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WORK-BASED LEARNING FOR OCCUPATIONAL COMPETENCE

Submitted by

RUDO MAZHINYE

A thesis submitted to the
Wits School of Education
Faculty of Humanities
University of the Witwatersrand
in fulfilment of the requirements for the degree of

Doctor of Philosophy

Johannesburg, October 2024





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Date: October 2024

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Declaration

I, Rudo Mazhinye, declare that this thesis titled: **Work-based Learning for Occupational Competence** is my work that has not been submitted for any other course or degree, and all the sources I have used or quoted have been indicated and acknowledged using complete references. This thesis is being submitted in fulfilment of the requirements for the Doctor of Philosophy Degree in Education at the University of the Witwatersrand. Furthermore, the thesis represents my own opinions and not necessarily those of the University of the Witwatersrand.



……

Rudo Mazhinye

October, 2024

Dedication

To the enduring spirits of my mother and son, Andile, and the future of my two sons, Vel Jnr and Bongani.

Acknowledgement

I express my heartfelt gratitude to Doctor Presha Ramsarup and Professor Volker Wedekind for their invaluable guidance and unwavering support throughout this thesis journey.

A sincere thank you to my participants for generously sharing their insights and experiences, contributing significantly to the richness of my study.

To my husband, the sacrifices and space you provided for me to pursue this academic endeavour are immeasurable. Your unwavering encouragement fuelled my perseverance.

To Professor Yael Shalem, you were the missing puzzle piece that made everything fall into place, thank you so much.

I extend my appreciation to all those who played crucial roles in the meticulous stages of transcription, editing, formatting, and proofreading. Your dedication ensured the precision and quality of this piece.

I thank you all for being pivotal contributors to the completion of my thesis.

Abstract

Policies in skills development in most countries consider work-based learning (WBL) crucial to Technical and Vocational Education and Training (TVET) because it integrates theory learned in the classroom and workplace practice to achieve occupational competence. Several authors argue that theoretical and practical knowledge integration is key to raising the occupational competence levels of students. It is, therefore, argued that strengthening this theory-practice relationship through WBL might lead to the kind of en-skilling required in the 21st-century economy.

There are vast scientific reports on the benefits of WBL and workplace experience to students. However, only a few contemporary local empirical studies have advanced our understanding of the specific contributions of WBL towards building occupational competence in hospitality students. What students learn and how they learn to develop such competence remains unclear, indicating an existing gap in the literature. This necessitated an exploration of the learning experiences, modalities, and practices available to students to develop occupational competence during WBL.

A qualitative approach was employed to investigate the contribution of WBL towards developing occupational competence in hospitality students. Face-to-face, semi-structured interviews and workplace observations were conducted with a purposively selected sample comprising N6 Report 191 students in a hospitality programme and their mentors.

For analysing the data, I used manual methods for coding and identifying themes, which allowed me to closely engage with the data, immerse myself in the context, and uncover delicate and interrelated patterns and themes. I was able to interpret the data in a holistic and nuanced manner, resulting in a more comprehensive and insightful exploration of the research topic. Lave and Wenger's (1991) and Wenger's (1998) theory of situated learning in communities of practice was used to explain how students learn in the workplace.

This research shows that learning in the workplace took place through social participation, which occurred through active engagement and interaction with others, specifically through experts and the community of pastry chefs. Rather than being an isolated activity, learning in the workplace was found to be a social process where students gained skills, knowledge, and understanding by participating in shared activities, discussions, and experiences with others.

This study draws attention to four guided learning strategies identified by Billett (1994b, p. 11), modelling, coaching, scaffolding, and fading; which formed a central focus of the research. Within these strategies, experts used learning modalities such as observations, demonstrations, replication, and explanations to help students build occupational competence. These modalities show that learning in the workplace is both implicit and explicit. It was implicit through observations, demonstrations and replication and was made explicit when verbal descriptions, explanations and feedback were made.

These affordances to WBL built a clear picture of interactions and engagements between students and experts and among members of the community. This made the expert pastry chefs and the community of practice the most valuable learning resources for developing students' occupational competence in the workplace. However, the study highlights significant shortcomings in the workplace environment as a space for effective learning. While skilled in their trades, experts lack the necessary pedagogical qualifications and struggle to explain concepts clearly to students. Their protective attitude towards their jobs creates barriers to knowledge and skills sharing, as they seem more concerned with job security than with the development of occupational competence in students. Furthermore, their behaviour exhibits disrespect toward students, relegating them to menial tasks rather than meaningful learning experiences. Besides, experts are frequently too busy with production targets to dedicate time to mentoring students, further diminishing the value of WBL.

This thesis contributes to the literature on WBL by offering a contextually grounded understanding of occupational competence in hospitality education. It expands the concept beyond technical skills to include relational, situated, and artefact-mediated dimensions of learning. Using Lave and Wenger's (1991) theory of situated learning, the study shows how occupational competence develops through social participation and engagement with tools and practices, while also being shaped by contextual factors such as limited mentorship, power dynamics, and institutional constraints. These findings refine the application of situated learning theory within the South African TVET context and offer practical insights for improving WBL pedagogy and policy.

Abbreviations and Acronyms

COVID-19	Coronavirus Disease
DHET	Department of Higher Education
DoE	Department of Education
GDP	Gross Domestic Product
NATED	National Accredited Technical Education Diploma
NCV	National Certificate (Vocational)
NQF	National Qualifications Framework
PPE	Personal Protective Equipment
PSET	Post-School Education and Training
R191	Report 191
SACA	South African Chefs Association
SETA	Sector Education and Training Authority
SOPs	Standard Operating Procedures
Stats SA	Statistics South Africa
TVET	Technical and Vocational Education and Training
VET	Vocational Education and Training
WBL	Work-Based Learning

Keywords

College Learning: Learning that takes place at a formal institution, such as a TVET college or other learning providers or institutions of higher learning

Community of Practice: A group of people who share a common interest or profession and engage in collaborative learning, knowledge sharing, and problem-solving within that domain.

Competence: Possession of the required skills, knowledge, or qualities to perform a task effectively and proficiently in an authentic work context

Expert: A person with extensive, highly developed knowledge and skills in a particular field.

Explicit Knowledge: it is formal knowledge that is documented, and easily transferable; it is often codified and articulated explicitly.

Generic skills: also known as transferable or soft skills, are broadly applicable abilities that are valuable across various domains.

Occupational Competence: Possessing the necessary skills and knowledge to perform effectively within a specific occupation or job.

Situated Learning: Learning within the context of real-life situations and environments, enhancing practical understanding.

Tacit Knowledge: it is the knowledge that is unspoken, implicit, and difficult to formalise, information gained through experience, intuition, and practice. It is also referred to as workplace knowledge.

Task: A task is a specific piece of work that needs to be accomplished within a defined period, often with a particular goal or objective in mind.

Work-Based Learning: An educational approach that integrates practical work experiences with academic or theoretical learning.

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CHAPTER 1: Introduction and Background

1.1 Introduction

Technical and Vocational Education and Training (TVET) colleges worldwide are increasingly expected to produce highly trained graduates in possession of relevant occupational competence to respond to the ever-changing needs of the contemporary workplace. Scholarly research has shown work-based learning (WBL) to be vital to the training of students at all levels of vocational training, as it helps to bring together theory learned in the classroom and practice undertaken in the workplace to achieve occupational competence. Despite arguments made by various scholars on the kind of knowledge required in TVET training, research has shown that theory and practical integration are key to raising the occupational competence levels of students (Wheelahan, 2010, p. 159). Moreover, businesses perceive WBL as a practical strategy to improve students' occupational competence (Mazhinye, 2018).

It is argued that strengthening the relationship between classroom theory and practice through WBL (Mutereko & Wedekind, 2016; Wheelahan, 2008a) might lead to the kind of occupational competence required in the 21st-century economy. Global advancements in technology are reshaping the skills required for the modern workforce. The World Bank (2019) reports that there is a drastic decline in demand for less advanced skills, whilst the demand for advanced cognitive skills, socio-behavioural skills and skill combinations associated with greater adaptability is rising. Cognitive skills are brain-based skills needed to acquire theoretical knowledge, information manipulation and reasoning. Socio-behavioural skills entail generic skills that enable individuals to operate or function in a community. These include problem-solving, communication, teamwork, empathy and time-management skills among others.

In this thesis, I explored the specific contribution of WBL in developing occupational competence in students. I sought to understand the learning experiences, modalities and practices available to students while learning in the workplace. I applied the situated learning theory proposed and developed by Lave and Wenger (1991) and Wenger (1998) to analyse my data. Set within a sociocultural paradigm (Vygotsky, 1978), this perspective illuminates the importance of context, culture and the social aspects of learning. It emphasises that learning occurs through students' social interactions and engagements with experts and through their

participation within communities of practice, where learning is collaborative and involves various artefacts to facilitate learning.

Additionally, I researched students attending WBL in the pastry kitchen, an area I understand well, as it is within my trade. The pastry kitchen provides a unique and rich learning environment where students experience hands-on, practical learning while interacting with skilled experts. The precise and creative nature of pastry work and the collaborative kitchen atmosphere make it an ideal context for studying what and how students learn to develop occupational competence in a real-world setting. Insights gained from this study will benefit WBL researchers, policy developers, training providers, and the hospitality industry, especially in understanding the critical role of workplace environments in fostering effective learning.

In chapter one, I introduce my research topic. After providing a brief background, I present the regulatory and educational context of the study. I then outline the problem statement, my research aims, and the questions and objectives of the study. Finally, I propose the significance of this research and summarise how the study is structured.

1.2 Background of the study: A Missing Link to Vocational Training

This section critically examines the foundational goals, structural design, and practical implementation of the NCV qualification. It explores the persistent challenges related to curriculum relevance, industry alignment, resource constraints, and WBL integration. Despite being conceptualised as a programme that bridges theoretical knowledge and workplace readiness, a growing body of research highlights several misalignments between this programme's intended outcomes and its actual impact on student employability and skill acquisition. The discussion further contextualises these issues within the broader hospitality industry, emphasising the significance of occupational competence and the crucial role of WBL in achieving it.

By unpacking the strengths and shortcomings of the NCV qualification, this section lays the foundation for a deeper understanding of the specific contributions of work-based learning towards occupational competence in South Africa's evolving education and economic landscape.

1.2.1 The Introduction of the National Certificate Vocational Qualification

In 2007, the National Certificates Vocational (NCV) was introduced as a new curriculum and qualification framework and aimed at replacing "the old NATED courses which were linked to the apprenticeship system that was offered in a trimester structure and allowed students to complete their training whilst working through block releases from companies" (Wedekind, 2014, p. 66). The NCV was intended to offer Grade 9 students an alternative to the academic Grades 10 to 12. The students enrolled for NCV received a Vocational National Certificate upon completion, equivalent to a Matric certificate. The difference between the two is that the NCV graduate, unlike the Matriculant, could be employed in a vocation that they would have trained for.

The NCV programmes addressed the quality and relevant shortcomings in the South African TVET college system. Therefore, the programme was designed to be completed in three years, an extended period compared to the old NATED courses. Thus, the NCV qualifications were expected to form the basis for higher quality skills and knowledge with a more strategic link to economic growth (Gewer, 2010, p. 15). The qualifications cover a broad spectrum of key economic sectors, including hospitality. They also incorporate literacy, numeracy and life skills (Wedekind, 2014, p. 67). The National Policy regarding further education and training programmes stipulates that the NCV at NQF Level 4 "enables students to acquire the necessary knowledge, practical skills, applied competence and understanding required for employment in a particular occupation or trade, or class of occupations or trades, or entrance into higher education" (Department of Education, DoE, 2006, p. 82). It was intended that the NCV graduate would be equipped for either direct entry into employment or further study at a university upon completion. However, this outcome has not materialised in practice, for reasons discussed in the following sections.

1.2.2 Mismatch of the Curriculum to the Needs of the Employer

Research asserts that most NCV TVET graduates in search of employment lack work experience and practical 'on-the-job knowledge', and that the skills that they have are irrelevant to the current job market (Gewer, 2010; McGrath, 2012; Wedekind & Mutereko, 2016a). This is in line with a study conducted by Engelbrecht, Spencer and van der Bijl (2018, p. 231), which found that there was a gap between industry expectations and the skills possessed by NCV graduates. This implies that the curriculum content of the NCV qualifications does not accurately align with the skills required by the industry. Employers in the 21st century primarily

seek graduates who possess both the technical and generic skills (Balcar, 2016, p. 464) fundamental to the day-to-day execution and operations of work. According to Jackson (2015, p. 111), generic skills are the unique attributes that facilitate how an individual works with other people, and both technical and generic skills are supposedly obtained from WBL.

The mismatch between skill and job requirements has led to mistrust in the industry of the NCV programmes. As a result, many NCV graduates find it difficult to get employment upon completion. A study conducted by Engelbrecht et al. (2018, p. 231) demonstrates that most NCV graduates were unemployed, with a notable number employed in sectors that they did not train for. They noted that only a few, about 20%, worked in their sectors, a figure that is almost insignificant compared to the numbers that are churned out of the system annually.

Industry expects quality delivery and sufficient output from TVET colleges, but these expectations have not been met since the introduction of this qualification. The distrust in the NCV programmes by the local industry developed over the first three years of NCV implementation, has led the industry to turn to other sources, including employing Grade 12 school leavers (Gewer, 2010, p. 10), whom they would rather train themselves. As such, some hotels have opted to run their academies. According to Catrett (2018, p. 21), hotels establish academies to provide specialised training tailored to various roles, a service often lacking in formal training institutions. Such academies guarantee that students acquire the specific skills demanded by employers, thereby bridging the gap between traditional education and the practical requirements of the hospitality sector. But what are the exact stipulations of the NCV curriculum?

