by research that has found that ongoing leadership development programmes that incorporate reflective activities and feedback are more effective in promoting ethical leadership than one-time training sessions (Sims & Brinkmann 2002).

How cognitive learning theories can promote self-reflection, personal growth and understanding of ethical principles

Cognitive learning theories focus on how people acquire, process and use knowledge. These theories provide insights into how individuals learn and understand ethical principles and how they can apply them in their personal and professional lives. The following discussion highlights some key aspects of cognitive learning theories and their relevance to promoting self-reflection, personal growth and understanding of ethical principles.

According to cognitive learning theories, individuals learn by actively constructing knowledge through their experiences, observations and interactions with the environment (Piaget 1970). This process involves several cognitive processes, such as attention, perception, memory and reasoning, which enable individuals to make sense of their experiences and to develop new knowledge and skills.

One way cognitive learning theories can promote self-reflection is through the use of metacognitive strategies. Metacognition refers to the process of thinking about one's own thinking, and it involves awareness of one's own knowledge, skills and learning strategies (Flavell 1979). By engaging in metacognitive activities such as self-monitoring, self-evaluation and self-regulation, individuals can reflect on their own ethical values, beliefs, and behaviours and identify areas for personal growth and development (Schraw & Dennison 1994).

Furthermore, cognitive learning theories emphasise the importance of schema development in knowledge acquisition. Schemas are mental frameworks or structures that individuals use to organise and interpret information (Anderson & Bower 1973). In the context of ethical leadership development, schemas can be used to represent and understand ethical principles, values and behaviours. By developing and using ethical schemas, individuals can better understand and apply ethical principles in their personal and professional lives.

Another way cognitive learning theories can promote understanding of ethical principles is through the use of cognitive apprenticeships. Cognitive apprenticeships involve modelling, coaching and feedback to facilitate learning and development (Collins, Brown & Newman 1989). In the context of ethical leadership development, cognitive apprenticeships can be used to help individuals develop ethical reasoning skills by providing opportunities for guided practice and feedback on ethical decision-making.

Recent studies have provided support for the effectiveness of cognitive learning theories in promoting self-reflection, personal growth and understanding of ethical principles. For example, a study by Liu et al. (2017) found that metacognitive strategies can improve ethical decision-making and promote self-reflection in medical students. Another study by Ahmad and Gao (2018) found that cognitive apprenticeships can be effective in promoting ethical leadership development in business students.

Best practices for designing ethical curricula

Designing ethical curricula for business leaders is crucial to ensure that they have the knowledge, skills and values needed to navigate complex ethical challenges in their professional lives. The following discussion highlights some best practices for designing ethical curricula for business students based on recent research and expert recommendations.

- **Integrate ethics across the curriculum:** Integrating ethics across the curriculum is essential to ensure that ethical principles are not seen as an isolated topic but rather as an integral part of all aspects of business education. One study recommends incorporating ethics into all business courses rather than creating a separate ethics course, thus avoiding isolating the study of ethics from other business subjects (Hartman et al. 2015a). This approach helps students understand the connections

between ethics and other business areas and how ethical considerations are relevant in all business decisions.
- **Use real-world case studies:** Using real-world case studies is an effective way to help students develop critical thinking and ethical reasoning skills by providing them with opportunities to analyse complex ethical dilemmas (Hartman et al. 2015b). Case studies help students understand the complexities of ethical decision-making in business and the consequences of unethical behaviour. Case studies also allow students to develop empathy and understanding of different perspectives and stakeholders involved in ethical dilemmas.
- **Use experiential learning:** Experiential learning provides students with opportunities to apply ethical principles and decision-making skills in real-world situations. This approach includes simulations, role-playing and internships, among others. Research shows that experiential learning can be effective in enhancing students' ethical reasoning skills and ethical decision-making abilities (Waples et al. 2015). Moreover, experiential learning helps students understand how ethical principles apply to specific business situations and the consequences of their decisions.
- **Include diversity and inclusion:** Incorporating diversity and inclusion in ethical curricula is essential to help students understand the role of ethical principles in creating a more equitable and just society. Research shows that students who have exposure to diversity and inclusion are more likely to have higher levels of ethical awareness (Johnson & Woodcock 2019). By including diversity and inclusion in ethical curricula, business leaders can help students understand how ethical principles apply to diverse populations and how they can contribute to building a more just and equitable society.

Recent studies have provided support for the effectiveness of these best practices in designing ethical curricula for business leaders. For example, a study by Waples et al. (2015) found that experiential learning can enhance students' ethical reasoning skills and ethical decision-making abilities. Another study by Johnson and Woodcock (2019) found that exposure to diversity and inclusion can increase students' ethical awareness.

Promoting critical thinking and self-reflection is also an important aspect of designing ethical curricula. According to Ahmad and Gao (2018), this can involve the use of open-ended questions, discussion prompts and reflective writing assignments that encourage students to think deeply about ethical issues and to articulate their own ethical beliefs and values. It can also involve the use of group discussions and peer feedback to encourage students to engage in respectful dialogue and to learn from one another's perspectives.

Challenges and opportunities in designing ethical curricula

Designing ethical curricula presents both challenges and opportunities. The following discussion highlights some of the challenges and opportunities in designing ethical curricula for business students based on recent research and expert recommendations.

Challenges

- **Resistance from students**: One challenge in designing ethical curricula is student resistance. Some students may view ethics as a secondary or irrelevant part of their business education. This can lead to a lack of engagement with ethical content in courses (Chen & Hou 2016).
- **Instructor competence:** Another challenge is the lack of instructor competence in teaching ethics. Many business instructors may not have expertise in ethical principles or pedagogy (Hartman et al. 2015b).
- **Time constraints:** Time constraints in the curriculum are another challenge in designing ethical curricula. Integrating ethics across the curriculum may require additional time and resources (Trevino & Weaver 2003).

Opportunities

- **Increasing awareness:** With increasing public attention to corporate scandals and ethical failures, there is a growing demand for ethical education in business programmes (Baker 2017). This provides an opportunity for educators to integrate ethics across the curriculum and create a culture of ethical awareness in business education.
- **Industry demand:** There is also increasing demand from the industry for ethical leadership and corporate responsibility. Business leaders recognise the importance of ethical principles in creating a sustainable and socially responsible business environment (Weber & Wasieleski 2013). This provides an opportunity for educators to prepare students for ethical leadership roles in their careers.
- **Innovative pedagogy:** Educators can use innovative pedagogical approaches to engage students with ethical content. For example, using simulations, role-playing and interactive exercises can help students apply ethical principles in real-world situations (Chen et al. 2016).

How to overcome the challenges

- **Incorporate ethics across the curriculum:** One way to overcome resistance from students is to integrate ethics across the curriculum

rather than isolating it in a separate ethics course. This approach can help students understand the relevance of ethical principles to all aspects of business education (Hartman et al. 2015b).
- **Provide instructor training:** Providing training for instructors on ethical principles and pedagogy can help them feel more comfortable and competent in teaching ethics. This can include workshops, seminars or online resources (Chen et al. 2016).
- **Use efficient teaching techniques:** Time constraints in the curriculum can be addressed by using efficient teaching techniques, such as using real-world case studies or experiential learning (Trevino & Weave 2003).

The role of universities and business schools in promoting ethical leadership

Universities and business schools play a crucial role in promoting ethical leadership by providing students with the knowledge, skills and values needed to make ethical decisions in their professional lives. This section will discuss the role of universities and business schools in promoting ethical leadership and provide recent research and expert recommendations to support this role.

Education and training

One of the most important roles of universities and business schools in promoting ethical leadership is education and training. According to a study by Baker (2017), business schools can play a key role in cultivating ethical leaders by integrating ethics into their curricula. This can be done by offering courses on business ethics, corporate social responsibility and sustainability, as well as by integrating ethics into other courses, such as finance, marketing and operations management. This approach helps students understand the relevance of ethical principles to all aspects of business education and prepares them for ethical leadership roles in their careers.

In addition to formal education, universities and business schools can also promote ethical leadership through training and development programmes. According to a study by Choi, Ullah and Kwak (2015), leadership development programmes that emphasise ethical leadership are associated with higher levels of ethical behaviour and fewer ethical violations in organisations. These programmes can be offered to students, alumni and business professionals and can include workshops, seminars and online resources.

Research and thought leadership

Another important role of universities and business schools in promoting ethical leadership is research and thought leadership. Universities and business schools can contribute to the development of ethical leadership theories and frameworks, as well as to the study of ethical leadership practices in organisations. For example, a study by De Hoogh and Den Hartog (2008) found that transformational leadership, which emphasises ethical values and moral development, is associated with higher levels of ethical behaviour in organisations. Universities and business schools can also produce thought leadership through publications, conferences and other forums, which can help disseminate knowledge and best practices in ethical leadership.

Partnerships and collaborations

Finally, universities and business schools can promote ethical leadership through partnerships and collaborations with organisations and stakeholders. By partnering with organisations that prioritise ethical leadership, universities and business schools can align their curricula and research with the needs of the business community. For example, a study by Baker (2017) found that partnerships between business schools and companies can help promote ethical leadership and corporate responsibility. Universities and business schools can also collaborate with stakeholders, such as regulatory bodies and advocacy groups, to promote ethical leadership and responsible business practices.