1.2.3 Stipulations of the National Certificate Vocational Curriculum

Within three years of their qualification, NCV students should exit the college system with a good general vocational education and some specialisation, complemented by significant practical experience gained through college-based workshops and exposure to workplaces (DoE, 2006; FETC Act, 2006). On paper, the NCV qualification seems to have addressed the critical problems that had been identified by various stakeholders (Wedekind, 2018, p. 115), but in reality, this is not the case. Most studies have noted that the NCV programme range indicates a clear predominance in theory-based classroom teaching (Gewer, 2010; Mazhinye, 2018; Wedekind & Mutereko, 2016a) as it is constructed around the delivery of theory. According to Wedekind (2018, p. 115), NCV students graduate without workplace exposure

and spend the whole three-year programme in the classroom, which is deemed to be a major weakness of the qualification.

The opportunities for students to engage in WBL are largely absent. This indicates that WBL is not an obligatory component of the curriculum and has never been prioritised despite the 40:60 split between theory and practice proposed in the curriculum (Wedekind, 2014, p. 68). The general evaluation from employers, as envisaged by Wedekind (2018, p. 115), is that the NCV is a broad vocational preparation intended to be supplemented by in-company training or additional qualifications. In other words, the NCV qualification provides a foundational grounding which should be further developed in the workplace to build crucial occupational competence. This may not align, however, with employer expectations.

This is in contrast to the declaration by the Department of Higher Education and Training's White Paper for Post-School Education and Training (DHET) (2013, p. 6) which states that the specific role of TVET colleges is to provide vocationally aligned education and training that equips students with occupational competences that are attained through the integration of theory and practice. The NCV curriculum also ignores the 1998 Skills Development Act that requires students to integrate formal theoretical learning at an accredited TVET provider and WBL (Department of Labour, 1997). The NCV programmes exhibit a negligible connection between theoretical instruction and practical workplace application, presenting a deficiency that could hinder the development of occupational competence among students. This disparity underscores the need for enhancements in curriculum design to bridge the gap between theoretical knowledge and real-world skills acquisition, thereby ensuring a more robust pathway toward competency attainment within vocational education. Despite the shortcomings of the written curriculum, TVET colleges also lack the required training resources.

1.2.4 A Lack of Training Resources in Colleges

The practical training component within TVET colleges faces significant limitations, primarily attributable to a trifecta of challenges: inadequate funding for essential training materials, outdated infrastructure and equipment (Mazhinye, 2018, p. 107), and a shortage of adequately trained lecturers to execute this crucial provision (Papier, 2011, p. 106). Compounding the issue further is that TVET college lecturers are not obliged to possess vocational teacher qualifications, as noted by Papier (2011, p. 107).

In vocational education, lecturers need to fulfil a dual role, wherein they must not only be expert tradespeople in their respective fields but also possess a deep understanding of industry-specific knowledge. They should also have the necessary pedagogical skills to effectively impart their vocational expertise to students. Regrettably, this dual identity requirement has remained largely unmet within the South African TVET context. A significant portion of vocational lecturers lack the essential vocational teacher qualifications (Papier, 2011, p. 106), and even among those who do, many possess only a General Certificate in Education.

This glaring deficiency in the qualifications of TVET lecturers has concerning implications. It implies that they might not be able to teach specialised vocational subjects, let alone navigate the intricacies of vocational curriculum interpretation. The absence of these critical resources in the TVET landscape significantly hampers the effective implementation of sound policies. Consequently, the broader educational system grapples with substantial challenges in delivering quality technical and vocational education, further emphasising the need for urgent reform and support in the TVET sector. In addition to the inadequate provision of training resources, most policies designed to ensure students are adequately trained have failed significantly.

1.2.5 Failed Policy Goals

Attempts in policies to ensure sufficiently trained students with modern and high-tech skills are moving at a snail's pace. Studies done after the publication of the White Paper for Post-School Education and Training, argue that not much has been achieved as there is little tangible progress in the scope of the TVET programmes and qualifications, given the rapid social and technological changes taking place (Akoojee, 2016, p. 11; Wedekind, 2014, p. 66). The limited advancement may have stemmed from overly ambitious policy goals. When policymakers set unrealistic or overly complex objectives, implementation becomes challenging, hindering progress and potentially leading to underachievement in policy outcomes. As a result, South Africa lacks the intermediate-skilled manpower required for modern work and industry (Gewer, 2010, p. 10). It is imperative to reassess and recalibrate these policies to ensure they better align with the rapidly shifting educational and technological landscape. Otherwise, the nation risks falling further behind in preparing its workforce for the demands of the 21st century. Given these challenges, it is important to consider how occupational competence can be effectively developed and sustained.

1.2.6 Fostering Competence: The Role of Work-Based Learning

To guarantee alignment between their curricula and the requirements of the workplace (Rasool & Mahembe, 2014), TVET colleges should forge partnerships with industry. This alignment is intended to facilitate a seamless student transition from college to the workplace. Gewer (2010, p. 17) notes that employers are reluctant to collaborate with colleges due to doubts concerning their capacity to produce competent graduates. Consequently, they do not respond to requests to have students engage in WBL on their premises. The college-industry partnership approach is based on the belief that WBL significantly contributes to the development of occupational competence (Badroodien & Kraak, 2006). Beyond conventional classroom learning, students should have the opportunity to gain insights from hands-on work experiences. This dual approach might allow them to cultivate both conceptual skills and technical expertise, which may enable them to excel in their future work roles.

Scholars like Billet (2001b) and Gamble (2006) suggest that enhancing the synergy between theoretical knowledge and practical application in a workplace context can lead to acquiring the vital occupational competence that students need. Understanding the process by which workplaces foster occupational competence and the specific competence students acquire during WBL is of paramount importance, especially within the context of the global hospitality industry. The significance of this sector is widely acknowledged and considerably debated among notable scholars both locally and abroad (Baum, 2002; Baum & Odgers, 2001; Marneros et al., 2020; Millar & Park, 2013; Tribe, 2001; Walo, 2001). Tribe (2001) and Baum (2002) concur that a substantial ten per cent of the global workforce is engaged in hospitality-related roles. They emphasise the pivotal role played by the hospitality industry as an engine driving both economic and social development on a global scale.

Given the indisputable importance of this sector, it is imperative to acknowledge that the processes in WBL that prepare students for occupational competence cannot be overlooked. Scholars from diverse corners of the world have explored the realm of hospitality competence, scrutinising them from various vantage points across the different functional domains of the industry (Baum & Odgers, 2001; Formica, 1996; Kay & Russette, 2000; Marneros et al., 2020; Nelson & Dopson, 2001; Raybould & Wilkins, 2006; Sisson & Adams, 2013; Tse, 2010). However, one significant aspect that has been conspicuously absent from this literature is what students learn during WBL and how occupational competence is cultivated and developed in

real-world workplace settings. This study underscores the pivotal role of WBL in nurturing students' occupational competence. Section 1.3 stipulates the problem statement.

1.3 Problem Statement: A Rationale for this Study

Despite the critical role that TVET education is expected to play in addressing South Africa's skills shortages, significant concerns persist regarding the effectiveness of the NCV qualifications, particularly within the hospitality sector. While the tourism industry continues to expand and generate employment opportunities in South Africa, employers report a widening gap between the occupational competence of NCV graduates and the practical demands of the workplace. This section presents the rationale for this study by examining the central problem: the apparent misalignment between the NCV curriculum and the skills required in the hospitality industry. The discussion begins by contextualising the economic importance of tourism in South Africa and then explores the implications of a skills mismatch. It concludes by identifying key gaps in existing literature, which collectively underscore the need for an exploration into the specific role of WBL in developing occupational competence among hospitality students.

1.3.1 The Importance of the Tourism Industry to the South African Economy

The tourism industry in South Africa has emerged as a key driver of economic growth, significantly contributing to the country's Gross Domestic Product (GDP) while offering numerous opportunities for employment and enterprise development (Garidzirai & Pasara, 2020, p. 555). The tourism sector stands as one of South Africa's largest economic domains, having experienced remarkable expansion in recent years, particularly following the coronavirus (COVID-19) pandemic.

According to Statistics South Africa (Stats SA) (2024), the influx of tourists in June 2023 alone reached a notable figure of 2,311,573 travellers, comprising arrivals, departures, and transits. Cowling (2024) indicates that the travel and tourism sector in South Africa provided close to 1.08 million jobs in 2021, representing a 1.9% increase from the preceding year, wherein the sector's contribution amounted to approximately 1.06 million jobs. These statistics underscore the profound impact of tourism on South Africa's economy, positioning it as one of the key pillars of employment and economic development.

1.3.2 The Skills Mismatch

Despite the sector's significant importance, the hospitality industry in South Africa expresses considerable concern about the quality of service provided to tourists by employees. The industry attributes this concern to insufficient training provided to graduates from TVET colleges (Mazhinye, 2018, p. 108). This study stems from a growing concern highlighted by employers regarding the work readiness of hospitality NCV graduates. After completing their qualification and obtaining their certificate, graduates eagerly anticipate joining the workforce to apply their acquired knowledge and skills to real-world challenges. They are often confronted by a disheartening reality in which the competence they have developed does not align with available job opportunities. This mismatch indicates that the NCV curriculum does not accurately reflect the skills requirements of the relevant industries (Gewer, 2010, p. 10).

Employers frequently complain about the quality of TVET graduates, describing them as subpar and noting deficiencies in creativity, problem-solving skills, communication, interpersonal abilities and technical skills (Mazhinye, 2018, p. 113). They assert that the NCV programme produces graduates who are not adequately trained, failing to satisfy the labour market's requirements for occupational competence and job knowledge (Engelbrecht et al., 2018, p. 231). This criticism underscores the need for training institutions to better prepare graduates for employment. Wilton (2012, p. 604) further highlights employers' dissatisfaction with the "work-readiness" of graduates, citing evidence that suggests a perceived decline in the quality of graduates from colleges. One significant reason behind this dissatisfaction is the industry's resource constraint; companies often cannot afford the time and financial investment required to train and develop recruits within the workplace. Conversely, the South African Chefs Association (SACA) has echoed the same sentiments, asserting that member institutions are dissatisfied with the calibre of graduates from South African TVET colleges.

Proponents of TVET argue that the above problem is not solely due to the inadequate staff development of TVET lecturers, who require continuous retraining to stay updated with modern technological trends (Papier, 2011, p. 109). Nor is it attributed to a lack of training resources (Engelbrecht et al., 2018, p. 235). Instead, as demonstrated in the background section of this chapter, the primary issue lies with the curriculum offered by these institutions, which often fails to include the mandatory WBL component.

A commitment to outstanding customer service is crucial, as it directly influences guest satisfaction and loyalty, which are paramount to repeat business in the highly competitive hospitality industry. Given that high-quality service hinges on a well-trained labour force (Shereni, 2020, p. 139) capable of adapting to new technology in this rapidly evolving environment, I found it valuable to explore what and how hospitality students learn in the workplace to develop the occupational competence required by the industry. Additionally, the widespread dissatisfaction among employers highlights a significant skills gap that urgently requires resolution.

1.3.3 The Inadequacy of the Literature

A comprehensive review of the literature highlights extensive research endorsing the benefits of WBL (Baum, 1988; Billett, 2003; Jackson, 2015; Papier & Vollenhoven, 2017; Spowart, 2011; Tse, 2010; Wilton, 2012). These investigations have transcended geographical boundaries, comprising both local and international contexts. They emphasise the broad appeal and relevance of WBL across various regions and educational systems. Significantly, the versatility of the WBL concept extends beyond vocational education, finding successful implementation in various academic disciplines, including, but not limited to, medicine, social studies, engineering, and business management.

On the other hand, numerous scholars (Baum, 2002; Marneros et al., 2020; Ord & Leather, 2011; Wilton, 2012) have attempted to identify the competence requirements of the hospitality industry but failed to establish what students learn and how the competence is built. This means that empirical evidence is limited regarding what hospitality students learn about pastry and how this builds occupational competence. This topic has received limited attention, and only a few studies have explored it. Although Vollenhoven's (2016) doctoral thesis investigates WBL experiences among TVET College students in South Africa. It focuses on engineering programmes, without specifically addressing what the students learned in the workplace.

Similarly, Jack (2011) and Brennen (2017) explored experiential learning for hospitality management students, focusing on the context of university education in the United States. Likewise, Alhelalat (2015) examined the skills needed to become an effective hospitality manager. This literature, however, focuses solely on hospitality management skills, ignoring the basic operational aspects that affect most employees. These scholars offered only partial

insights into WBL outcomes, leaving significant aspects of the topic unexplored. There is a notable gap in understanding the specific contributions of WBL to the development of occupational competence in hospitality students. The following section outlines the aim and objectives of the study.

1.4 The Aim and Objectives of the Study

This research aimed to bridge the aforementioned knowledge gap by exploring the learning experiences, modalities, and practices that WBL provided to hospitality students to develop their occupational competence. To realise this aim, I had four objectives. Firstly, I examined what hospitality students learn about pastry to develop occupational competence in pastry-making skills in the workplace. I evaluated how classroom theory is applied to practice during WBL to enhance learning. I then investigated hospitality students' perceptions of the WBL experiences, modalities and practices to identify factors that contribute to or hinder their progress. Finally, I highlighted the shortcomings pointed out by hospitality students and mentors regarding WBL experiences, modalities, and practices to give insights into areas of improvement. Section 1.5 outlines the research questions of the study.

1.5 Research Questions

In this research, I asked the question:

What is the specific contribution of work-based learning towards the development of occupational competence in hospitality students?

To answer this question effectively, I broke it down into four sub-questions:

1. What do hospitality students learn about pastry in the workplace that contributes to building occupational competence?
2. How is the theory learned in the classroom integrated into practice during work-based learning?
3. What are hospitality students' perceptions about the learning experiences, modalities and practices provided by work-based learning?
4. What shortcomings are pointed out by hospitality students and mentors regarding the learning experiences, modalities and practices provided by work-based learning?