Universities and business schools play a critical role in promoting ethical leadership by providing education and training, conducting research and thought leadership, and forming partnerships and collaborations. By integrating ethics into their curricula, developing ethical leadership theories and frameworks, and partnering with organisations and stakeholders, universities and business schools can help prepare students for ethical leadership roles in their professional lives and contribute to more ethical and responsible business environments.

Recommendations for integrating pedagogy and cognitive learning into ethics education

Incorporating pedagogy and cognitive learning into ethics education is essential for students to develop critical thinking skills and to enhance their ethical decision-making abilities. In this section, we will discuss some recommendations for integrating pedagogy and cognitive learning into ethics education, along with recent research and expert recommendations to support these approaches.

☐ Active learning strategies

Active learning strategies can be used to engage students in ethical decision-making and help them understand the complexities of ethical dilemmas. According to a study by Wang (2016), active learning strategies, such as case studies, role-playing exercises and group discussions, can be effective in promoting ethical reasoning and moral decision-making. These strategies help students to analyse complex situations and consider multiple perspectives, which can enhance their ethical decision-making abilities.

☐ Experiential learning

Experiential learning is a hands-on approach to learning that involves students in real-world situations. According to a study by Niemi and Niemi (2017), experiential learning can enhance ethical decision-making by allowing students to apply ethical principles to real-world scenarios. This approach can be accomplished through internships, service-learning projects and simulations, which can help students develop their ethical decision-making skills in a real-world setting.

☐ Ethics across the curriculum

Integrating ethics into all areas of the curriculum is an effective way to promote ethical decision-making and cognitive learning. According to a study by Velasquez et al. (2018), ethics across the curriculum programmes can help students develop ethical reasoning skills that can be applied across a variety of disciplines. Ethics across the curriculum programmes integrate ethics into courses across the curriculum rather than just in specific courses on ethics or business ethics. This approach helps students to understand the relevance of ethical principles to all areas of their education and prepares them for ethical decision-making in their professional lives.

☐ Critical thinking skills

Developing critical thinking skills is an important aspect of cognitive learning and ethical decision-making. According to a study by Haapasaari, Rissanen and Mattila (2018), critical thinking skills are essential for students to analyse complex ethical dilemmas and make sound ethical decisions. Strategies for developing critical thinking skills include Socratic questioning, problem-solving exercises and analysis of case studies. These approaches help students to develop the ability to analyse complex situations, consider multiple perspectives and make informed ethical decisions.

Multidisciplinary approach

A multidisciplinary approach to ethics education can also promote pedagogy and cognitive learning. Ethics education can be integrated into a variety of disciplines, such as business, law, medicine and engineering. According to a study by Zhang et al. (2019), a multidisciplinary approach can enhance students' understanding of ethical issues and promote interdisciplinary collaboration to address ethical challenges. By learning about ethics in the context of different disciplines, students can develop a broader perspective on ethical issues and learn how to apply ethical principles in various settings.

Technology-enhanced learning

Technology-enhanced learning can also be used to integrate pedagogy and cognitive learning into ethics education. According to a study by Wu and Wu (2021), technology-enhanced learning methods such as online discussion forums, social media and virtual reality simulations can promote student engagement and facilitate ethical decision-making processes. Technology-enhanced learning can also provide students with opportunities to practice ethical decision-making skills in a safe and controlled environment.

Promote self-reflection

Ethics education should encourage students to reflect on their own values, beliefs and biases. This can be achieved through activities such as journaling or reflective writing assignments.

Provide mentorship

Mentorship programmes can help students to develop ethical leadership skills and to navigate complex ethical challenges. Mentors can provide guidance, support and feedback to students as they navigate ethical issues.

Conclusion

In conclusion, the chapter highlights the importance of prioritising ethics education in business schools and universities, recognising that ethical leadership development is essential to address the complex ethical challenges of the future. The potential of pedagogy and cognitive learning in promoting ethical decision-making is emphasised, including the use of active learning strategies, experiential learning, ethics across the curriculum, critical thinking skills, multidisciplinary approaches and technology-enhanced learning.

While these approaches have shown promise in enhancing students' ethical decision-making abilities, ongoing efforts are needed to foster a culture of ethical behaviour in the business community.

Therefore, it is crucial that universities and business schools prioritise ethics education and develop a new generation of ethical business leaders who are equipped with the knowledge, skills and values to navigate the ethical challenges of the future. This can be achieved through a concerted effort to integrate ethics into the curriculum, provide opportunities for practical ethical decision-making experiences, and create a culture of ethical behaviour that emphasises the importance of social responsibility and accountability.

In conclusion, the call to action is for all stakeholders to work together to prioritise ethics education in business schools and universities so that future generations of business leaders can effectively navigate the complexities of the business world while upholding ethical principles and promoting social responsibility.

Chapter 14

Responsible management education in Africa: Teaching sustainable business strategies

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Introduction

Achieving financial, social and environmental sustainability has become a significant global challenge for individuals, businesses and governments. Businesses and their leadership have a crucial role to play in addressing this challenge, particularly in Africa, where non-action could have devastating consequences for countries' (typically large) populations. Businesses must therefore formulate carefully crafted strategies to drive financial, social and environmental sustainability while implementing good local and global governance. However, given the continent's institutional shortcomings and weak infrastructure, it is essential to raise awareness about sustainability and provide relevant education on its inherent opportunities and challenges.

In this chapter, the importance of building a clear corporate purpose, creating conditions for the implementation of sustainable strategies,

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managing stakeholders and creating shared value is discussed. In particular, the complexities of managing stakeholders with different interests and creating shared value within cross-cutting contexts are discussed.

Following the Impactful Five (i5) learning methodology developed by the United Nations (UN) Principles for Responsible Management Education (PRME), an integrative sustainable business strategy curriculum is presented. The overarching design of this curriculum moves education from a performativity to a process of learning that fosters both joy and well-being. It does this by engaging in sensing and contemplation; making learning meaningful by personalising real-life, exemplar cases; developing supportive social interactions by braving and bridging contextual social realities to arrive at business strategies; facilitating active engagement by linking management experiences to sustainable strategies; and designing for iteration by prototyping innovative solutions.

The chapter emphasises the importance of embedding a sustainable business strategy curriculum in business management education. As such, the opportunities and challenges through economic, social and governance lenses are considered, and the implications thereof for large corporates, small and medium enterprises and business leaders are reflected on. The author also explores the 'what', 'why' and 'how' of managing sustainable business strategies. Moreover, it is demonstrated how business management educators can employ contextually relevant business cases to create a deeper awareness of the opportunities and challenges associated with driving sustainability in a business. By integrating responsible management education into business management education, it is demonstrated that it is possible to equip the next generation of business leaders with the knowledge and skills needed to address the sustainability challenges of the 21st century.

The following topics are addressed in the sections below: the context for teaching sustainable business strategies in South Africa, four theoretical frameworks for understanding sustainable business strategies, and a unique and novel pedagogy tool for delivering responsible management education.

Context for teaching sustainable business strategies

Sustainability has become an increasingly important topic in commerce education in South Africa. Over the years, the teaching of sustainability has become much more important because of the need to develop change agents to confront the issues of climate change, social unsustainability and poor environmental practices. Given the growing acknowledgement of the need for sustainable development and the influence of business on the environment, society and the economy, commerce education institutions are under increasing pressure to integrate sustainability into their curricula with a view to producing knowledgeable graduates who are equipped to contribute to a more sustainable future.

In 1987, the Brundtland Commission defined the goal of sustainable development as being to meet the needs of the present without compromising the ability of future generations to meet their needs. Although it is a macro concept, sustainable development links strongly to the micro activities of individuals and businesses, as well as their values, opinions, behaviours and choices. This has become increasingly evident in a world driven by consumption. Raivio (2011) asserts that while sustainable development encompasses the actions of sustainable producers, it also relies heavily on sustainable consumers and the pressure they put on policymakers. Sustainable development therefore requires all actors – individuals, businesses and policymakers – to play an active role in ensuring that its overarching goals can be met (Raivio 2011).

One of the reasons for teaching sustainable business strategies is to educate and empower change agents (Dentoni, Pinkse & Lubberink 2020). These are individuals in businesses who 'deliberately tackle social and ecological problems with entrepreneurial means to put sustainability management into organisation practice and contribute to the sustainable development of the economy and society' (Hesselbarth & Schaltegger 2014, p. 26).

Ever since the Industrial Revolution, the challenges that businesses have had to navigate and the changes that they have had to introduce have been enormous. Clearly, then, as the world contemplates an even more uncertain future, sustainable businesses need to lead the charge and effectively manage the change process (Hesselbarth & Schaltegger 2014). The rationality of this choice of actors is strongly dependent on the access they have to knowledge of the environment in which they produce, consume and legally operate and the implications thereof for society.

This chapter focuses on the role of the business actor, giving due attention to the complexity of the business ecosystem, which requires different stakeholders to collaborate in addressing the escalating challenges that the world is facing. More specifically, an overview of the importance of sustainability education in the teaching of sustainable business strategies in South Africa is provided. The theoretical frameworks for devising and operationalising sustainable business strategies and presenting an integrative learning methodology proposed by the UN PRME for teaching sustainability are also discussed.

Based on Hesselbarth and Schaltegger (2014), I developed a useful framework for actors to teach sustainable business strategies (see Table 14.1). This framework highlights different activities and the

TABLE 14.1: Framework for teaching sustainable business strategies.

Actor* activity	Subject-specific competencies	Social competencies	Personal competencies and actions
Identify and develop the business case for sustainability	• Understand the science behind sustainability (for example, climate change) • Understand relevant environmental, social and economic theories • Understand the policy and governance landscape (industry, local and global) • Understand the drivers and challenges of corporate sustainability	• An ability to inspire others • An ability to identify and engage strategic partners and guest speakers	• An ability to challenge the status quo with logical and caring reasoning
Integrate sustainability aspects into core business education	• Analyse the opportunities, challenges and risks associated with embedding a sustainable business strategy	• An ability to convert complex thinking into relatable information and convey it to a wide and varied audience	• A strong commitment to sustainable principles and values
Reflective learning practices	• Integrate sustainability theories into practice	• Empathy towards students	• An overarching individual purpose

Source: Adapted from Hesselbarth and Schaltegger (2014).
Note: *, 'Actors' could include educators, facilitators, coaches and team leaders, among others.

relevant competencies needed to enable the learning process. For example, for an actor to effectively position the business case for a climate leadership strategy, they need to understand the science of climate change. In addition, they need social competencies to inspire others to see the relevance of developing a climate leadership strategy that considers the contextual environment. They also need the personal competencies to convey complex information simply and logically.

The context of South Africa

South Africa, with a Gini coefficient of 0.63 (World Bank 2023), currently stands as the most unequal country in the world. This exposes the country to a myriad of social problems, including food shortages, gender-based violence and high levels of unemployment, which are compounded by environmental issues brought about by climate change. For example, environmental crises such as the KwaZulu-Natal floods, the severe drought in the Eastern Cape and other severe weather fluctuations in the country are potential triggers of socio-economic upheavals. Rising unemployment, lost livelihoods and increased poverty levels are only some of the negative externalities that may result.

Although there is a current global response to climate change, the mitigation of and adaptation to the effects of climate change need to take place at the local level. Climate change needs to be taken very seriously, as it is poised to negatively impact developing countries like South Africa that have limited to no climate mitigation and adaptation policies or infrastructure in place.

Policymakers and government leaders have been looking to create a just framework where individual countries actively take part in addressing the issues surrounding climate change. In 2015, nearly all countries signed the Paris Agreement – a voluntary, opt-in-or-opt-out agreement designed to strategically engage with the issue of climate change. The Paris Agreement (UNFCCC 2015) requires developed countries to support developing countries in their drive towards achieving Net Zero, which means cutting greenhouse gas emissions to as close to zero as possible. Over the past five years, the US$100 billion goal still remains unmet, with the closest to target being US$83.3bn in 2020 (OECD 2022). Juxtapose this with the fact that, in developing countries, the funds needed to adapt to the effects of climate change are north of US$70bn (Guteres 2021), as shared by the UN Secretary General. The implications for climate action are immense.

It is within the described context that South Africa recently announced its Just Energy Transition Implementation Project (JET IP) (South Africa's Just Energy Transition 2023). This is an important step, as a significant proportion of South Africa's productive economy is currently dependent on the activities of coal sales and usage, which are major contributors to the country's growing carbon footprint. There are, however, opportunities for key stakeholders to address the sustained social and environmental crises that grip the country. Policymakers can broadly influence the policies and infrastructure underpinning climate change mitigation and sustainability. While businesses are highly dependent on the policy decisions made in these areas, they are nevertheless able to proactively address current problems and influence the state of play. There are many examples of businesses ameliorating the failures of the state through corporate social responsibility (Rehbein & Schule 2015), corporate philanthropy (Gautier & Pache 2015) or policy change advocacy (Kolk & Pinkse 2007).

The recent coronavirus disease 2019 (COVID-19) crisis showed how the South African private sector, through the Business for South Africa (B4SA) collaboration and the Solidarity Fund, was able to support the government in addressing some key socio-economic problems facing the country. Moreover, in a country with recurring social, economic and environmental crises which require urgent attention, it is essential for businesses to shoulder the responsibility for designing and operationalising sustainable business strategies. Businesses also have a crucial role to play in developing sustainable business practices and enabling their internal and external networks to take proactive steps to address the diverse sustainability concerns of today.

Businesses' environmental sustainability actions can also be channelled into the energy transition, in the form of strategies to use more sustainable sources of energy, including wind and solar. Formulating and implementing strategies that minimise, track and measure environmental impacts could help to support conservation efforts aimed at enhancing biodiversity and restoring natural ecosystems. All the mentioned sustainability actions, however, are dependent on effective strategic planning and implementation.

In the next section, I discuss some of the current theoretical perspectives on teaching sustainable business strategies and provide case examples of selected real-life businesses that have practically engaged with these perspectives in developing their own sustainable business strategies.

Theoretical perspectives on teaching sustainable business strategies

Business purpose and purpose-driven strategy

The concept of business purpose is not new. As far back as three decades ago, Bartlett and Ghoshal (1994) defined purpose as encompassing a business's moral response and responsibility to all of its stakeholders, not limited to instrumentally making a profit but a genuine concern for its responsibilities. In a traditional business environment, where the sole purpose of the business is to make a profit, embarking on a drive to introduce purpose-driven strategies is difficult and presents a dilemma for business leaders. The often-mentioned challenge of balancing different stakeholders' expectations is real.

In a predominantly neoliberal world, where significant systemic effort goes into generating profits, business leaders are often called upon to move away from simply co-creating stakeholder value to actually transforming existing systems to be socially, environmentally and economically responsive. Waddock (2020) interrogates this process of adapting systems by influencing actors to act in ways that bring about a more *transformed* world. She argues that through a process of epimimetics, businesses and other actors in the ecosystem can respond to changes in the context and, accordingly, influence the business ecosystem. However, this process of epimimetics needs the participation of a large number of stakeholders to adequately influence the system.

Developing a purposeful business strategy is useful for a firm's sustainability drive. However, if the firm is to influence the overall system, then more than one purposeful business, purposeful policymaker and purposeful consumer need to be paying attention. This is a call for a transformed and sustainable world for the future. Understanding the need for a purpose-driven strategy sets a business apart from others. It requires executives to consciously think through the process of redefining their overarching business strategy, go beyond profit making and enter a realm that seeks to deliver value to economic, societal and environmental stakeholders (Waddock 2020).

Waddock (2020) adds that when firms pursue their purpose, it should be clearly defined, provide collective value and include a method for tracking and measuring performance. This is a simple yet effective guide for achieving a purpose and can be used as a framework by commerce educators in their quest to help South African businesses find their purpose. The Unilever case on real beauty (Kramer, Sidibe & Veda 2021) illustrates how a corporation pursued its purpose, allocating resources to the *Dove and Real Beauty* campaign with the intention of empowering women and nurturing a deeper sense of dignity. This is just one teaching example; there is much more that can be said about identifying and/or redefining a business purpose.

Driving a sustainable business strategy through business model innovation

The concept of a business model has been around for a long time and is widely used. While such a model lacks a clear and universally accepted definition, interest in business models has grown exponentially in the last decade, especially in the strategic management field (Prescott & Filatotchev 2021). This growing interest can largely be attributed to the combined impact of globalisation, deregulation and advances in information and communication technologies (ICTs) (Massa, Tucci & Afuah 2017). In fact, some scholars (Bocken & Geradts 2019; Evans et al. 2017; Foss & Saebi 2018) and practitioners argue that the ability to implement structural changes through the use of innovative business models can determine a firm's current and future competitiveness.

Massa et al. (2017) define a business model as a description of an organisation and how that organisation functions in pursuit of its goals, which may be profitability, growth and/or social impact (sustainability). As such, business models applied in the limited-innovation environment characteristic of some emerging markets differ from business models applied in developed markets (George, Mcgahan & Prabhu 2012), primarily because of the prevailing context in which they are applied. The implication of this for sustainability is that firms need to create unique business models that are specifically tailored to help them overcome the challenges and constraints in their own market environment. Importantly, sustainable business models provide significant opportunities for the application of novel, innovative processes in value chains (Evans et al. 2017).

Sustainable business models carefully analyse the interdependencies between actors involved, whether it is in relation to the value chain, suppliers or consumers. Its development integrates the economic, social and ecological issues that face the business, expanding its purview from the singular focus on economic profit and enabling firms to deepen their innovation to address the pressing issues facing the business and the environment (Evans et al. 2017). A sustainable business model not only serves to exploit an opportunity, but it may also be part of the opportunity to find new ways to concurrently address social, environmental and economic challenges that face businesses. It is important to recognise that sustainable business model innovation is fuelled by a firm's business purpose, which leads to strategising and innovating for sustainability. Without a purpose, it would be relatively easy to default to business-as-usual measures that seek primarily to maximise profits. Kolk and Ciuli (2020) argue that adopting a business model innovation perspective is a useful way for businesses to consider and address their social and environmental impacts. Some scholars (Bohnsack, Pinkse & Kolk 2014; Pedersen et al. 2021) interrogate business model innovation in terms of the complexity of the process of innovating for social and economic sustainability. For example, Bohnsack et al. (2014), in their research on the development of electric vehicles, highlight how path dependencies for incumbent or entrepreneurial firms influence their innovative capabilities and ability to pursue new business model innovations.