1.6 Significance of the Study

The significance of my thesis is rooted in its connection to the broader landscape of skills development and policy formulation in the TVET field in South Africa. Over the past sixteen years, there has been a notable trend among policymakers where they have increasingly drawn upon ideas and strategies from diverse contexts to shape their approaches to skills development. This trend has been marked by a focus on integrating WBL into vocational programmes. Policymakers have actively promoted initiatives aimed at forging partnerships between industry and training providers to facilitate WBL. This concerted effort reflects the acknowledgement of WBL as a powerful educational tool, delivering substantial benefits to students pursuing vocational and occupational qualifications.

In essence, this thesis presents a distinctive viewpoint on WBL and its impact within the hospitality context, contributing to the existing body of knowledge and underscoring its adaptability and effectiveness in various educational domains. Through this research, I aim to provide valuable insights to inform and guide WBL researchers, policymakers, training providers, and stakeholders in the TVET field, empowering them to make informed decisions that can ultimately enhance the quality and relevance of TVET programmes in the country.

I engaged and interacted with students in WBL and their mentors through interviews and workplace observations. I gained insights into their experiences, viewpoints, practices and learning modalities in the workplace. Through my analysis, I drew conclusions anchored in reality, highlighting what and how students learn and illuminating the shortcomings of WBL towards developing occupational competence in students. Thus, the findings from this study offer a new body of academic knowledge, stimulate further discussion and debate, and serve as a foundation for researchers aiming to contribute further to bridge the knowledge gaps in this area of study.

The study found that students achieved optimal learning through active interactions and engagements with expert pastry chefs and participation within communities of practice. A notable finding emphasises that active participation in practical tasks and activities significantly enhances student learning. Consistent reassurance from experts, however, remained crucial to ensure correct task completion and adherence to standards. Learning from

experts was the most prominent finding of this research, magnifying their pivotal role in WBL, despite the challenges they face during this crucial period.

The findings in this study carry significant implications for the strategic planning, organisation, and support for WBL. Recognising the challenges experts face, such as production pressures that limit their availability for guiding and supporting students, amplifies the importance of thoughtful planning. Additionally, their lack of teaching qualifications influences the way they support and guide students during WBL, making it crucial to create frameworks and provide them with appropriate training to optimise mentorship. The recommendations presented in this study aspire to influence decision-making for skills development. By acknowledging the intricate dynamics of WBL, I anticipate that these suggestions will resonate with stakeholders and guide the design of effective learning experiences that balance the demands of experts while fostering robust occupational competence development in the workplace. I anticipate that this knowledge could also enable the industry to enhance students' WBL experience, thereby facilitating more impactful learning outcomes.

Equally vital is the anticipation that these newfound insights may aid the South African TVET stakeholders, more specifically regarding the NCV qualification, to recognise the importance of WBL towards building occupational competence in students and for better sustained human capital development for the industry in the country. Findings on the contribution of WBL in developing occupational competence may contribute to curriculum re-development planning, policy-making and implementation. As such, the findings and recommendations in this study may also inform national policy and action plans aimed at promoting quality and relevant TVET in South Africa. I found it to be of utmost importance to gather student feedback to refine the existing curriculum. By incorporating student input, the curriculum can be tailored to address current needs and challenges, enhancing the overall effectiveness of the educational programme. The following section outlines the structure of this study.

1.7 Structure of the Study

My thesis is structured as follows:

Chapter One: Introduction and Background

Chapter One introduces and outlines the background of the study. It also highlights the problem statement, aims, objectives, research questions and the significance of the study. Particularly,

this chapter establishes the foundation for the research by framing WBL as a crucial element of TVET, particularly in addressing skills gaps and preparing students for the modern workplace. It highlights the research's significance by identifying the limitations of the NCV curriculum and a gap in existing literature on the specific contributions of WBL in hospitality. The main research question is thus, 'What is the specific contribution of work-based learning towards the development of occupational competence in hospitality students?' The study examined what and how hospitality students learn during WBL.

Chapter Two: The Notion of Achieving Occupational Competence in Vocational Training

Chapter Two presents a comprehensive exploration of the concept of occupational competence development within vocational training systems. The chapter commences by offering a set of definitions of occupational competence as proposed by different scholars, followed by a focused examination of the factors that are pertinent to the development of occupational competence. Within this discussion, emphasis is placed on two primary training approaches employed to attain such competence. Subsequently, the chapter shifts its focus to a detailed analysis of policy on skills development within South Africa, as this thesis is intricately situated within this specific context.

Chapter Three: Hospitality Education and Work-based Learning

This chapter is built upon the literature review presented in Chapter Two. Here, I delve into the perspectives of various scholars regarding the construction of vocational knowledge within the vocational training domain. This exploration naturally transitions into an examination of the training process within hospitality education, followed by an analysis of the literature on work-based learning, the focal point of my thesis. I explore its definitions and interpretations by different authors and its associated benefits and challenges. Finally, I investigate how learning occurs in the workplace according to existing literature. Through this thorough review, a deeper comprehension of the subject emerges, extending to me a solid foundation for my research.

Chapter Four: Situated Learning Theory and Work-Based Learning

The theoretical foundation of this study is rooted in Lave and Wenger's (1991) concept of situated learning within communities of practice. This theory places significant emphasis on the dynamics of the master-novice relationship and collaborative learning within communities of practice. Positioned within a socio-cultural paradigm, this theoretical framework highlights

the crucial role of context, culture, and social interactions in a WBL context. According to this theory, learning occurs when individuals actively participate, interact, and engage with others. This engagement involves immersive experiences in purposeful, real-world activities while utilising various tools and reified artefacts within the workplace. While it is worth acknowledging that Lave and Wenger's (1991) theory draws from Vygotsky's (1978) concept of the expert other in the Zone of Proximal Development, for this study, my primary focus remains on the situated learning theory.

Chapter Five: Research Design and Methodology

In this chapter, I explore the rationale behind the adoption of a qualitative research methodology. I outline the research method employed, including details regarding data collection techniques, instruments, and the sampling approach. Special attention is given to the ethical considerations observed throughout the research process. The study involved the purposive selection of two distinct participant groups: a cohort of ten hospitality Report 191 students engaged in WBL and five of their mentors. Data collection primarily relied on face-to-face interviews and workplace observations, encompassing all 15 participants. Interviews were audio recorded and subsequently transcribed for in-depth analysis, while observations were documented through field notes, pictures and video recordings. The analysis of the gathered data followed a manual approach, involving coding and the identification of key thematic elements.

Chapter Six: Findings from the Data

In this chapter, I present the collected data related to each of the sub-questions aimed at addressing the main research question. The data is comprehensively presented, highlighting the themes that emerged from the interviews, observations, and the literature reviewed in the study. To provide a tangible representation of the participants' viewpoints, I included relevant excerpts from the data, which served to substantiate the identified themes. The findings show that WBL is fundamentally a social process, unfolding through interactions with experts and engagement within communities of practice. This highlights the critical role of social participation, experiential learning, and the use of mediating artefacts. Chapter Six expands on both the strengths and limitations of these learning mechanisms.

Chapter Seven: Discussion of Findings

I present a discussion of the findings in the context of the reviewed literature, theoretical framework, and my experiences with WBL. In this chapter, I explore the learning experiences, modalities and practices afforded to students within the workplace, drawing on Lave and Wenger's (1991) theory of situated learning within communities of practice. The discussion of the findings entails an examination of what and how students learn in the workplace, as well as their perceptions of the learning experiences, practices and modalities afforded to them by the workplace. This chapter demonstrates how social participation is the main mode of learning, as seen through expert mentoring and learning in communities of practice. It articulates how hands-on practice and the use of artefacts contribute to building occupational competence and unpacks how the findings fit within the broader context of WBL and the literature relating to it. The expert and the community of practice play a vital role in students' learning, despite the challenges posed by their demanding work schedules and production tasks. Through WBL, students learned both the technical and soft skills related to the trade under study.

Chapter Eight: Conclusions and Recommendations

In Chapter Eight, I present a concise summary of the key conclusions drawn from my thesis. Here, I explicitly articulate the contributions that this thesis makes to the existing body of knowledge and the practical and policy implications and recommendations stemming from the research. This thesis makes two key theoretical contributions. First, it reconceptualises occupational competence as a socially negotiated, materially mediated, and contextually situated process, challenging checklist-based definitions by showing how students develop occupational competence through participation in workplace practices. Second, it refines the situated learning theory by illustrating how structural and institutional factors, such as inconsistent mentorship, lack of access to experts, and untrained mentors, complicate the idealised model of legitimate peripheral participation in the South African WBL context. By showing these complexities, the study offers a more grounded and policy-relevant application of situated learning in TVET systems, ultimately enhancing understanding of how WBL unfolds and informing future pedagogical and policy approaches. Moreover, I reiterate the identified gaps in the study and suggest directions for future research. Ultimately, I provide a clear and concise outline of the research argument and the central knowledge claims made throughout the thesis.

1.8 Conclusion

The NCV was introduced in 2007 to replace the outdated NATED system, which provides an alternative vocational pathway for Grade 9 learners, aiming to align education with employability. However, the NCV has faced criticism due to a mismatch between its curriculum and industry needs, with graduates lacking relevant practical and generic skills sought by employers. Despite policy intentions, NCV programmes are heavily theory-based, with minimal workplace exposure, leading to doubts about graduate readiness. Further challenges include under-resourced TVET colleges and underqualified lecturers, hindering practical training delivery. Ambitious yet poorly implemented policies have failed to meet workforce demands. To address these issues, WBL is highlighted as crucial for developing occupational competence, particularly in the hospitality sector, by integrating classroom knowledge with real-world experience. However, collaboration between colleges and industry remains limited, affecting students' transition into the workforce.

Despite tourism's significant role in South Africa's economy and its potential to create employment, there is a growing concern about the mismatch between the skills taught in TVET colleges, particularly through the NCV qualification and the practical needs of the hospitality industry. Employers consistently report that graduates lack essential occupational competence, such as problem-solving, communication, and technical abilities, largely due to the curriculum's limited integration of WBL. This disconnect hinders graduates' work readiness and burdens employers who lack the resources to provide further training. Although WBL is internationally recognised as a valuable educational approach, existing literature offers limited insight into what hospitality students learn in the workplace, especially in operational areas like pastry. This highlights a critical gap in research and practice, justifying the need to explore what and how hospitality students learn about pastry during WBL to develop occupational competence.

This chapter establishes the foundation for the research by framing WBL as a crucial element of TVET, particularly in addressing skills gaps and preparing students for the modern workplace. It highlights the research's significance by identifying the limitations of the NCV curriculum and a gap in existing literature on the specific contributions of WBL in hospitality.

This study focused on four key objectives: identifying what students learn about pastry in the workplace, assessing how classroom theory is applied in practice, exploring students' perceptions of WBL experiences, and highlighting challenges reported by students and mentors to inform improvements. The research question guiding the study is:

What is the specific contribution of work-based learning towards the development of occupational competence in hospitality students?

To answer this question, I broke it down into four sub-questions:

1. What do hospitality students learn about pastry in the workplace that contributes to building occupational competence?
2. How is the theory learned in the classroom integrated into practice during work-based learning?
3. What are hospitality students' perceptions about the learning experiences, modalities and practices provided by work-based learning?
4. What shortcomings are pointed out by hospitality students and mentors regarding the learning experiences, modalities and practices provided by work-based learning?

This study makes a twofold theoretical contribution to the literature. First, it extends the concept of occupational competence beyond technical and cognitive skills to include its situated, relational, and artefact-mediated dimensions. By foregrounding the lived experiences of students in hospitality workplaces, the study shows that occupational competence develops through interactions with experts, active participation in communities of practice, mediated by tools, and workplace norms.

Second, the research refines situated learning theory by applying it to the South African TVET context, where access to experts, mentorship and learning opportunities is inconsistent, and often shaped by production pressures and institutional constraints. In doing so, the thesis contributes a contextualised understanding of how legitimate peripheral participation and identity formation unfold in resource-constrained WBL environments. This framing enables a more nuanced application of situated learning theory to technical and vocational education and training and offers a new lens through which to understand and improve WBL in hospitality education.

CHAPTER 2: The Notion of Achieving Occupational Competence in Vocational Training

2.1 Introduction

The subsequent chapter is a detailed literature review of the concept of 'occupational competence', comparing its various definitions and proposed processes of its development. This comprehensive review of 'occupational competence' served as a foundational reference point from which I explored and evaluated students' WBL experiences, training methods and practices towards developing occupational competence.

The concept of occupational competence is by no means an easy concept to define due to its expansive, intricate, and diverse nature. Its complexity stems from its widespread usage by authors from various countries, each bringing their unique perspectives and backgrounds. These various perspectives, sometimes seemingly contradictory, appear to be deeply intertwined with the institutional structures and labour processes specific to each country. Defining occupational competence for this research led to an examination of the two skill categories critical for nurturing it within the contemporary hospitality industry: technical competence and generic skills. To this end, in examining these skills categories, I explored their importance, distinguishing attributes, and their increasing significance within the modern hospitality landscape.

Although some of the literature I drew on may appear to be too general, the primary focus was on learning and knowledge related to hospitality education rather than a broader vocational orientation. At its core, my thesis aligns with the viewpoints of scholars like Gamble (2013), Rauner (2007), Wheelahan (2012) and Winch (2012) who assert that all practice is rooted in theory, and theory must be translated into practice to guide and justify action. These authors advocate for a holistic approach to training that involves blending classroom theory with practical experience in the workplace. To arrive at a definition, I examined literature related to the epistemology of vocational knowledge in the vocational curriculum to which hospitality belongs. Employing Mulder's (2014) concepts of 'competence as integrated occupationalism' as a lens, I emphasised the development of occupational competence through the integration of theoretical knowledge obtained in the classroom and practical knowledge acquired through workplace experience.