In resource-constrained environments, where domestic investment is comparatively low and formal institutions to support the market are weak, firm innovations that seek to efficiently employ capabilities to increase value are consistently sought after. These innovations could be technological or otherwise and could focus on the maximisation of organisational routines and managerial expertise.

Teece (2018) argues that innovation has the capacity to improve a firm's value proposition and its ability to create and capture value. Firms in constrained environments like South Africa maximise their access and response to the external environment by altering their current business activities through a strategic process of reactivating their elemental activities, redefining their boundaries, relocating actors within the firm and reorganising their linkages to address their immediate sustainability concerns (Santos, Spector & Van der Heyden 2011). It is possible to examine the value created for all the actors involved in a value chain and to highlight the impact of the business model on the ecosystem.

Mr Green Africa, a Kenyan plastics recycling company, provides a unique example of how a business can redesign its business model to address a pressing socio-economic issue (Weforum n.d.). Mr Green Africa carefully interrogated its value chain and focused on a key player in that chain – the waste picker – and then designed a business model that met their economic needs and, equally importantly, addressed the environmental issue of plastic waste and the social issue of empowering a group of workers to feel dignified and recognised (Dow 2022).

Stakeholder theory and the creation of shared value

The ongoing conversation in business management circles pits the views of Milton Friedman regarding the primacy of the shareholder against the stakeholder theory, which asserts that value ought to be created for all stakeholders and not be limited to the shareholder (Freeman 2017). The Business Round Table, a large group of chief executive officers (CEOs) of top global businesses, only recently recognised the need to expand the idea of a business being accountable to its shareholders to the broader view of a business being answerable to all its stakeholders (Harrison, Phillips & Freeman 2020). While there has been an enthusiastic response from top CEOs like Larry Fink from Blackrock, most businesses find it difficult to do what the Round Table says.

The neoclassical definition of value assumes that the costs and benefits of a business strategy are entirely economic, with little or no consideration given to the social and environmental influences of strategic choices (Porter & Kramer 2011). Such a narrow perspective of value cripples the capacity of businesses to play a more prominent role in stabilising and uplifting the communities and societies in which they are located.

Social responsibility is not a peripheral engagement; rather, it should be a holistic strategy in which business and society co-create the relevant success factors to deliver a symbiotic existence – what Porter and Kramer (2011) refer to as the process of creating shared value. Porter and Kramer (2011):

> [*D*]efine the concept of shared value as policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates. (p. 6)

Creating shared value involves (1) reconceiving products and markets, (2) redefining productivity in the value chain and (3) enabling local cluster development.

The process of creating shared value can be infused into a business's overall strategy if it is underpinned by a business purpose. An example is Nestlé's role in creating shared value in their engagement with the Makhoba community in South Africa (Nestlé 2022). The case involves the business strategically looking at how productivity is defined in its value chain. The focus is on its milk value chain, and the partnership with the Makhoba community is designed as a long-term engagement to improve the productivity of the cattle farm. In improving the company's competitive advantage, Nestlé also focuses on the overall development of the community through local cluster development. To do this, the business partners with the Inyosi Empowerment Fund to train members of the community in advanced technological tools to improve the agricultural yield. Community members are also trained on indigenous and non-indigenous plants and how to effectively get rid of them, because of their negative influence on the farm's productivity.[20]

Socio-ecological resilience and climate strategy

Why should businesses be concerned about the natural environment? This is a question that is often asked. Purpose-driven businesses are interested in how they engage with a wide range of internal and external stakeholders (Harrison et al. 2020). External stakeholders might include social communities and the natural ecology characterising the physical environment. In fact, societies, ecosystems and the climate are all interconnected and constitute a complex system of stakeholders that businesses need to actively engage with.

The complexity of a business's engagement with ecological stakeholders requires that there are resilience strategies in place which can be effectively and efficiently formulated and implemented within a complex system (Dentoni et al. 2020). This socio-ecological resilience of a business, which is defined 'as the buffering capacity of a system to cope with change and unforeseen disturbances while safeguarding the ecological systems on which human activity depends' (Dentoni et al. 2020, p. 96), is under serious threat from the quickening pace of climate change. In fact, the Intergovernmental Panel on Climate Change (IPCC) (2021) reports that 2023 is a major milestone on the road to Net Zero, highlighting the pressure that individuals, businesses and policymakers are under to aggressively tackle the high levels of carbon emissions and low levels of emission reductions.

Regarding management sustainability strategies, Kolk and Ciuli (2020) recommend that firms consider four factors when adopting corporate positions on climate change. Table 14.2 lists the four factors and the four guiding questions in each case for making strategic decisions. This constitutes a useful question guide for educators when engaging with

20. See https://vimeo.com/731771155.

TABLE 14.2: Factors for businesses to consider in the formulation of climate change strategies.

Factors	Four guiding questions
Issue-specific factors	1. What is the impact of the issue on sectors, countries and locations? 2. Is there institutional infrastructure available to address the issue? 3. To what degree is the issue and connected regulation global? 4. How complex and uncertain is the issue?
Sector-specific factors	1. What is the nature and extent of the threat posed by climate change to the sector? 2. Are there alternatives, and how costly are these alternatives? 3. How globalised is the sector? 4. What is the type and nature of the supply chain that supports the industry?
Firm-specific factors	1. What is the firm's economic situation and market positioning? 2. What is the firm's degree of (de)centralisation and internationalisation? 3. What is the corporate culture, managerial perception and strategic planning towards climate change? 4. What is the firm's ability to manage internal resources (expertise), anticipate risks, spread vulnerabilities and manage stakeholders?
Country-specific factors	1. What are the societal concerns about climate change and their views on firm responsibility? 2. What are the national policies on climate change? 3. What are the national industrial promotion policies? 4. What is the country's geographical and natural capital in relation to possibilities for renewables?

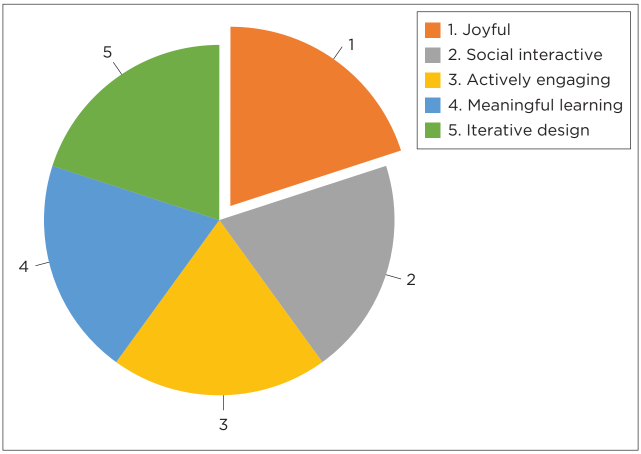
Source: Adapted from Kolk and Ciuli (2020).

companies and their business strategies. Questions about the prevailing contextual issues, sector-specific concerns and the firm's capabilities can help to reveal opportunities for businesses to think differently about how they should engage.

In this section, I have provided some theoretical perspectives for educators on how to start engaging with business students for the purpose of developing more sustainable business strategies. Using business examples, I explained that businesses should develop strategies that are purpose-driven with the potential to address sustainable issues. In the next section, I present and discuss the i5 methodology, with views and cases drawn from personal experience.

Embedding the Impactful Five methodology

The i5 programme was launched by the UN PRME in 2023. It is an intentional pedagogic methodology designed to equip responsible and sustainable leaders emerging from business schools with the holistic skillset needed to actively navigate the systemic opportunities and challenges found in the social, economic and ecological environments in which 21st-century businesses operate.



Source: UN PRME (n.d.).
FIGURE 14.1: The Impactful Five methodology.

The programme is specially designed to empower business schools with the educational capabilities to satisfy the demand for more socially and environmentally sound businesses. The goal is to situate business school education as a source of timely and relevant knowledge in a fast-changing world. The i5 methodology, as illustrated in Figure 14.1, is an integrative learning methodology that enables students to be active agents in retaining their autonomy, staying rooted in the reality and practicality of the prevailing issues, remaining excited about the possibilities emanating from their learning and developing much-needed critical thinking skills (André 2020).

The i5 methodology is expressed in five (aptly named) signature moves that set out the process of teaching in a way that actively co-creates the learning environment with the students. The signature moves are:

1. make learning meaningful
2. facilitate active engagement
3. design for iteration
4. develop supportive social interaction
5. foster joy and well-being.

As an early adopter of the i5 methodology, I have had some experience in applying the pedagogy tool when delivering sustainable business strategy education. In the next section, I showcase some scenarios from personal experience and collegial insights.

Make learning meaningful

This signature move involves making the theories and constructs being taught contextually relatable. Through the activities of role modelling, personalising, surfacing and dignifying, educators have an opportunity to give students ample opportunity to see how the issue relates to their particular context.

Students engage in immersion exercises, which extend their opportunity horizon as the exercises relate to the issue in question. These immersion exercises might involve visits to selected physical locations where the issues of inequality, unemployment and poverty are in full view. Through these immersions, students develop a deeper appreciation of, for example, the social sustainability concerns that need to be addressed and how businesses could play a role.

Facilitate active engagement

This signature move constitutes a two-way street in which students share their business experiences, and the educators deductively apply the theories to the experience of the students. Activities that connect the real-life experiences of the students to the theoretical expertise of the educators are encouraged.

Through the use of case studies, students are exposed to the practicalities surrounding selected theories. These could be published case studies sourced from recognised case study publishers, or they could be case study insights derived from publicly available information on selected companies. For example, the Porter and Kramer (2011) theory on creating shared value takes on a more realistic character for students when the case focuses on a known company and details how the latter's activities align with the assumptions underpinning the theoretical perspective. In teaching the value of shared value creation, the case of Nestlé and the Makhoba community reveals how the company facilitated local development and redefined productivity in its value chain.

Design for iteration

This signature move focuses on the recurring need to take chances, test ideas and recreate solutions to everyday challenges. It takes the focus away from grades and certification, promoting a more practical learning approach. Sometimes, design for iteration would involve developing mock-ups of proposed solutions.

Through the use of an applied sustainable business project, students are tasked with designing a sustainability-themed applied business project (ABP) that requires them to work in groups, identify social issues and design possible solutions to the identified challenges. This project also requires students to align their problem to selected theoretical frameworks and to determine how the project will retain its competitiveness while tackling the issue in question. The mock-up outputs could be technology-driven mobile and IB-based apps. They could also be consultancy-based solutions. The possibilities are endless, relying entirely on the students' creative skills and the results of their brainstorming sessions.

Develop supportive social interaction

This signature move entails students (through collaborative engagements and syndicate work) sharing ideas and developing sustainable solutions to entrenched problems. For example, in the Gordon Institute of Business Science ABP, which forms part of the first year of the Master of Business Administration (MBA) programme, students are required to spend nine months engaged in a project that ultimately offers a solution to a collectively chosen sustainability problem in South Africa. Identified problems and solutions are wide-ranging, from the development of a marketplace for the disposal of e-waste to the mobilisation of resources for early childhood education.

The benefit of this signature move is that the solution to a given problem is derived from students who understand the issue in question. Moreover, in the process of developing relevant solutions, students learn how to connect, agree, agree to disagree and use innovation to tackle big or meaty problems.

Foster joy and well-being

Arriving at solutions to grand challenges is a heavy responsibility and calls for intensive activity, especially when innovative solutions are required. Yet addressing these challenges can be a positive, and even uplifting, experience and can open up exciting new pathways.

In this signature move, students are assigned to safe spaces in which to reflectively contemplate their emotions, choices and decisions, thereby ensuring that they remain mindful and present in every learning situation. Having the opportunity to contribute to real-life issues that students are passionate about can be a highly creative and joyful experience for them.

Conclusion

Rethinking commerce education in South Africa requires that educators pay close(r) attention to the context, opportunities and challenges that commerce students and businesses face. This is becoming increasingly urgent in the face of escalating global crises that are often characterised by myriad social and environmental issues.

In this chapter, thoughts were shared on some of the resources that could be used to teach business leaders how to manage responsibly and develop a sustainability mindset. In this regard, a praxis method was applied where different theoretical perspectives were applied and opportunities for practice using case studies, immersions and simulations were highlighted. With reference to selected case examples, a novel pedagogy tool was presented for developing future-fit business leaders who, during their learning journey, are likely to experience productive engagement, a sense of community, the power of innovation, heightened awareness and meaning, and joy.

Chapter 15

Unlocking the power of micro-credentials in commerce degrees: A practical example

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Introduction

Reconsidering traditional teaching methods is something that has been widely discussed for many years (Steyn, Millard & Jordaan 2017). Responding to employers' demands for more work-integrated skills (Botha et al. 2018; MCsGreal & Olcott 2022; Msweli, Twinomurinzi & Ismail 2022; Smith, Maguire & Han 2018) has also increased the need to rethink the broader curriculum (Kwarteng & Mensah 2022; MCsGreal & Olcott 2022; Steyn 2021), especially in the commerce field (Coetzee & Du Plessis 2020;

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Elo et al. 2023). As stipulated in the World Economic Forum's Report on the Future of Jobs, the third- and fourth-ranked jobs with a decreased demand include accounting, bookkeeping and payroll clerks (ranked third) and accountants and auditors (ranked fourth) (World Economic Forum 2020). One has to realise the need to adapt as there is already a threat to the traditional commerce fields. Elo et al. (2023) and Maelah et al. (2012) note that the accounting practice and profession are undergoing a massive transformation because of digitisation and globalisation and that the nature or future of work in this profession will differ significantly from what it used to be.

As the demand for enhanced soft skills in the workplace is growing, there is a heightened pressure on higher education institutions (HEIs) to incorporate these skills into the curriculum (Kwarteng & Mensah 2022). However, how to assess these skills is still to be determined and has been investigated over many years (Msweli et al. 2022). In higher education teaching, policymakers have shown a growing interest in exploring the potential of micro-credentials (MCs), considering it a promising avenue to pursue.

What are MCs? Numerous observers widely acknowledge MCs as a means of identifying professional learning outcomes (Kilsby & Fountain 2019; Selvaratnam & Sankey 2021; Varadarajan, Koh & Daniel 2023; Wheelahan & Moodie 2021), thus focusing on the result of the learning process, not the time used for learning. Acknowledged as a thoughtfully designed and standardised framework integrated into conventional applications, MCs facilitate easier employee-hiring processes (Hall-Ellis 2016).

This chapter aims to examine the utilisation of MCs to augment and evaluate soft skills within a teamwork-oriented module designed for commerce students as part of a pilot study at a HEI.

As this study is a pilot study conducted at a single university, the first logical step was to assess the impact on students' academic performance and reactions to the new learning approach. Ethical clearance was obtained for this research from the Faculty of Engineering, Built Environment and Information Technology at the University of Pretoria (UP), protocol number: EBIT/101/2022.

Consequently, the subsequent sections of this chapter will introduce literature to establish the context of this chapter. An overview of the module's background, illustrating how to practically integrate MCs into the module, is presented. Lastly, analysis and discussion of the feedback received from students are presented to assess their response to the implemented approach.

■ Soft skills required by graduates

Elo et al. (2023) identified that now more than ever, the required skills for accounting graduates are changing because of this rapidly changing business environment and should include both technical and professional skills. As an example, Smith et al. (2018) note that although Chinese accounting students have good academic results, there is a significant deficiency in their communication skills. In Malaysia, students undergo at least six months of industrial training (internships) at a recognised audit firm or institute before graduating. This particular training regime aims to improve and develop the skills that may be lacking in undergraduate programmes (Maelah et al. 2012). Focusing on the internal auditor competency gap, practitioners placed a higher emphasis on soft skills than on hard skills (Setyaningrum, Mita & Rosdini 2022). Professional skills are also referred to as soft skills, key skills, vocational skills and employability skills (Coetzee & Du Plessis 2020; Crawford, Helliar & Monk 2011; De Lange, Jackling & Gut 2006; Howcroft 2017; Kwarteng & Mensah 2022; Ng, Schweitzer & Lyons 2010; Succi & Canovi 2020; Tan & Laswad 2018; Towers-Clark 2015). Professional skills are considered transferable qualities that are not industry-specific and are difficult to acquire, and even more challenging to teach (Crawford et al. 2011; De Lange et al. 2006; Elo et al. 2023). However, Elo et al. (2023) have, by reviewing various literature, identified that the required professional skills from employers are not sufficiently addressed in accounting programmes. Steyn (2021) notes the increased need for soft skills, specifically in the internal auditing curriculum, and even talks about the 'modern-day auditor who possesses these soft skills'. Steyn (2021) continues by stating that if HEIs can effectively implement soft skills development, it could have a cost-saving effect on organisations and their performance management processes, linking this to the graduate attributes required by industry. Various authors have listed numerous skills required by auditing or accounting graduates. Elo et al. (2023) listed skills identified in various literature sources as the most important skills required by accounting students (see Table 15.1).

Although some authors refer to professional skills, this chapter will use the term soft skills as it seems to be the more familiar term to use throughout literature.

Steyn (2021) noted that alternative teaching activities are needed to enhance these skills effectively. Some suggested activities include 'group work, work-integrated learning, student presentation, role-play, debates and educational games' (Steyn 2021). Some of these activities were adopted in the pilot study presented in this chapter to facilitate and enhance the commerce student's soft skills and will be discussed later.

TABLE 15.1: Skills examined in prior research.