Despite ongoing debates regarding knowledge construction, I intentionally avoided becoming entangled in the persistent scholarly disputes over the predominance of a specific knowledge type within TVET education. These debates often favour practical knowledge acquired in the workplace against disciplinary knowledge taught in the classroom. A study by Bathmaker (2013), which traced some of the major arguments on vocational knowledge, highlights that such disputes are far from being resolved. Moreover, despite Wolf's (2011) review of vocational education, key stakeholders in the United Kingdom's vocational system continue to have varying interpretations of the knowledge required to deem students occupationally competent.

The examination of technical competence and generic skills necessitated an exploration of the two primary vocational training approaches that foster occupational competence. Brockmann (2011), building on the work of Rauner (2007), elucidates a fundamental difference between the two approaches: the knowledge-based approach centred on vocational training for regulated and stable professions and the skills-based approach, which is oriented toward enhancing 'employability' in a more open and competitive job market. These two training approaches provide valuable insights into the South African vocational training context and the development of occupational competence within the local TVET system.

2.2 Exploring the Multifaceted Nature of Occupational Competence

Many definitions of occupational competence have surfaced over the years in the academic world. One of the most cited definitions is one suggested by Tan et al. (2020, p. 58), who define it as "an underlying characteristic of a person which results in effective and/or superior performance in a job". Similarly, Spencer and Spencer (2008, p. 9) describe it as "an underlying characteristic of an individual that is causally related to criterion-referenced effective and/or superior performance in a job or situation". In like manner, Tas (1988) defines it as the performance of duties based on one's ability to accomplish specific job-related tasks and assume the role connected to a particular position. Here, occupational is defined in the context of performing a task or job, indicating that certain ways of thinking or behaving are crucial for performance on that particular task.

In an article by Marneros, Papageorgiou and Efstathiades (2020, p. 4), occupational competence is defined as "motives, traits, self-concepts, attitudes, hard skills, and knowledge". I suggest that knowledge, as included by Marneros et al., refers to both theoretical and practice-based knowledge, as they further posit that occupational competence enables employees to work more effectively and efficiently. In this way, 'occupational competence' reflects the idea that theoretical knowledge should be complemented by the development of attitudes and hard skills, resulting in the integrated ability to perform tasks in jobs or professions according to established standards and expectations. In this definition, the emphasis is on the skills and traits that individuals should acquire to perform tasks more effectively. The focus is on the quality of an individual more than on the workplace itself.

On the other hand, Mulder (2014, p. 11) states that:

> Occupational competence is seen as the generic, integrated and internalised capability to deliver sustainable, effective (worthy) performance (including problem-solving, realising innovation, and creating transformation) in a certain professional domain, job, role, organisational context, and task situation.

Like Marneros et al. (2020), Mulder's definition adopts a comprehensive view of occupational competence and refutes narrow conceptualisations that require students to master a long series of detailed tasks, similar to those in the Anglo-Saxon TVET system. Mulder emphasises the effective performance of an individual through their integration of technical and generic skills, defining occupational competence about the individual and not the conditions of the workplace. Both definitions consider occupational competence concerning theoretical knowledge, technical competence and personal attributes (Wedekind & Mutereko, 2016b, pp. 379–380).

According to Wedekind and Mutereko (2016b, p. 380), occupational competence predominantly concerns the individual and the set of skills they bring to the employment context. The occupational competence discourse begins with a set of criteria that employers consider when evaluating prospective employees. There is much debate as to what constitutes this competence (Barnett, 2006; Wheelahan, 2007; 2010). The narrow approach to occupational competence emphasises generic skills related to attitudes and personal characteristics, rather than the technical skills necessary to perform job-related tasks. Wheelahan (2010, pp. 159–160) differentiates between the different types of knowledge necessary to develop a competent and holistic graduate. She argues that focusing narrowly on skills (be they soft skills or work-specific competences) fails to understand the relationship

between those competences and the underpinning knowledge structures. She maintains that individuals need both disciplinary knowledge and practical knowledge to be considered competent.

Informed by these diverse perspectives, my preliminary definition of occupational competence is the holistic capacity and demonstrated skill set that encompasses theoretical knowledge, practical knowledge and soft skills specific to a given occupation. This definition signifies an individual's readiness, expertise, and proficiency to meet occupation-specific standards and expectations, ensuring effective job performance.

Given that many definitions of occupational competence emphasise the significance of both technical and generic skills, I examined these two types of competence as essential in the development of occupational competence.

2.3 Technical and Generic Skills

An account of occupational competence is incomplete if a description of its components is not given. As I previously mentioned, competence is divided into two different types: technical competence, referred to as hard skills (Balcar, 2016, p. 454) and personal attributes often referred to as either generic or soft skills (Balcar, 2011, 2014; Wedekind & Mutereko, 2016a). In this research, I have used the words 'personal attributes', 'soft skills' and 'generic skills' interchangeably. Hard and soft skills differ from one another but are both considered necessary for a person to succeed in the labour market, as the two need to be used concurrently. Both hard and soft skills are known to significantly increase an individual's productivity, although most employers, as suggested by the literature, prefer soft skills over hard skills (as detailed in section 2.4). Research by Balcar (2016) found that the two types of skills complement each other and should be regarded as such if individuals are to be deemed productive or occupationally competent. In the following two sections, I discuss both technical competence and soft skills and their importance.

2.3.1 The Importance and Characteristics of Technical Competence: Definitions and Perspectives

Technical competence is concrete skills that are specific to one's job and are required for the accurate and precise execution of tasks. If one is a pastry chef, for example, technical

competence includes baking and icing cakes. Technical competence is closely related to the knowledge required to perform a task and is easily taught and assessed. Balcar (2014, p. 5) describes technical skills as "skills which are easily observed and/or measured, easily trained and closely connected with an individual's knowledge". Similarly, Balcar (2016, p. 466) affirms that "hard skills embodied are acquired from qualifications and that these are necessary for labour market success". A study by Andrews and Higson (2008) on graduate employability found that most employers considered graduates whose qualifications and hard skills were integral to the business.

Andrew and Higson further assert that formal WBL in a real work environment is valuable to qualification, as it enhances students' learning experiences whilst providing them with the opportunity to acquire and hone the hard skills they need for work (2008, p. 420). This implies that technical competence is generally acquired through universities, colleges, training centres and the workplace. Once trained, the individual will possess the technical competence required to master relevant tasks. By the same token, Guile and Unwin in their book chapter entitled: *VET, Expertise and Work: Situating the Challenge*, argue that:

> learners require access in educational institutions to the forms of knowledge and the types of technology that they may encounter embedded in occupational practice in workplaces, as well as access in workplaces to opportunities to develop, refine, and utilise their occupational capabilities to engage in tangible and intangible activity (Guile & Unwin, 2019, p. 35).

Technical competence is closely related to the skills learned for performing specific work tasks or an individual's formal qualifications (Andrews & Higson, 2008; Balcar, 2011, 2014, 2016; Guile & Unwin, 2019; Mehralizadeh, Salehi, & Mansur, 2013). In the South African context, this is evident in post-school education and training institutions, which primarily focus on assisting students to acquire the technical competence needed for their future employment. Resultantly, employers can assess one's technical competence by reviewing one's qualifications and previous experience.

2.3.2 The Challenge of Measuring and Developing Soft Skills: Definitions and Perspectives

The term 'generic skills' and its synonyms (soft skills, core competence, key competence, transferable skills, personal skills, etc.) are used to refer to transferable skills that underpin

competent performance across various occupational fields (Mehralizadeh et al., 2013, p. 97). These skills include, among others, communication skills, teamwork, and adaptability (Harrison, 1996; Jackson, 2013; Wilton, 2012). Generic skills are also called ‘transferable skills’ because they can be transferred from one job to the other. Examples of transferable skills include time management skills, confidence, teamwork, and communication skills, as these skills enable individuals to navigate various jobs with ease.

Generic skills, according to Balcar (2016, p. 454), represent learned behaviour based on an individual’s predispositions. Similarly, Wedekind and Mutereko (2016b, pp. 379–380) argue that:

> generic skills are linked to attitudes, dispositions and personal characteristics rather than the specific skills required to carry out the tasks associated with the job. The focus is on communication and presentation skills, career guidance and such like.

Demonstrating an overlap with soft skills, Heckmann, Stixrud, and Urzua (2006) suggest that generic skills refer more to acquired skills than to cognitive abilities. In the same way, Balcar (2016) posits that soft skills are interpersonal or people skills that are applicable across all jobs. Offering broader definitions of soft skills, Lucas, Spencer, and Claxton (2012, p. 113) regard soft skills as a combination of people, social, and communication skills along with character traits, attitudes, career attributes and social intelligence. These skills enable people to navigate their environment, collaborate with others, perform well, and achieve their goals. Conversely, Bi and Boo (2025, p. 320) define soft skills as a stable, long-lasting, learned predisposition to respond to certain things in a certain way. In a similar vein, Mehralizadeh et al. (2013, p. 105) relate soft skills to attitudes stemming primarily from psychological traits, preferences, experience, background and many others.

The common thread in these definitions is that soft skills are closely linked to personal traits, making them difficult to measure and evaluate. Unlike technical competence, which is easily assessed and can be demonstrated in curricula vitae and cover letters, soft skills are less tangible and more difficult to assess and quantify. Balcar (2016, p. 456) proposes that:

> It is very difficult to measure soft skills … as there is no test which objectively assesses the individual’s workplace behaviour, as it is an interactive process depending on context.

In contrast to technical competence, potential employers often have to wait until an interview or a few days on the job to assess an individual’s soft skills (Balcar, 2014, p. 4). Furthermore,

Balcar (2014) asserts that developing soft skills is a slower and more difficult process. Improving skills such as cooperation often requires changing an individual's attitudes and then assisting them to master methods to improve that competence. For some people, certain soft skills may come naturally, while others may struggle to develop them.

To acquire these soft skills, one needs practice in the real world as they cannot be taught in any curriculum (Balcar, 2016; Guile & Unwin, 2019; Wedekind & Mutereko, 2016b). Mazhinye (2018, pp. 87–91) analysed the NCV Level 2-4 hospitality services curriculum and found that it focused solely on teaching and learning technical competence related to the subject while neglecting soft skills. She found that the development and assessment of technical competence was clearly outlined in both the subject and assessment guidelines but this was not the case for soft skills (2018, pp. 90–91). As shown above, not only are there missing credentials for soft skills, but there are also gaps in their development. Excluding soft skills from college curricula could have significant implications for both students and the industry. Soft skills, such as communication, teamwork, critical thinking, and problem-solving are essential for success in the workplace.

By neglecting these skills in education, students may graduate lacking the generic skills needed to navigate complex workplace environments. This omission could hinder graduates' employability and career advancement prospects, as employers increasingly value candidates with well-rounded skill sets (Balcar, 2016, p. 458). This indicates a mismatch between students and the needs of the employer. This negatively impacts institutional productivity and success. Research has observed that educational providers are neglecting the importance of soft skills (Baum, 2002; Mehralizadeh et al., 2013; Wedekind & Mutereko, 2016a). Moreover, integrating soft skills into college curricula is crucial for promoting holistic development and preparing students for the multifaceted challenges of the modern world of work.

2.4 The Growing Emphasis on Soft Skills in the Modern Hospitality Industry

Although technical competence is often detailed in curricula vitae, modern society and the economy demand more. They place greater value on soft skills or personal attributes that help individuals interact and engage effectively with others for better productivity. Balcar (2016), propounds that the elements of occupational competence have evolved, shifting from a focus on technical aspects to generic skills. According to Weber et al. (2013, p. 315), the hospitality

industry is increasingly identifying shortages in generic skills rather than in technical competence. Similarly, literature on curriculum responsiveness and student employability (Wedekind & Mutereko, 2016b, pp. 379–380) notes the dominant focus by employers on generic skills rather than on specific competence required to perform tasks associated with the job.

By the same token, Mehralizadeh et al. (2013, p. 102) aver that "the new workplace emphasises a shift in decision-making and problem-solving, from the supervisory level to the shop floor, where workers must cope on the spot with a growing number of unpredictable problems". In a survey I conducted in 2018, I found that employers prioritise soft skills related to hospitality over hard skills when making hiring decisions. Accordingly, Baum (2002, p. 353) asserts that hotels hire based on generic employability more than on specific skills and experience. This suggests a growing recognition of the importance of soft skills among hospitality employers, illuminating the need for educational institutions to place greater emphasis on developing these crucial abilities alongside technical knowledge and expertise.

In the next paragraph, I include older literature as far back as 1992 to provide a historical perspective on the development of key competence in the hospitality industry. This helped me to trace how foundational skills such as communication and customer service have remained relevant over time, while also setting the stage for understanding how such competence is reinterpreted in contemporary contexts.

Additionally, Hsu, Gilmore and Walsh (1992) suggest that essential occupational competence to prepare graduates for a successful career in the hospitality industry should include customer service, supervision of personnel, communication skills, ethical and professional standards at work, decision-making, and positive working relationships. Dana (1992) also maintains that effective communication with people and providing high-quality customer service are the most essential competences for the industry. Hanson (1993) suggests creativity as a necessary competence for hotel operations and management. Industry professionals, alumni, faculty, and students participated in a survey by Enz, Renaghan and Geller (1993). The survey highlighted that the top competences for success in the hospitality industry are leadership, the ability to identify problems, organising, and writing. Harrison (1996) also notes that interpersonal skills are ranked as the highest domain of workplace competence.

In a fascinating study, Shariff and Abidin (2015) developed a competence index which consisted of eight domains. Of the eight domains, communication skills, business fundamental skills, and interpersonal skills were the top-rated competences. In a similar study conducted in Taiwan, Wang (2001) assessed the professional competences necessary for the front-house employees of food and beverage establishments. The results of his study showed that language skills, professional appearance, and self-confidence were the basic competences required. Spowart (2011, p. 172) in Johannesburg, South Africa, whose work is on hospitality students' competences elucidates that personal attributes, enthusiasm and self-confidence were the skills that enhanced graduate employability and success. She further upholds that an important trait demanded by employers is for graduates to work confidently and effectively when they enter their occupation.