Skill group	Prior literature
Technical skills and knowledge Examples: Key accounting skills, financial administration skills, research skills, accounting knowledge, knowledge of the interaction of disciplines, juridical knowledge and knowledge of statistics	De Lange et al. (2006); Edeigba (2022); Jackling and De Lange (2009); Kavanagh and Drennan (2008); Klibi and Oussii (2013); Kwarteng and Mensah (2022); Towers-Clark (2015); Usoff and Feldmann (1998)
Computer, IT and data processing skills Examples: Computer technology, computing and IT, IT software and accounting software skills	Arquero Montano et al. (2001); De Lange et al. (2006); Dolce et al. (2020); Hassall et al. (2003); Howcroft (2017); Jackling and De Lange (2009); Kavanagh and Drennan (2008); Spraakman et al. (2015); Towers-Clark (2015); Usoff and Feldmann (1998)
Interpersonal, social and communication skills Examples: Written and oral communication, teamwork, effective listening and customer service	Al Mallak, Tan and Laswad (2020); Arquero Montano et al. (2001); Botha et al. (2018); Crawford et al. (2011); De Lange et al. (2006); Dolce et al. (2020); Douglas and Gammie (2019); Hassall et al. (2003); Howcroft (2017); Jackling and De Lange (2009); Kavanagh and Drennan (2008); Kwarteng and Mensah (2022); Maelah et al. (2012); Paguio and Jackling (2016); Steyn (2021); Towers-Clark (2015); Usoff and Feldmann (1998); Zaid, Abraham and Abraham (1994)
Intellectual skills Examples: Decision-making, problem-solving, critical evaluation, analytical and logical skills	Al Mallak et al. (2020); Arquero Montano et al. (2001); Dolce et al. (2020); Douglas and Gammie (2019); Hassall et al. (2003); Howcroft (2017); Jackling and De Lange (2009); Kavanagh and Drennan (2008); Klibi and Oussii (2013); Kwarteng and Mensah (2022); Towers-Clark (2015); Usoff and Feldmann (1998)
Other professional skills Examples: Leadership, negotiation, continuous learning, flexibility and adaptability, critical reading, time management and organising workloads	Al Mallak et al. (2020); Arquero Montano et al. (2001); Crawford et al. (2011); Douglas and Gammie (2019); Hassall et al. (2003); Howcroft (2017); Jackling and De Lange (2009); Kavanagh and Drennan (2008); Klibi and Oussii (2013); Kruger and Steyn (2020); Maelah et al. (2012); Smith et al. (2018); Usoff and Feldmann (1998)

Source: Adapted from Elo et al. (2023).
Key: IT, information technology.

Research has indicated that there is a need for consensus in standardised teaching methods and the evaluation of soft skills (Caeiro-Rodríguez et al. 2021). Adding to the challenge is that these teaching methods and the subsequent assessment are influenced by the social, professional and HEI environment in which these skills are taught. For example, culturally specific examples and case studies are proven to be more effective when students can relate to a specific environment or setting in which the case is presented. Interestingly enough, Caeiro-Rodríguez et al. (2021) investigated various European programmes to see how they teach soft skills. His work revealed that most, if not all, the programmes incorporated a problem-based approach implemented through capstone projects, while some institutions also implemented gamification (elements of games during the learning process) to facilitate the transfer of these skills (Caeiro-Rodríguez et al. 2021), which also relates to the suggestion of Steyn (2021) to incorporate various teaching activities. Looking at a range of examples of assessing these skills, two examples emerge. One is focused on peer evaluation, and the other is focused on analysing the acquisition of these skills based on a problem-solving model. However, none of these HEIs explored MCs as an avenue to develop or enhance soft skills. This chapter addresses this problem by investigating if the use of MCs, specifically in a teamwork-based module, can be used to develop and perhaps measure these skills.

Micro-credentials

In their study, Msweli et al. (2022) emphasised the importance of MCs for lifelong learning. They highlighted the need to adapt the curriculum to align with the evolving demands of soft skills, competencies and innovation in the rapidly changing Fourth Industrial Revolution (4IR). The authors further argued that MCs enable the establishment of competency-based professional learning pathways, ensuring that students acquire the essential skills employers seek (Turhan and Akman 2013). It is worth noting that soft skills require active participation in the learning process (Caeiro-Rodríguez et al. 2021). However, Msweli et al. (2022) pointed out that existing MCs have not been integrated into other assessment methods to evaluate soft skills. Additionally, they highlighted the absence of hybrid learning approaches, the limited availability of free digital badges and the relatively short duration of MCs.

Although MCs have the potential to bring substantial value to the higher education landscape, there is still a necessity to ascertain their precise contribution (Ashcroft et al. 2021; Ha et al. 2022). Previous education innovations, such as massive open online courses (MOOCs), have emerged in the past. However, they have yet to illustrate industry-aligned skills development on a similar scale to what MCs appear to offer (Wheelahan & Moodie 2021). Micro-credentials in HEIs must be broadly investigated and explored, especially in a South African higher education (HE) context.

Micro-credentials provide individuals with a platform to construct and showcase evidence of their learning and professional growth (Pitt et al. 2019). In short, Berry (2016) states that MCs 'recognise educators' professional learning', placing a more significant emphasis on learning than 'seat time', even talking about granular competencies that can be stacked (Berry 2016; Pitt et al. 2019), and is similar to the continuing professional development (CPD) structure used in many professional industries (Berry 2016).

Micro-credentials are often used interchangeably with digital badges and MOOCs, to name a few, and various authors use these terms to understand MCs, as well as the impact that they have on the industry (Ashcroft et al. 2021; Berry 2016; Dyjur & Lindstrom 2017; Ha et al. 2022;

Hall-Ellis 2016; Hurst 2015; Kilsby & Fountain 2019; Lim et al. 2018; MCsGreal & Olcott 2022; Pitt et al. 2019; Varadarajan et al. 2023).

An essential advantage of MCs is their ability to integrate informal learning practices (Dyjur & Lindstrom 2017). Because MCs provide valuable details on experience and expertise, they are transparent (Pitt et al. 2019), giving a clearer view of the MCs-holder's skills and competencies (Berry 2016). Because of the transparency and potential to build your learning path, as well as the ability for cross-disciplinary upskilling or an increased range of skillsets (Pitt et al. 2019), it presents a more detailed framework to assess skills and knowledge (Dyjur & Lindstrom 2017) and makes it easier to verify a skills set beyond only 'what' one can learn from a HE degree.

One prominent feature of MCs, which has gained significant popularity, is the utilisation of badges (Dyjur & Lindstrom 2017), inspired by the principles of game-based learning (Hurst 2015). A badge serves as a tool that enables individuals to develop their competencies and skills, both within and beyond the confines of a conventional academic environment (Dyjur & Lindstrom 2017; Hurst 2015). A badge is a clickable graphic that contains an online record of achievement and information about the organisation or entity that issued the badge (Borrás-Gené 2018). As badges include certain elements and coding, badges, except for the fun part, also have an element of authority (Hurst 2015). Badges are seen as a person's skills and accomplishments represented electronically via the web (Dyjur & Lindstrom 2017; Pitt et al. 2019). Higher education institutions should make a decision regarding open badge interfaces, which allow for the creation and customisation of badges (Hurst 2015). Customisation should, however, be carefully considered and planned as one needs to determine how these customisations can be done and who can do them.

Therefore, when addressing the call to investigate the use of MCs in higher education, this chapter demonstrates the implementation of badges as a subset of MCs within a HEI. This study focuses on a final-year module – project management behavioural aspects – where the entire module focuses on soft skills.

Berry (2016) lists six components that MCs should include, which will be addressed in this chapter: competency, key method, method components, research and resources, submission criteria and scoring rubric. One should also determine the evidence required to prove that the work has been completed, such as a portfolio, video, student work, classroom observations and student reflection.

Selvaratnam and Sankey (2021) identified four key constructs that HE should consider when implementing MCs: learning and capability, employability, technology ecosystem, and artefacts and texts. These constructs will form the basis of the data gathering for this chapter.

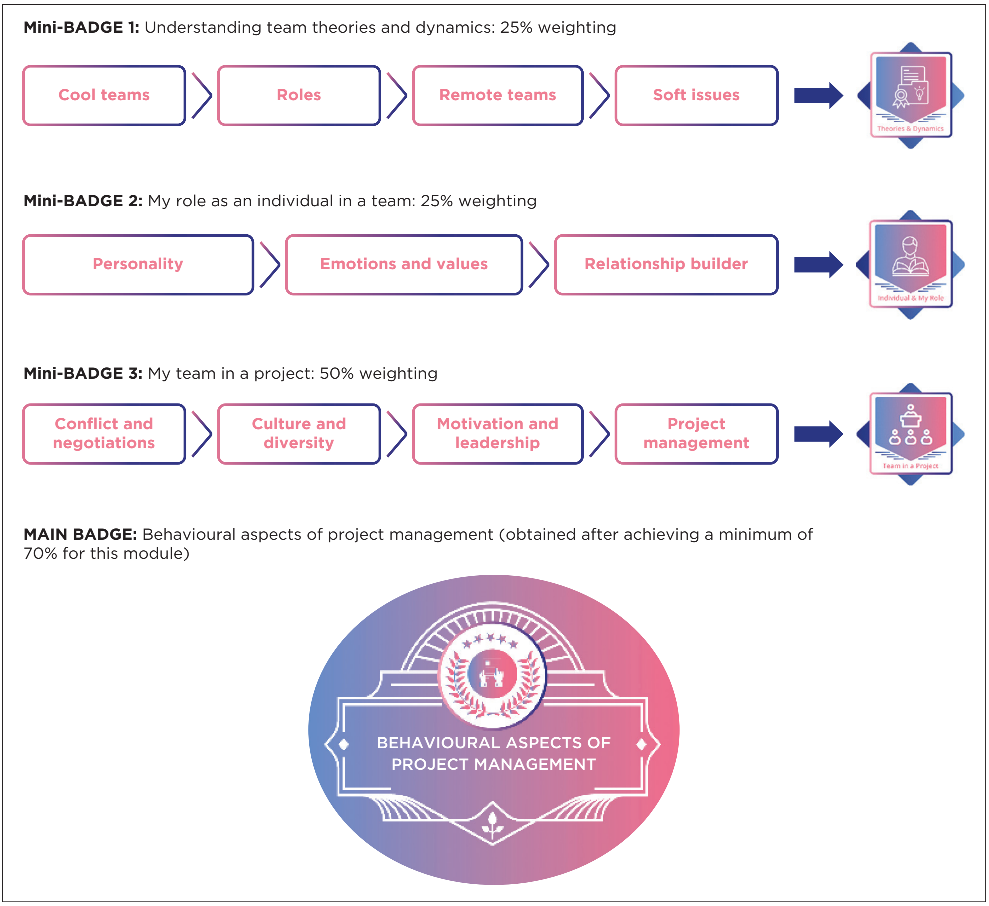
This chapter focuses on soft skills, specifically enhancing students' soft skills in teams, which was already been identified as a development focus area when transitioning from the university environment to the professional world (Perla, Vinci & Scarinci 2023).

Background on the module

The main emphasis of this chapter is on a specific group of approximately 250 commerce students in their final year, enrolled in a soft skills module. The chapter addresses the issue of evaluating and appraising their soft skills and explores alternative teaching methods. Instead of traditional assessments, the authors opted for a different approach by adopting a continuous or programmatic assessment, as Van der Vleuten et al. (2012) recommended. This approach involved implementing various learning activities, giving a total of 33, accumulated throughout the semester during which the module was presented. According to programmatic assessment, three activities are needed for ongoing evaluation: learning activities, assessment activities and support activities (Van der Vleuten et al. 2012). Now, let us investigate how to implement these components practically.

Students had to invest considerable effort in pre- and post-activities to stay up-to-date with the weekly material for the entire semester – failure to complete the pre-activity meant no access to post-activities, and not every activity counted marks; some merely provided access to another activity or assessment. This formed part of the learning activities.

A few assessment activities were used, ranging from in-video assessments, wikis and FlipGrid videos, to name a few. These activities all contribute to the student's overall semester mark. At the end of each central theme, students had to complete reflective journals (reflecting on what they had learned, so what, now and now what). This formed part of the support activities. Apart from this, weekly class discussions took place analysing the week's topics, discussing the pre-activities, and providing guidance on the following week's topic. Apart from pre-activities unlocking the next post-activities, the first mini-badge counted only 25% of the final semester mark. The second mini-badge also contributed 25% and ensured that the students continued working throughout the semester. The last mini-badge contributed 50% of the final mark for activities, including an end-of-semester individual assignment to test specific theoretical concepts. These activities were the only ones that counted towards the final semester mark. This was also done to include the notion of scaffolding for self-directed learning, as proposed by Van der Vleuten et al. (2012). A main badge, retained on a Badgr platform and integrated into the university's learning management system (LMS), could only be awarded if a final semester mark of 70% was achieved. Figure 15.1 details the module's

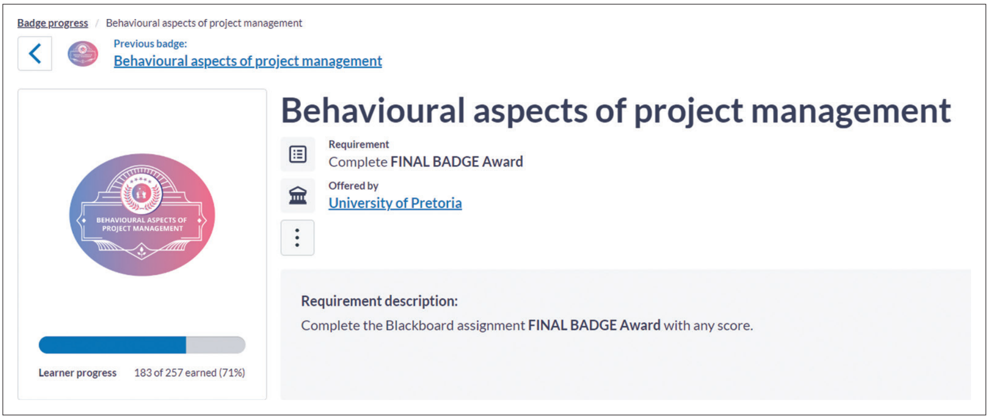


Source: Authors' own work using https://up.eu.badgr.com.

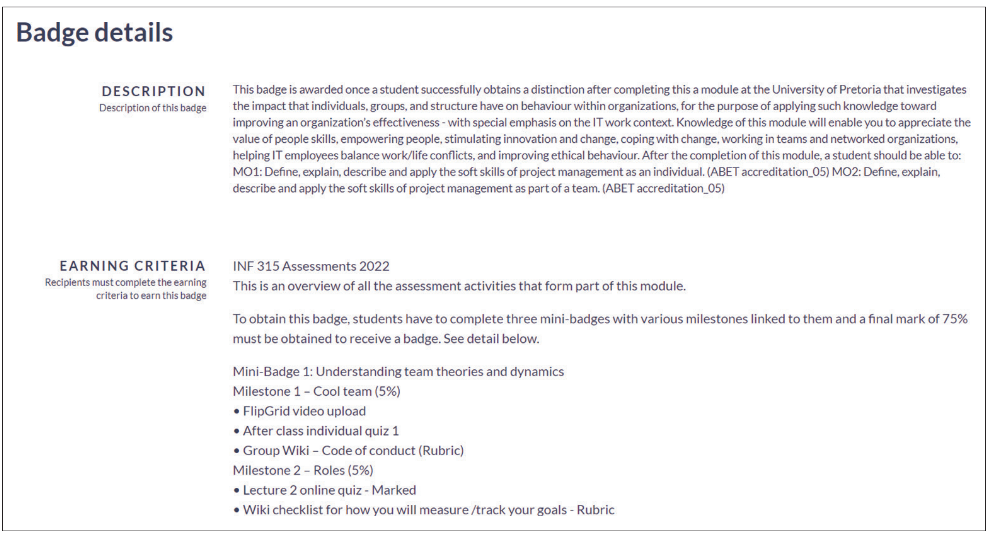
FIGURE 15.1: Module framework.

framework, how scaffolding took place and the overall structure of the course, including all the soft skills that formed part of this module. All badges were linked to module and programme outcomes, allowing a badge to be accredited and used on professional networks as part of a student's curriculum vitae (CV).

During the semester, students actively reflected on their roles within the team and developed an understanding of teamwork and other soft skills by engaging in various activities. As the semester concluded, the groups were also required to revisit their code of conduct and team dynamics checklist, which they had formulated at the beginning of the semester. They had to evaluate their performance and their team's achievements using the measurement checklist they had initially created. Figure 15.2 is an example of the main badge in Badgr.



Source: Authors' own work using https://up.eu.badgr.com.
FIGURE 15.2: Overall view of the badge in Badgr.



Badge details

DESCRIPTION
Description of this badge

This badge is awarded once a student successfully obtains a distinction after completing this a module at the University of Pretoria that investigates the impact that individuals, groups, and structure have on behaviour within organizations, for the purpose of applying such knowledge toward improving an organization's effectiveness - with special emphasis on the IT work context. Knowledge of this module will enable you to appreciate the value of people skills, empowering people, stimulating innovation and change, coping with change, working in teams and networked organizations, helping IT employees balance work/life conflicts, and improving ethical behaviour. After the completion of this module, a student should be able to: MO1: Define, explain, describe and apply the soft skills of project management as an individual. (ABET accreditation_05) MO2: Define, explain, describe and apply the soft skills of project management as part of a team. (ABET accreditation_05)

EARNING CRITERIA
Recipients must complete the earning criteria to earn this badge

INF 315 Assessments 2022
This is an overview of all the assessment activities that form part of this module.

To obtain this badge, students have to complete three mini-badges with various milestones linked to them and a final mark of 75% must be obtained to receive a badge. See detail below.

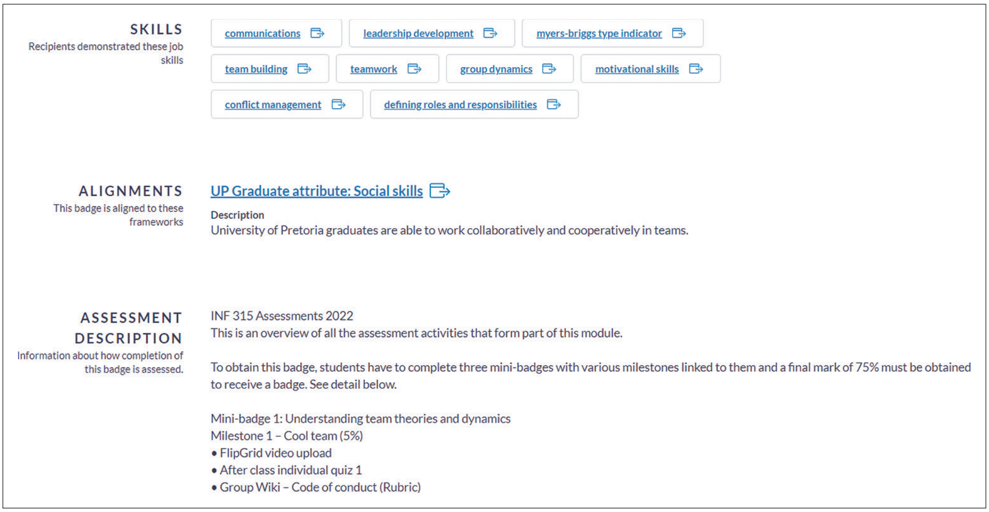
Mini-Badge 1: Understanding team theories and dynamics
Milestone 1 – Cool team (5%)
• FlipGrid video upload
• After class individual quiz 1
• Group Wiki – Code of conduct (Rubric)
Milestone 2 – Roles (5%)
• Lecture 2 online quiz - Marked
• Wiki checklist for how you will measure /track your goals - Rubric

Source: Authors' own work using https://up.eu.badgr.com.
FIGURE 15.3: Detailed description of the badge.