Sisson and Adams (2013) conducted a study to determine the essential competences and the differences between competences required by employees in the accommodation, food and beverage and events management departments. Their findings show that hospitality programmes should focus on developing generic skills such as listening skills, written and verbal communication, motivation, and self-development, rather than hard skills. Tesone and Ricci (2005), in a study conducted in Florida, showed that the strongest attributes desired by hospitality managers included: teamwork, communication skills, guest service skills, professional appearance, understanding of industry expectations, pride in self, and the ability to work with people, over specific knowledge of hospitality and administrative tasks. In like manner, Thompson, Poulston, and Neill (2017, p. 116) argue that the development of interpersonal skills in a work setting is of equal importance and in some cases even more important than technical skills when hiring new employees.

Skills such as listening, collaborating with others, and communicating with team members are all highly valued in the modern workplace, where people are encouraged to work in teams to improve production. Employers consider technical skills as irrelevant in comparison to generic skills. To them, hard skills are insufficient for an employee to be truly effective in the workplace. In an increasingly competitive world, a productive, collaborative, and healthy work environment is essential for organisations to thrive. Generic skills have been found to foster such an environment. Baum (2002, p. 355) reports that this shift in focus within the hospitality industry has been styled by the generic agenda, which prioritises soft skills over hard skills.

While both earlier and contemporary literature emphasise the importance of soft skills in the hospitality sector, I have intentionally drawn on older sources alongside more recent studies to demonstrate the continuity and evolution of key competences over time. I also briefly reflect on contemporary authors such as Marneros et al. (2020), who, in their study on identifying key success competences for the hospitality industry, reference earlier works to underscore the enduring complexity of the concept of competence and to examine it from multiple perspectives. Similarly, this study references foundational texts to provide a robust theoretical grounding and to demonstrate how current understandings are built upon earlier scholarly contributions. Older literature provides a foundational understanding of the core values long held in the industry, particularly communication, adaptability, and customer service, while newer research reflects how these competences have been adapted in response to changing industry demands. Although technical skills remain important, the consistent prioritisation of generic skills highlights the hospitality sector's need for employees who can effectively navigate complex, service-oriented environments. This approach supports my wider argument that occupational competence in hospitality is shaped by a blend of enduring values and evolving expectations, underscoring the relevance of foundational competences across time.

2.5 A Holistic Approach to Competence Building: Balancing Knowledge, Skills, and Attitudes

Research by Balcar (2016) titled: *Is it better to invest in hard or soft skills?* argues that technical and generic skills should always be used in tandem and that employers should treat them as such. His analysis of these skills established that soft skills are as important a wage determinant as hard skills, indicating that the two should be considered together (2016, p. 466). This is supported by Weber et al. (2013, p. 315) and Baum (2002, p. 354), who suggest that a key shift in hospitality work is the integration of technical and interpersonal skills in all aspects of work. Although Balcar's (2014) article discussed the returns of hard and soft skills separately, he sternly concluded that job applicants and employees need both to succeed in the labour market. Both these authors argue that the efficiency of hard skills stems from their combination with soft skills and that the two should never be separated.

Similarly, Wedekind and Mutereko (2016a) in their journal article on *Employability and Curriculum Responsiveness in Post-School Education and Training* state clearly that the two types of skills might not be useful if they are isolated, indicating that they both are crucial to

rendering an individual competent. Consequently, like technical skills, soft skills could also be incorporated into the curriculum and taught in the same way as technical skills. Additionally, Lucas et al.(2012) acknowledge the importance of soft skills, asserting that they enable people to navigate their environment, work well with others, perform well, and achieve their goals, but state that they are complementary to hard or technical skills.

Studies by Carty (2021) and Busby (2003, p. 323) found that the skills needed for the hospitality industry are practical, self-confidence, positive attitudes and the ability to analyse problems. Scholarly work by Ricci and Kaufman (2008) used focus groups containing twelve lodging managers in Florida to identify job competence expectations. They found competences for entry-level employees to include: the ability to be empathetic with guests, balancing the needs of multiple guests at one time, teamwork, personal pride, empathy, technical skills and seeking out positive solutions. Koenigsfeld, Youn, Perdue, and Woods (2012) investigated occupational competence for private club workers; they categorised the competences into five domains. The five domains and their examples are illustrated in Table 1 below.

Table 1: The five competence domains and their examples for a pastry kitchen

Creative domain	Leadership domain	Administrative domain	Interpersonal domain	Technical domain
Recipe development Menu design Presentation skills Trend awareness	Coaching Decision making Problem-solving skills Team management Training and development	Time management skills Organisational skills Attention to detail	Teamwork Empathy People skills Communication skills Customer service	Baking Decorating Icing cakes Recipe knowledge Ingredient handling

Source: Koenigsfeld, Youn, Perdue, and Woods (2012)

Koenigsfeld et al. (2012) rated the technical and interpersonal domains as the most important. Similarly, Suh, West and Shin (2012) conducted a study to identify the core competences contributing to the success of future employees in the hospitality industry. Their study indicates four dimensions of core competences, namely, hospitality skills, interpersonal skills, leadership skills and communication skills. My interpretation of Suh et al's hospitality skills is the technical competences required in the field. Both Koenigsfeld et al. (2012) and Suh et al. (2012) appear to draw from the situated learning theorists (Brown, Collins & Duguid, 1989;

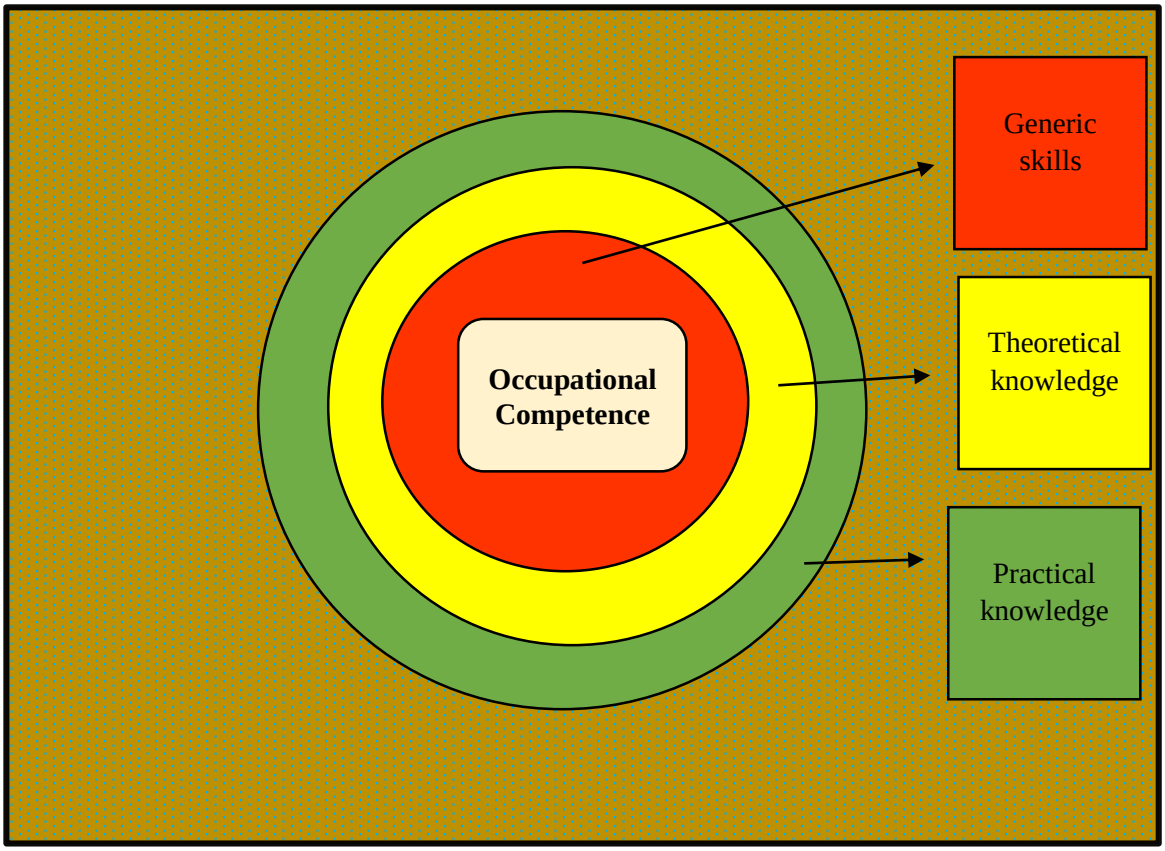
Lave & Wenger, 1991; Wenger, 1998) who suggest that occupational competence is effectively developed in a real workplace environment where students learn through active participation, interaction and engagement in socio-cultural settings. These theorists emphasise the development of technical competence and generic skills through working with others.

The literature above highlights the synergy between technical competence and soft skills within the hospitality industry, emphasising their interdependence. The interdependence of the two skill sets in the hospitality field requires a harmonious blend of both skill types, underlining the importance of job seekers and employees possessing the skills to thrive in the job market. While technical competence ensures competency in industry-specific tasks, generic skills foster adaptability and effectiveness in diverse hospitality contexts, enhancing graduates' employability and career prospects. In other words, technical expertise, while essential, gains greater significance when coupled with strong interpersonal aptitudes, like effective communication, interpersonal skills and teamwork. Some literature notes that occupational competence can only be effectively developed through a holistic approach to training, which highlights that knowledge, skills and attitudes should be integrated into the curriculum.

Mulder's (2014, p. 16) book chapter, *Conceptions of Professional Competence*, argues that competence is seen as a coherent cluster consisting of knowledge, skills, and attitudes which can be applied in real performance contexts. This approach to competence building, according to Mulder, stimulates what he calls "integrated occupationalism", which is based on notions of holistic, generic and integrated sets of knowledge, skills and attitudes necessary in core occupational roles and situations. Mulder (2014) further argues that not only are knowledge and skills important, but of equal importance is professional attitude or identity, important in the hospitality industry and care and service sectors. In addition, Mulder (2014, p. 16) emphasises the importance of theoretical knowledge in developing competence. Consistent with Mulder (2014), Wedekind and Mutereko (2016b, p. 381) argue that theoretical knowledge, technical competence and generic skills are essential components of occupational competence. Likewise, Wheelahan (2010; 2012) advocates for a balance between disciplinary and mundane knowledge. Wheelahan (2010, p. 160) defines mundane knowledge as basic, everyday knowledge acquired through everyday experiences and interactions, encompassing technical competence and generic skills that are often considered common sense.

Although I have drawn on the situated learning theory as a theoretical framework for my thesis, I concur with the stance that developing occupational competence requires a holistic approach that includes theoretical knowledge, technical competence, and generic skills (Mulder, 2014; Mutereko & Wedekind, 2016; Wheelahan, 2010). These authors necessarily illuminate the significance of developing theoretical knowledge parallel to technical and generic skills in achieving competence. Understanding theory provides a framework for problem-solving and innovation, while technical competence ensures proficiency in executing tasks. Generic skills such as communication, interpersonal skills and teamwork are essential for navigating diverse workplace environments. As such, by recognising the relationship between theoretical understanding, technical competence and generic skills, individuals can develop the comprehensive occupational competence necessary for success in various professional contexts. This perspective extends beyond borders, as studies from various regions support the idea that the global hospitality industry values a similar skill set in its workforce. It demonstrates the universality of these competences, reinforcing their global relevance. Figure 1 below illustrates the holistic way of developing occupational competence.

Figure 1: Developing occupational competence



Source: Authors' creation

This approach to training promotes a well-balanced education, preparing students with comprehensive skill sets vital for success in their trade. To illustrate the interplay of this comprehensive skill set, I consider the example of a pastry chef who is expected to produce yeast products for breakfast. They require the disciplinary knowledge to identify which flour to use and the optimal temperature for yeast fermentation, technical competence to knead the dough and work with the tools, and generic skills such as time management, coping with pressure, integrity, and teamwork to ensure productivity and delivery. Together, these elements constitute the occupational competence needed to make a pastry chef effective in their role. Educational programmes in hospitality are encouraged to integrate the three categories into their curricula to ensure student success.

2.6 Balancing Theoretical and Practical Knowledge for Occupational Competence

In the following segment, I examine the literature on the epistemology of vocational knowledge and explore the necessity of embracing both theoretical and practical knowledge to foster a comprehensive approach to TVET instruction. Emphasising the symbiotic interplay between these two forms of knowledge, I underscore their integration as pivotal in cultivating occupational competence.

Wheelahan (2010) suggests that the main aim of vocational education is the development of occupational competence in students to prepare them for work and not merely for specific tasks. Vocational education emphasises employability skills necessary for success in the labour market. A comprehensive notion of vocational education involves the inclusion of complex bodies of knowledge that an individual acquires in becoming a competent practitioner (Guile & Unwin, 2019). This implies that students should receive, as part of their vocational preparation, a broad education in principles based on the knowledge that underpins their future work alongside practical experience in the workplace.

According to Barnett (2006, p. 152), vocational learning is acquired through workplace activities and disciplinary knowledge. These provide students with more flexibility and adaptability to meet the changing demands of the labour market (Gamble, 2013; Wheelahan, 2010). Thus, vocational programmes must consider both the non-empirical world of ideas and

concepts and the empirical world of practice and experience (Barnett, 2006; Gamble, 2013; Young, 2006).

In this section, I demonstrated the importance of integrating theoretical and practical knowledge in the development of occupational competence. It is thus imperative for me to clarify the nature and development of these two knowledge categories within TVET training and to elucidate their importance in the context of hospitality training.

2.6.1 Understanding the Landscape of Theoretical Knowledge: Implications for Technical Vocational Education and Training

Theoretical knowledge, also known as knowledge-that or propositional knowledge (Winch, 2012, p. 130), encompasses a broad understanding rooted in contextualised theorems and communicated through systematic language. This form of knowledge, often synonymous with scientific knowledge, is considered universal and is typically conveyed by teachers within classroom settings (Moodie, 2002, p. 252). Gamble (2016, p. 213) offers a nuanced perspective, characterising theoretical knowledge as specialised disciplinary and scientific knowledge operating at a general level, codified into written form, and acquired as 'theory'. Building on Durkheim's (1977) insights, Young & Muller (2013, p. 231) emphasise its crucial role as powerful specialised knowledge essential for comprehending and potentially transforming the world. Rauner (2004, p. 239) further defines theoretical knowledge as context-independent, guiding and legitimising actions, rooted in academia, and objective in nature. Rauner (2004), however, does not elaborate on its acquisition processes or sources. From the above definitions, I propose that theoretical knowledge encompasses a broad, systematic understanding derived from contextualised theorems. It spans scientific and disciplinary domains, operating at a general level, often codified into written form as 'theory'. Rooted in academia, it guides actions and enables comprehension and potential transformation of the world.

Wheelahan (2007, p. 3) argues that learning at the workplace is one mechanism through which the working class is denied access to powerful knowledge (theoretical knowledge). Similarly, Young (2006, p. 115) posits that whilst all jobs require context-specific knowledge, many jobs also require knowledge involving theoretical ideas shared by a community of specialists that are located within the special community of practice. Workers within a particular discipline need to be able to use theoretical knowledge in various ways and different contexts, responding

to the complexities in their work. According to Orchard and Winch (2015, p. 33), employees need a theoretical understanding to comprehend both what they are doing in their occupation and why, and must be capable of thinking critically about how to improve their practices. In contrast, Wheelahan (2007, p. 5) states:

> access to disciplinary knowledge is important for epistemic reasons because it provides students with access to the collective representations of the causal mechanisms that the discipline studies, mechanisms that are not always accessible through direct experience.

Wheelahan argues that theoretical knowledge consists of society's 'collective representations,' which play two roles. Firstly, society comprehends and builds knowledge about the nature of the natural and social world that transcends what is accessible through individual experience alone. Collective representations allow societies to make sense of the world, to connect the past, present and future and to consider alternative futures.

Access to theoretical knowledge is vital for students to engage meaningfully in societal and professional dialogues, discussing their actions, potential improvements, and underlying rationales (Wheelahan, 2015, p. 757). Including theoretical knowledge in a vocational curriculum is a better alternative to the notion of a skills-based conception of TVET, as it enables graduates to fully participate in society and their occupational fields. Access to theoretical knowledge can form a basis for their participation in society's conversation more broadly. Wheelahan (2019, p. 104) further argues that if theoretical knowledge is not part of a vocational curriculum, students are denied a disciplinary style of reasoning that they can use to consider the theoretical basis of their field of practice. This implies that students might find themselves unable to engage in discussions that influence the development of their field.

According to Wheelahan (2015, p. 758), the demand for theoretical understanding in various occupations has increased due to the intricate interplay of technology, job requirements, and economic and societal dynamics. As technology advances and societal complexities deepen, the comprehension and application of theoretical concepts become indispensable for navigating occupational landscapes effectively. Economic, societal, and technological changes pose risks of deskilling and diminishing occupational competence (Braverman, 1998). Without a solid theoretical foundation, employees may struggle to adapt, leading to skill erosion and decreased effectiveness. Theoretical knowledge serves as a vital educational element that equips individuals with the analytical tools needed to navigate evolving job landscapes successfully

and maintain competence in their fields. As such, theoretical knowledge is the bedrock of curricula, for without it, curricula become meaningless.

Fostering access to theoretical knowledge equips students with the analytical tools necessary for informed decision-making and adept problem-solving in their respective fields. Wheelahan (2007, p. 3) draws upon Bernstein (2000), who argues that abstract, conceptual knowledge is the means through which societies think "the unthinkable" and "the not-yet-thought". This implies that theoretical knowledge develops critical thinking in graduates, which leads to innovativeness. With theoretical knowledge, students can draw on well-thought-out and coherent theoretical frameworks, on knowledge of well-substantiated empirical research, and on considered ethical principles to make decisions in the workplace (Carter, 2015; Gamble, 2016; Orchard & Winch, 2015). Resultantly, employees possessing conceptual knowledge can make sound judgments based on reliable and well-informed criteria rather than relying on intuition.

An example of this is the skill of bricklaying, which is considered dependent on the understanding and application of physics (Clarke & Winch, 2006; Winch, 2011, 2013b); as such, bricklaying students in TVET institutions must be taught the theoretical knowledge of physics to be proficient in this skill. In this way, Gamble (2016, p. 216) suggests that disciplinary knowledge is the bedrock of every vocational curriculum because it underpins practice. Similarly, Young (2009) favours a knowledge-based approach to TVET curriculum design to enable all students to gain access to scientific knowledge, which he sees as the central purpose of schooling. Moreover, the more abstract and wide-ranging the theoretical knowledge, the more applicable it is likely to be to a range of technical processes that ultimately depend on it.

Theoretical knowledge enables students in vocational education to progress to higher education. Barnett (2006, p. 146) affirms that if a vocational education programme is to contribute to the possibility of the student progressing to higher education, some degree of non-specificity to the content taught is necessary. Without theoretical knowledge in vocational education curricula, the potential of a learning progression facilitating career advancement and mobility will remain elusive (Gamble, 2013).

Consequently, the exclusion of theoretical knowledge in TVET programmes might have serious repercussions as it may result in a simplified knowledge of workplace challenges, making critical thinking difficult. Alternatively, leveraging the insights of Durkheim, Wheelahan (2015, p. 753) posits that neglecting theoretical knowledge could position vocational training as experiential, applied and job-oriented learning. This approach may, however, offer a solution for students who struggle with the traditional academic education system. While this is true to some degree, I argue that excluding TVET students from access to theoretical knowledge can perpetuate social inequality rather than promote social inclusion through TVET systems.

Theory is important in producing a graduate who is broadly knowledgeable, responsible and occupationally functional in their area of specialisation (Gamble, 2006, p. 89). Solely concentrating on the hands-on aspect of training disadvantages students and renders them less likely to respond to stakeholders in the developing knowledge economy (Kotzee, 2014, p. 166). Executing a skill involves thoughtful attention, encompassing both the intellectual activities required and the execution of complex and extended tasks (Orchard & Winch, 2015). It involves both manual and intellectual activities, emphasising the need to incorporate theory into practice.

In summary, the significance of theoretical knowledge, often synonymous with disciplinary and scientific knowledge, transcends mere classroom instruction; it forms the foundation of understanding, reasoning, and critical thinking across various disciplines and professional landscapes. As highlighted above, theoretical knowledge encompasses not only the abstract understanding of concepts but also the ability to apply them effectively in practical scenarios. Its acquisition is crucial, not only for individual advancement but also for societal progress, as it enables informed decision-making, innovative problem-solving, and meaningful engagement in societal dialogues.

The exclusion of theoretical knowledge in vocational education poses significant risks. Without a robust theoretical foundation, individuals may struggle to adapt to evolving job requirements, leading to skill erosion and decreased effectiveness. Moreover, this exclusion may result in oversimplified perceptions of work and hinder critical examination of work-related issues.

Recognising the pivotal role of theoretical knowledge in developing individuals' occupational competence is essential for designing effective educational curricula. Integrating theoretical knowledge into vocational education not only facilitates students' progression to higher education but also empowers them to become broadly knowledgeable, responsible, and occupationally functional individuals. Efforts to foster access to theoretical knowledge should be prioritised to ensure equitable educational opportunities and to promote social inclusion, contributing to the cultivation of a skilled and adaptable workforce capable of thriving in an ever-changing knowledge economy.

2.6.2 Comprehending Practical Knowledge and Its Acquisition

In contrast to theoretical knowledge, Winch (2013b, p. 283) regards practical knowledge as know-how, which is perceived to be related to skill and has its primary use in the execution of relatively restricted types of tasks. Oftentimes, hand-eye coordination and/or manual dexterity are required. A key feature of practical knowledge, according to Winch (2013b, p. 283), is that it consists of the exercise of a technique or performing an activity. Raelin (1997, p. 564), on the other hand, argues that practical knowledge is embedded in action within a specific context and cannot be articulated. Practical knowledge cannot always be expressed in language; it can, however, be taught through demonstrations by experts and observations by the novices (Lave, 1990; Lave & Wenger, 1991; Raelin, 1997; Wenger, 1998; Winch, 2013b).

According to Winch (2013b, p. 282), practical knowledge goes beyond theoretical understanding and involves hands-on experience through the execution of tasks. It is gained through direct engagement with tasks, often in various contexts, allowing individuals to develop expertise and judgment. It encompasses procedural knowledge of how to perform specific tasks. Practical knowledge is essential for navigating daily challenges, achieving goals, and excelling in various fields, from craftsmanship to professional endeavours. It is also worth noting that Germany distinguishes between two kinds of know-how, a broad integrated capacity (a *Fähigkeit*) and a narrow skill (a *Fertigkeit*). Thus, if one has the *Fähigkeit* of being a carpenter, this would consist of, among other things, the *Fertigkeiten* associated with sawing, planing and chiselling (Clarke & Winch, 2015). This means that the *Fähigkeit* also includes the integration of these *Fertigkeiten*, and is associated with underpinning theoretical knowledge and the personal, social and moral dispositions necessary for competent performance. Here, the *Fähigkeit g*ives an account of know-how in terms of skills or the practice of technique/s to describe a broad and complex form of agency, for example for an occupation. An occupation

involves not just the practice of a variety of skills/techniques, but also the ability to operate independently, plan, control and evaluate one's activities.

While theoretical knowledge is learned as theory in the classroom, practical knowledge construction mostly involves learning in the workplace and is regarded as informal because it involves a combination of learning from other people and personal experience, often both together (Billett, 1998, p. 47). Evidence has shown that two-thirds of all WBL may be informal, but it is vital to the attainment of practical knowledge. Lave (1990, p. 264) argues that informal learning in the workplace is characterised by experiences and non-structured learning seen as participation in everyday social and working practice leading to practical knowledge construction.

Across human history, learning through practice has been the single most important process for constructing practical knowledge. For example, in Europe, for over a millennium before industrialisation, the learning of practical knowledge typically occurred in the family or in small businesses which served and met the needs of their communities (Billett, 2013, p. 126). In addition, Winch (2003, p. 59) argues that economic activities at earlier stages of capitalism suggest that much of the relevant knowledge used in the past belonged to the categories of know-how learned and cultivated by other people within families.

Learning in the workplace exposes and provides students with opportunities to access situations and resources that help construct practical knowledge (Billett, 1994b, p. 11). Here, Billett implies that practical knowledge is acquired in the workplace as individuals attempt authentic vocational tasks supported by more skilled peers or experts. Similarly, Billett (2000, p. 2) holds that student engagement in everyday authentic workplace activities contributes significantly to constructing and learning practical knowledge that relates to the workplace. Through direct involvement in workplace activities, individuals not only acquire specific skills but also develop a deeper understanding of the nuances and complexities involved in their field.

Likewise, Webster and Leger (1992, p. 55) argue that practical knowledge is absorbed through a prolonged process of working with a master practitioner since working alongside an expert allows novices to listen, observe, engage and participate in activities, thereby learning new practices and gaining some sense of other people's tacit knowledge. Leger and Mothibeli (1988, p. 227) emphasise that mastering difficult tasks and acquiring practical knowledge

involves close observation of a skilled mentor, followed by practice. They illustrate this with an example from mines, where novices learn by observing, listening, and imitating experienced miners until they become proficient in the task. In the case of Leger and Mothibeli (1988), mastery of practical knowledge in the work environment is acquired through practice. This is defined by Schön (2001) as the realisation of a set of actions developed by an individual and can be executed together with artefacts, material and other people. By the same token, Guile (2014, p. 91) notes that if students spend enough time with experts in the workplace, practical knowledge gets transmitted and tacitly acquired through the process of indwelling. The mention of working with a master practitioner highlights the significance of mentorship in practical knowledge transfer. By spending time alongside experts, novices have the opportunity to absorb tacit knowledge, learn new practices, and gain insights that may not be easily communicated through formal instruction alone. Thus, the acquisition of practical knowledge is a highly sophisticated form of imitation and assimilation that requires the help of experienced workers and being directly involved with objects, products and services in the workplace.

Moreover, in WBL, repeated tasks allow novices to gradually refine their skills, making their know-how more efficient, tacit and automatic. This process ultimately leads to the benefits of specialisation. However, it is important to note that a mode of learning which includes observations, explanations and discussions through question and answer, could be of paramount importance for students to acquire practical knowledge. Polanyi (1967) proffers that when experts demonstrate tasks, they are displaying tacit knowledge which may need articulation to make it accessible to students. An example of this is the student observing a pastry chef at work. They may not understand why and how flaky pastry is rolled out multiple times if an explanation is not provided.

In summary, an exploration of practical knowledge provides valuable insights into the nature of learning and skill acquisition. Practical knowledge, as described by Winch (2013b), embodies know-how and is honed through hands-on experience, often in workplace settings. This form of knowledge encompasses procedural skills and is crucial for navigating real-world challenges and achieving competence in various fields. While theoretical knowledge is typically acquired through classroom instruction, practical knowledge construction predominantly occurs through informal learning in the workplace and is facilitated by interactions with experienced practitioners and direct engagement in tasks.