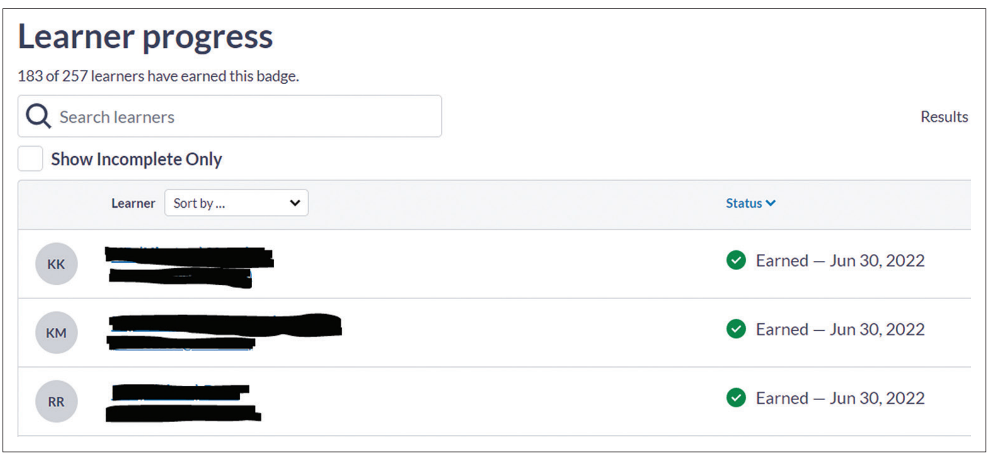
As seen on the badge (in the red circle), 71% of all the students managed to obtain it. Thus, 71% of the class had an average of over 70%.

Addressing Berry's (2016) six components for MCs for badge issuance, it was necessary to execute specific activities, research, methods, resources, submission and scoring criteria. Figure 15.3 and Figure 15.4 indicate the integration of these components into the final badge on the Badgr platform, along with comprehensive evidence about the badge's content and the rationale behind the activities.

The badge being awarded allowed one to easily track each student's progress (Figure 15.5). It is important to note that there were a few



Source: Authors' own work using https://up.eu.badgr.com.
FIGURE 15.4: More details linked to the badge.



Source: Authors' own work using https://up.eu.badgr.com.
FIGURE 15.5: Learner progress.

limitations to Badgr, such as being unable to create a pathway to track progress throughout the semester. However, these fall outside the scope of this chapter.

■ Methodology and analysis

At the end of the semester, students had to complete a quantitative survey using the online platform Qualtrics. As the final-year module had to be reviewed by an external examiner, the survey was only distributed after releasing the final marks and during the examination period. Thus, no marks were awarded for completing the survey. As students had no incentive, this resulted in a lower-than-expected 14.4% response rate. However, the responses gave good insight into the student's module experience and how to take this idea forward in the next year. The data were analysed using the basic Qualtrics analytics tool.

Given the novelty of this approach for both the academic staff and students, the initial objective was to determine the preferred learning methods for the students. As the study was executed just after the final lockdown restrictions were lifted in South Africa, it was observed that most students exhibited a strong inclination towards online learning, including attending classes and accessing course material digitally, which was not surprising. On the other hand, students maintained a neutral stance regarding using theory exclusively for learning purposes (neither agreeing nor disagreeing).

The LMS was used extensively for learning purposes (which makes sense as all the activities were on the LMS), while responses indicated that YouTube was used when students needed to understand complex concepts better.

Regarding the students' experience of the new learning approach, the introduction of badges proved to be a significant catalyst for individual motivation among most respondents within team settings. This approach also facilitated students' comprehension of the module content. Obtaining a badge served as motivation for students to pursue lifelong learning and to earn additional badges. Consequently, badges played a vital role in enhancing students' understanding of their fellow team members' capabilities, enabling them to leverage individual strengths and contributions within their teams. Moreover, students gained a deeper appreciation for the effort required to become a highly effective team member.

To conclude, students were asked what they liked, as well as what they did not like, in two separate questions. Interestingly, continuous assessments, assignments and activities were highlighted when asked what they liked about the module (most of the students' responses), but also when asked what they did not like (only three responses). Thus, this is not everyone's preference. One can never please everybody, and trying to design a programme that will suit everyone is impossible. However, one can design an approach that suits most of the group.

Some of the comments from the students were:

> 'I loved that it focused more on the skills we should be able to use after the module rather than trying to make it just another thing that we would have to learn and try to remember.' (Student, location unspecified, n.d.)

> 'The continuous assessment ensured I stayed up-to-date and I never fell behind. I've had two modules use continuous assessment and I find it really helps ensure

you do not fall behind. Although I can see a flaw where if I did fall behind, I would be incredibly disheartened to keep going.’ (Student, location unspecified, n.d.)

‘I loved that each week we had pre-activities that helped ensure that I come to class prepared and ready to engage.’ (Student, location unspecified, n.d.)

‘The continuous assessments and reflections. It helped to think about what I learned and why.’ (Student, location unspecified, n.d.)

Conclusion

The utilisation of MCs in HEIs is a relatively novel concept in the context of commerce education. Given the application of the concept, which is like CPD points in various professions, the utilisation of MCs should be encouraged as it appears to contribute to developing lifelong learning, even beyond formal tertiary education.

The main findings presented in this chapter supported the effectiveness of MCs by contributing to students’ understanding and appreciation of the effort it takes to obtain a badge. Furthermore, it provided a visible, tangible method to evaluate soft skills, which is key to high-performance teams in commerce environments. Beyond tertiary education, MCs can be used to provide evidence of prior skills, which can improve employability and, in doing so, contribute to meeting the high demand for soft skills in the job market. As both the education and commerce landscape evolve, the implementation of MCs has the potential to meet the changing demands of students and employers.

Lastly, the importance of an LMS in the deployment of MCs cannot be ignored. The integration of badges into current student platforms, as well as their mobile availability, played an essential role in the successful adoption of MCs in commerce environments.

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We live in an era of rapid global economic evolution and significant local socio-economic challenges. Business science and commerce educators in South Africa must tailor their curriculum and teaching methodologies to align with what is most pressing and trending in our real-world contexts. *Rethinking commerce education in South Africa: The case for change to develop future-fit business leaders,* authored by a diverse team of scholars, offers a comprehensive reimagining of commerce education tailored to the unique socio-economic landscape of South Africa. Through insightful analysis and practical strategies, it navigates the complexities of facilitating student success across commerce disciplines. It provides the reader with deep insights into the role of the academic in enabling and supporting student learning at multiple levels, from undergraduate to doctoral degrees. The themes embedded in the chapters speak to critical issues inside and outside of the classroom. The book is a valuable resource for scholars in higher education seeking mechanisms to better prepare future business leaders for the realities of a super-fast changing world of work.

Prof. Suki Goodman, Deputy President of the South African Commerce Deans Association and Dean of the Faculty of Commerce, University of Cape Town, Cape Town, South Africa

This book presents a compelling analysis of the challenges facing commerce education in South Africa and offers practical solutions to improve student success. The individual chapters provide valuable insights into enhancing student support and ensuring preparedness for the evolving world of commerce. It provides a robust discussion on interventions designed to assist students in adjusting to university life and offers a roadmap for commerce faculties grappling with resource constraints. The book further presents forward-looking approaches by presenting a holistic framework for preparing students for the future world of work. It explores the challenges and opportunities of digital transformation in commerce education, the importance of ethics education in developing future business leaders, and innovative pedagogical approaches such as micro-credentials and game-based learning. Overall, *Rethinking commerce education in South Africa: The case for change to develop future-fit business leaders* offers a comprehensive and forward-thinking examination of commerce education, providing valuable insights and practical recommendations for academics. This book is an essential scholarly resource for anyone interested in improving student outcomes and preparing the next generation of business leaders.

Prof. Mabutho Sibanda, Past President of the South African Commerce Deans Association and Dean of the School of Accounting, Economics and Finance, University of KwaZulu-Natal, Durban, South Africa

In this book, the importance of commerce education in South Africa is explored, with specific directions for the development of future business leaders. One of the major objectives of commerce education in South Africa is to produce graduates who are capable of making informed decisions as leaders in a dynamic and globally competitive environment. This book features contributors who are leading scholars in the field of commerce, providing invaluable insights and expertise for fellow academics.

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