The historical perspective presented underscores the longstanding tradition of practical knowledge acquisition, often within familial or community contexts. WBL, characterised by informal experiences and participation in everyday practices, plays a pivotal role in constructing practical knowledge. The process of indwelling, as described by Guile (2014), emphasises the immersive nature of learning in the workplace and the tacit acquisition of competence. The importance of mentorship and observation, as highlighted by Leger and Mothibeli (1988), underscores the significance of learning from skilled practitioners in mastering complex tasks. While repetition contributes to the acquisition of practical knowledge, explanation and discussion are vital for enhancing understanding, particularly when dealing with tacit knowledge. The insights provided by Polanyi (1967) emphasise the importance of verbalising tacit knowledge to make it accessible. Thus, the acquisition of practical knowledge is a multifaceted process that integrates observation, practice, mentorship, and discussion. It is through these dynamic interactions and experiences that individuals develop the occupational competence necessary for effective performance in their respective fields.

2.6.3 Integration of Theory and Practice

Integrating theory and practice became the new emphasis in TVET reforms in more recent years. Such education was intended to empower students and enhance their occupational competence and employment opportunities (Nherera, 2014, p. 259). The integration was regarded as leading to a broad curriculum that entails broad-ranging aspects of both theoretical and practical knowledge needed for occupational competence development. Wheelahan (2007) argues that vocational qualifications aim to introduce students to a field of practice along with the theoretical knowledge that underpins it, providing a foundation for integrating and synthesising both elements.

Within this integration, time is divided between theoretical education in an educational environment, the practice of specific skills in a workshop and controlled performance in operational conditions which cover the range of activities within the workplace (Clarke & Winch, 2004, p. 509). This integration aims to prepare students for an occupation with a legally and socially recognised status equivalent to professional identity (Winch, 2013a, p. 98). Its outcome is conceptualised as an overall occupational competence as opposed to a set of skills specific to particular tasks, as seen in Anglo-Saxon training. Concurrently, Barnett (2006), Gamble (2013) and Wheelahan (2015) argue that the integration of theory and practice

generates an individual who is equipped with the theoretical and practical knowledge that they require to be a member of an occupation and not for specific tasks, as it emphasises employability competences necessary for the labour market.

Research suggests that integrating practical and theoretical knowledge yields synergistic benefits. Osborne, Ackehurst, and Polvere (2020, p. 5) found that blending classroom and workplace experiences enhances students' acquisition of occupational competence. This fusion enriches the concept of TVET by enabling skilled workers to utilise complex bodies of knowledge as tools to transform practice (Wheelahan, 2019, p. 105). Similarly, John Dewey, a proponent of pragmatism, argues for the integration of theory and practice within experience (1966).

In today's dynamic labour market, employers increasingly seek individuals with a versatile blend of theoretical and practical knowledge, attainable in a two-pronged approach to TVET training. This type of training is perceived to equip students to think adaptively, produce high-quality work, and navigate diverse practical contexts dictated by market demands. As Moll et al. (2005, p. 38) assert, in the modern economy, skilled artisans must possess the ability to adapt their competence and knowledge according to labour market trends. While theoretical content enhances students' flexibility in the job market, the absence of practical experience leaves them unprepared for real-world work environments (Young & Gamble, 2006). Therefore, it is imperative to integrate theoretical and practical components within TVET curricula. By nurturing a synthesis of theoretical and practical knowledge, TVET programmes can better prepare students to tackle the multifaceted challenges of contemporary employment.

More often than not, in the knowledge economy, employers use qualifications to assess whether graduates have the specific theoretical and practical knowledge needed for a vacancy (OECD, 1996, p. 13). Wheelahan (2015, p. 756) asserts that the content of these qualifications is standardised and their pedagogy often includes specific bodies of knowledge and minimum workplace experience requirements for students. Similarly, Moodie and Wheelahan (2016, p. 3) note that most employers prefer job applicants who demonstrate the greatest potential, characterised by strong educational backgrounds with extensive theoretical knowledge and relevant workplace experience rather than those with specific vocational skills. Job applicant screening has intensified due to the increasing complexity of most occupations in today's rapidly evolving economy, technology, and society.

Maclean and Pavlova (2013, p. 52) argue that a well-rounded TVET student must possess both theoretical and practical understanding, as these elements are inherently interconnected for optimal learning outcomes. This perspective is echoed by Gamble (2013, p. 223), who emphasises the inseparability of theory and practice in TVET, advocating for their integration, devoid of the divisive practices common in many TVET systems. According to Gamble (2013, p. 222), effective vocational programmes should equip students to navigate both the abstract world of ideas and concepts and the practical world of practice and hands-on experience. A mere possession of theoretical knowledge without practical application or vice versa is insufficient for achieving occupational competence. Put differently, theory or practice alone cannot ensure full participation or competency in a given occupation. Despite these insights, some policymakers and curriculum designers fail to recognise the significance of this integration. For instance, Mazhinye's (2018) study shows that the NCV qualification in the South African TVET system disproportionately prioritises theoretical instruction and assessments, neglecting the crucial aspect of practical workplace experience.

The primary objective of the hospitality industry is to cater to the needs of its guests, encompassing a broad spectrum of entities dedicated to serving travellers away from their homes. Often, the essence of hospitality lies in providing memorable experiences, leaving guests with nothing tangible but lasting memories. Given the intangible nature of hospitality services, proficiency in communication, problem-solving, and technical skills is essential for individuals in this field.

Several scholars advocate for a blend of classroom learning and practical experience to cultivate these essential skills for the industry (Baum, 2002; Mazhinye, 2018; Thompson et al., 2017; Walo, 2001). Graduates lacking exposure to real-world settings may harbour unrealistic perceptions of the industry's dynamics, environment, and demands (Thompson et al., 2017, p. 119). Immersion in real-world work environments not only grounds them in the hospitality landscape but also enables a holistic understanding of industry dynamics, bridging theory with real-world application. Therefore, the hospitality curriculum, like other occupational programmes, should balance theoretical knowledge with practical exposure. It should prioritise understanding the industry's intricacies over mastering specific manual or technical competence tailored solely to immediate employer needs.

In summation, the evolution of TVET towards an integrated approach, combining theoretical understanding with practical experience, marks a significant advancement in educational philosophy. This integration, advocated by the scholars cited above, not only empowers students with occupational competence but also enhances their employability in a dynamic labour market. As evidenced by research, the synergy between classroom learning and workplace immersion enriches students' acquisition of competence and prepares them to tackle the multifaceted challenges of modern employment.

In fields such as hospitality, where the essence lies in intangible experiences, the integration of theory and practice becomes even more crucial. Scholars emphasise the importance of providing graduates with both theoretical knowledge and practical exposure to foster skills like communication, problem-solving, and technical competence. Such a balanced curriculum not only ensures a deeper understanding of industry dynamics but also equips students with the adaptability needed to thrive in diverse work environments.

Despite the clear benefits of this integrated approach, challenges persist, such as the disproportionate emphasis on theoretical instruction in some TVET systems. Policymakers and curriculum designers must recognise the significance of practical experience and ensure a holistic approach to education that prepares students for the realities of the modern workplace. Ultimately, by prioritising the synthesis of theory and practice within TVET programmes, a new generation of skilled professionals ready to meet the evolving demands of the global economy can be nurtured.

Following this examination of the construction and integration of theoretical and practical knowledge, it is important to explore the acquisition of occupational competence through examining distinct training approaches. In the following section, I investigate the Anglophone and German Approaches and compare these to the South African policy context on competence development, which serves as my research's focal point.

2.7 The Anglophone Approach to Competence Building: Skills, Tasks, and Implications

The definition of 'competence' in the Anglophone (liberal market) context tends to fragment expertise (Hager, 2019, p. 68). The context is centred on a very narrow understanding of

competence, one that assumes that the practice of occupation is reducible to a set of discrete competences (Wheelahan, 2019, p. 104). Here, the idea of competence is tied to narrow notions of skill and work into isolated skills. Haβler et al. (2019, p. 77) similarly state that the Anglo-Saxon definition of competence "concentrates on preparing an individual with a narrower set of skills that enables them to fulfil the immediate needs of the labour market.

Boreham (2002, p. 226) describes how learning and assessments are done to achieve competence in this context:

> learning is mainly work-based, the courses are assessment-driven, the assessment consists of compiling evidence of competence in the workplace, and the theoretical content has been reduced to the bare minimum deemed necessary to underpin this performance.

Prioritised in the Anglophone competence context is that learning takes place in the workplace and that the courses are assessment-driven. These assessments consist of gathering proof of competence in the workplace, and the theoretical content is reduced to what is considered important to support the particular performance.

Similarly, Allais (2011, p. 7) and Biemans, Nieuwenhuis, Powell, Mulder, and Wesselink (2004, p. 527) argue that the Anglophone approach usually begins with a task analysis in which jobs are broken down into single tasks or skills in what is referred to as narrow occupational training. Likewise, Jessup (1989, p. 59) argues that this type of training is employment-led because competence is derived from an analysis of employment requirements. In this case, employers determine what must be learned, paying particular attention to purpose and outcome. Jessup (1989, p. 58) has termed these as "statements of competence". These statements of competence are known to be independent of any course or program of learning, indicating that they are discrete tasks or activities that are not attached to conceptual knowledge but are performed and assessed to check for competence. The essential question that is asked during the formulation of the statement of competence is "What does the student need to be able to do in employment?" (Manfield, 1989, p. 8). Attewell (1987, p. 331) has used the term specialisation to refer to this kind of training, whereby a particular skill or task is learned quickly and does not require any abstract knowledge.

This notion of competence is perceived as narrow and task-based, leading to low-skill employment in what Braverman (1974, p. 54) termed the "degradation of work". To this effect, Rauner (2007, p. 118) argues that:

> when competence development is disconnected from occupationally organised work and the related vocational qualification processes, the relationship between vocational identity, commitment and competence development becomes loose and fragile. In this case, modularised systems of certification function as regulatory frameworks for the recognition and accumulation of skills that are largely independent of each other and disconnected from genuine work contexts.

In this model of skill formation, novices are only exposed to a restricted range of tasks, and their interactions with other employees are limited. According to Hager (2019, p. 68), these novices are more likely to become "narrow" rather than "broad" experts. In other words, students will only gain mastery over a single or limited range of tasks rather than having mastery over a broader range of skills and knowledge for use in a particular occupation.

The word task or skill, in this instance, refers to specific activities that someone may undertake in the work process, such as sawing wood or assembling a frame in woodwork (Winch & Clarke, 2003, p. 239). In more general terms, the skills-based type of training does not have a positive connotation as it is said to be appropriate for a Taylorist world. Guile and Unwin (2019, pp. 21–22) state that this type of training was prompted by:

> tendencies in the capitalist economies in the first half of the twentieth century to divide complex craft tasks into simple, routinised steps and to hire cheaper labour to perform those steps, a process known as Taylorisation.

Similarly, Braverman argues that the Anglophone model is a Taylorist task-focused concept in which training for an occupation consists of training for specific workplace tasks and roles. In the Taylorist world, training is mainly aimed at jobs rather than it is at occupations. Braverman (1974, p. 77) suggests that the labour process is broken and that skill is removed from the workers, creating a pool of unskilled workers that are only suitable for industrial tasks. This implies that the labour process in Taylorism is broken down into distinct work processes, and the employer's interest lies in skills for the immediate job at hand. Training in this sense tends to reproduce traditional skills that are solely beneficial to the employer and not the employee, as intellectual functions that involve planning, coordinating, evaluating, controlling and leadership are divorced from execution (Allais, 2011, p. 6). This way, the employer can control the workers and be able to reduce them to executors of the work process and turn them into cheap labourers for the sake of profit-making.

The Anglo-Saxon idea of skill is used similarly to know-how and technique, whereby a worker with skill is understood to possess know-how appropriate to the task at hand and may or may not possess a 'qualification' (Clarke & Winch, 2006, p. 6). This could be compared to what a student attains in competence-based training, as explained by Hager, who describes it as the narrow task-based view of competence. This does not produce lifelong careers and does not facilitate individual, social, and occupational mobility (Wheelahan, 2019, p. 98) as it lacks theoretical knowledge. Winch and Clarke (2003, p. 246) note that this training involves the acquisition of job-specific skills where students are taught generic occupation-relevant skills, in the context of employment. The Anglophone approach to training is devoid of conceptual content, resulting in skill-based instruction and training with an exclusive focus on skills. This is in contrast to Wheelahan's (2010, p. 155) argument that equitable access to theoretical knowledge is crucial as it provides a medium for society to discourse about itself and its ideals.

As theoretical knowledge is essential for a workforce to deal with economic change, a lack thereof leads to limited scope for developing flexibility, innovativeness and the ability to challenge fixed ways of working (Guile & Unwin, 2019, p. 31). Proponents of theoretical knowledge (Gamble, 2004; Wheelahan, 2019; Young & Muller, 2013) indicate that theoretical knowledge can foster a deeper understanding and facilitate meaningful conversations about societal aspirations and realities. According to Wheelahan et al (2012, p. 10):

> vocations are underpinned by capabilities. The capabilities approach relates the conditions individuals need to make choices about their lives, engage in work and progress through a career with the requirements of broad vocational streams. It focuses on what people need to be able to do to exercise complex judgements at work and what they need to be able to do in the future, rather than on workplace tasks and roles that have been defined for them.

This explicates that the Anglo-Saxon emphasis on practical skills over theoretical understanding limits adaptability and innovation. Advocates for theoretical knowledge uphold that a lack of theory hinders vocational identity and broad expertise development, thus impacting adaptability and mobility.

Allais (2011, p. 7) argues that this approach has created a significant gap between education and work, which needs to be narrowed to meet the needs of society and the economy. The emphasis on task-based competence development and the neglect of theoretical knowledge results in a disconnect between what is learned in educational settings and what is required in

the workplace. To address the needs of society and the economy effectively, there is a need to bridge this gap by integrating education and work more closely, ensuring that training aligns better with real-world demands.

Biemans et al. (2004, p. 527) regard this model of training as an incomplete preparation for the highly skilled work environment, where innovativeness, flexibility and problem-solving abilities are a requirement. Resultantly, the Anglophone approach to training may not adequately prepare individuals for the demands of a highly skilled work environment. Wheelahan (2010, 2019; 2012) criticises the Anglo-Saxon approach to vocational education and training (VET) for its narrow focus on specific competence, which she argues can lead to a fragmented understanding of the subject matter. Similarly, she contends that this approach often overlooks the broader theoretical knowledge and conceptual understanding necessary for holistic learning and effective problem-solving in real-world contexts. Wheelahan advocates for a more integrated approach to VET that combines practical skills training with theoretical knowledge to better prepare individuals for the complexities of the modern workplace environment.

By the same token, Winch and Clarke (2003, p. 247) argue that this approach lacks conceptual content, focusing primarily on skill-based instruction and training without incorporating theoretical knowledge. The emphasis on narrow, task-based competence development and the neglect of theoretical knowledge results in graduates lacking the essential skills for work. This suggests that the Anglophone approach might fall short in cultivating the breadth of competence necessary to thrive in modern workplaces that demand adaptability and creativity.

In essence, while the Anglo-Saxon approach to skill development may provide immediate vocational relevance, its neglect of theoretical knowledge limits individuals' capacity for adaptability and critical engagement with societal issues. I argue that this narrow focus disconnects skill development from broader occupational contexts, resulting in graduates with limited adaptability, hindering their ability to become versatile professionals in the ever-changing world of work. This focus risks undervaluing foundational concepts and critical thinking, limiting comprehensive learning and creating a divide between manual and mental labour.

2.8 Acquiring Occupational Competence in the German Sense

In contrast to the Anglo-Saxon way of acquiring occupational competence, countries with more regulated labour markets, such as Germany, France, and Denmark, conceive skill formation as a process of occupational capacity building that extends beyond an individual's immediate job role (Bahl & Dietzen, 2019; Brockmann, Clarke, & Winch, 2008; Guile & Unwin, 2019; Winch, 2011). This VET system takes the form of the knowledge-based approach, which Guile and Unwin (2019, p. 30) refer to as the expert-based approach. This approach values both the theoretical and practical forms of knowledge, personal development and civic education. Competence, in these countries, is seen as a multi-dimensional, holistic concept (Brockmann, Clarke, Méhaut and Winch 2008, p. 234), whereby it embodies both the theoretical and practical components involved in the performance of work of all kinds.

This form of training maintains the comprehensive aspect of traditional schooling, focusing on students as individuals, citizens, and workers. Given the evolving job market, it is crucial to offer a knowledge foundation supporting occupational adaptability, promoting social mobility and fostering innovation. In this instance, competence encompasses a broad occupational field underpinned by theoretical and practical knowledge as well as personal skills (Wheelahan, 2019, p. 105). This implies a learning system in which both theory and practical skills are regarded as promoting livelihoods and inclusion that support community and individual agency.

The German VET system bases its training on the idea of occupation. "The end goal of the training process is competency in a broadly defined occupational area, and this competency is acquired in a three to four-year course of training" (Bosch & Charest, 2008, p. 433). In such cases, learning in the workplace is combined with theoretical study in the classroom. The training process is not divided into individual modules because this would compromise the broad occupational base of the training and its recognition in the labour market. Rauner (2007, p. 118) attests that the German VET system is a comprehensive education system, and is designed in such a manner that it develops an individual's ability to act autonomously and competently within an occupational field. In this context, occupation refers to the category of labour that carries out work in the production process for a particular firm, such as a trades foreman, covering a range of tasks (Clarke & Winch, 2006, p. 14). Clarke and Winch (2006) further argue that a trades foreman, for example, belonging to the occupation of bricklaying, is

someone with the ability to fulfil all the activities negotiated or regulated for that particular labour process.

Winch (2013b, p. 116) has also termed this type of training ‘occupational know-how’, which is known to go beyond mastery of a technique related to task performance and extends to a grasp of the requirements of the occupation as a whole. This includes, among other things, the carrying out of extended projects and the specification of the broader context into which individual tasks are integrated. In the case of hospitality, a qualified graduate could be employed in a series of different jobs, such as head chef, waiter, and bartender, each involving an array of tasks. These may include costing, food preparation, setting out tables, serving food and beverages, managing kitchens and restaurants, planning menus and controlling inventory and budget. In this respect, competence is supplementary and integrative because of its potential to liberate VET from its increasingly narrow focus on fragmented skills, as has been discussed above.

An occupation is mainly bound up with a qualification, which is necessary for classification as an expert (Guile & Unwin, 2019). The qualification is awarded upon the completion of a comprehensive and nationally recognised TVET programme from a significant college (Brockmann, Clarke, & Winch, 2008; Clarke & Winch, 2006). This implies that the German VET system is built on the dual approach of vocational schooling through work experience. This highly valued VET system (*Berufsbildung)* focuses on individuals within a particular occupation, guided by curricula and aligned with achieving standards at various levels. This is agreed upon in corporate governance where decision-making involves all key sectoral stakeholders, including representatives of all social partners (providers, employers, and trade unions), through a range of bodies and committees in consensus-oriented though time-consuming cooperation (Bosch & Charest, 2008).

The VET system in Germany covers a wide range of learning fields, integrating intellectual and manual aspects and requiring contingent and systematic knowledge (Clarke et al., 2013, p. 939) which results in a qualification attained through the successful completion of courses that integrate theoretical and practical knowledge (Allais, 2011, p. 6). Students are expected to develop a high level of understanding of the entire work process (Brockmann, 2011, p. 138) of the wider industrial spectrum. Furthermore, the system aims to develop occupational competence and identity in students through a systematised combination of formal knowledge,

know-how, and experience attained in the workplace, but not customised to any particular workplace. Apart from this, this qualification enables employees to continue to develop their occupational competence so that they can respond to and anticipate future developments in their work and beyond (Mulder et al., 2007, p. 72). For the most part, this approach to training matches the culture of advancement and empowerment espoused by many in educational practice (Biemans et al., 2004; Wheelahan, 2010, 2012, 2019; Young & Muller, 2013), particularly as outlined by Becker (1962), one of the human capital theorist.

The popular belief is that graduates who are trained under this type of competence approach are better able to perform in jobs required by the modern industry. This notion of competence training is aligned with the policy debates on responsiveness, employability (Wedekind, 2014; Wedekind & Mutereko, 2016a), and lifelong learning offering knowledge, skills, attitudes and values that individuals require to become economically productive members of society. Moreover, a more holistic approach is recommended to mitigate the risks of the disintegrative approaches (Braverman, 1974, p. 7) found in the Anglophone TVET systems. Apart from this, in the world of work, employees need to be able to apply skills as well as understand them, consequently, there is a need for education to be based on both theory and practice.

Guile and Unwin (2019, p. 26) suggest that the vast changes in digital technologies throughout the economy and across the globe have increased the demand for a workforce in possession of analytical skills who can manipulate and interpret data, solve problems, and interact with the world outside their immediate workplace. Furthermore, Billet (2019, p. 50) states that occupation is the only thing that balances the distinctive capacity of an individual with their social service. Billet further indicates that nothing is more tragic than the failure to discover one's true business in life, or to find that one has drifted or been forced by circumstances into an uncongenial calling. The concept of competence in this sense is generally focused on the outcome of providing a skilled and adaptable labour force that can respond to the changing environment in an economy in a holistic manner, whereby individuals can move between roles. This means that:

> the concept of competence in the German sense is therefore concerned with the meaningful objectives and content of learning that will engender the personal development of students and position them within the domain of knowledge that can best prepare them to function effectively in society (Mulder et al., 2007, p. 4).

Literature has shown that competence building entails an individual successfully developing skills and abilities for the work activity of any given occupation.

However, the sustainability of the dual approach to VET in Germany is itself under scrutiny. The main challenge for the German industry is the shortage of skilled workers. This is already apparent in many sectors (Bahl & Dietzen, 2019, p. 6). Due to demographic changes, it has become even more difficult for companies to recruit sufficient junior workers to meet their needs. Furthermore, education patterns among the younger generation have noticeably shifted, with today's school-leavers increasingly turning to academic qualifications (Bahl & Dietzen, 2019). Nowadays, parents place enormous value on their children staying in school to attain the *Abitur*, Germany's highest school-leaving certificate from the general education system. Resultantly, the number of school pupils holding a higher education entrance qualification is rising. The year 2013 was the first in which more than 50% of a year group were *Abitur* holders (Bahl & Dietzen, 2019, p. 5). *Abitur* holders would subsequently embark on a university degree programme instead of VET.

This literature highlights a stark contrast between the Anglo-Saxon and German approaches to acquiring occupational competence. The German dual training approach is renowned for its integration of theoretical learning with practical on-the-job experience. It values both theoretical and practical knowledge, emphasising the integration of theory and practice in training. This training system combines classroom learning with hands-on training, allowing individuals to apply acquired knowledge directly in a real-world context. A hallmark of the German model is the close collaboration between educational institutions and businesses, ensuring alignment with industry needs.

The dual system emphasises a seamless transition from education to employment, fostering a skilled workforce tailored to the demands of the labour market. This method not only imparts technical expertise but also instils a strong work ethic and professional competence, contributing to a robust vocational training tradition. The model views competence building as a holistic, multi-dimensional concept. It is rooted in a comprehensive education system and a more regulated labour market, aiming to develop an individual's capacity to act autonomously within an occupational field. Unlike the Anglo-Saxon approach, dual training focuses on occupations rather than on specific jobs, providing individuals with a broad set of skills and knowledge.

The preference between the Anglo-Saxon and German approaches often depends on the specific goals and cultural context. In regions valuing immediate, practical impact and individual responsibility, the Anglo-Saxon model is favoured for its emphasis on hands-on learning and performance-driven outcomes. It has, however, been criticised for its inability to prepare individuals for the dynamic, highly skilled work environment, hindering flexibility and adaptability. Conversely, where a comprehensive integration of theory and practical experience is prioritised, the German dual training approach is preferred. The latter's success lies in its collaboration between education and industry, producing a workforce adept not only in technical skills but also in professional competence, contributing to its widespread acclaim. It has often been praised for its ability to create a highly skilled, adaptable workforce capable of responding to changing economic and technological demands.

2.9 The Training Approaches in the South African Training Contexts

After examining the Anglo-Saxon and German approaches, the following section details three approaches employed to acquire occupational competence within the South African policy context. In the South African skills development landscape, numerous training models aim to achieve occupational competence. However, for the scope of my thesis, I have delineated three of these approaches outlined in the policy framework concerning competency acquisition. These approaches include the unit standards qualifications approach and the TVET training system, with a focus on the National Certificate Vocational (NCV) and the National Accredited Technical Education Diploma (NATED) qualifications.

South Africa, like many other developing countries in the world, has replicated the skills-based approach of the liberal market in the form of the unit standards-based qualification, which offers hands-on vocational programmes. Programmes offered in such training contexts are offered in a shorter period, ranging from three months to one year; the curricula are based on skills-oriented training, and students receive a narrow type of education with no classroom learning (Formica, 1996, p. 317). Employers, including other stakeholders, develop competences or learning outcomes that they require the students to have (Allais, 2012, p. 633) to enhance their employability. In this case, qualifications are not related to a curriculum but are rather derived from an analysis of work functions, as they rely on assessment in the workplace (Allais, 2012). Hence, this approach is referred to as 'market' or 'industry' led

because training constitutes learning programmes closely aligned with the employer's skill needs (Kraak & Press, 2008, p. 13), similar to the Anglo-Saxon approach to training.

This was perceived as a way of ensuring sufficient quality and relevance to enhance workplace productivity. There was no recognition, however, that this approach diminishes middle and high-order skills within industries. These competences were registered as unit standards on the National Qualification Framework (NQF) (Allais, 2012, p. 634). Training providers then applied for accreditation from the Sector Education and Training Authority (SETA) and other quality assurance bodies to offer such programmes (Allais, 2011, p. 3). The unit standards focus on specific specialisations, for example, in hospitality, skills courses on offer include bar attendant, drink service attendant, assistant housekeeper and kitchen cleaner.

The above-mentioned unit standards are designed to provide the technical background to access the hospitality industry through entry-level positions. The designers of these qualifications did not consider that the fast-paced growth and rapid change of the hospitality sector would require training programmes that continually keep up-to-date with trends. In this sense, they have separated theory from practice. According to Baum (2002, p. 355), routine activities within the hospitality industry the world over have lost relevance as work has become increasingly complex. Work now involves the use of a wide range of software, coordinating data entries, maintaining in-house systems, analysing and understanding data for trends and anomalies and the expectations of a faster response to more complex methods of communications (Baum & Odgers, 2001). Baum and Odgers (2001), using the example of hotel front office work, argue that it demands relatively high educational and social skills levels and competes for labour with a range of professional areas of work, including, among others, all types of administrative-related work, both generic and technical. As such, it is believed that the skills-based model is obsolete and ineffective in meeting the demands of the modern labour market. This may suggest that employees in sectors such as hospitality need powerful vocational knowledge from education in reliable institutions, curricula, and lecturers rather than the ostensible employer's needs (Gamble, 2004). The unit standards approach has been critiqued for its exclusion of the knowledge that underpins performance.

The NCV was introduced into South Africa's TVET system by the Department of Education in 2007 to solve problems of poor quality programmes, lack of relevance to the economy, and low technical and cognitive skills of TVET graduates. This 3-year-long qualification, according

to Wedekind (2014, p. 66), was designed as a "general vocational qualification". The intention was for the curriculum to be broader and more substantial than the old courses from the apprenticeship system.

According to Umalusi (2010), the NCV curriculum was supposed to consist of a 40:60 split between theory and practice, but due to a lack of training resources, a lack of adequately trained lecturers, an overload of theoretical assessments and the like, it meant that only a handful of students were exposed to the practical aspects. This was exacerbated by the absence of a WBL component (Mazhinye, 2018, p. 109), despite the declaration by The White Paper on Post-School Education and Training of 2013 that "work-based learning must be a central part of our training system" (Department of Higher Education and Training, 2013, p. 8). Resultantly, NCV students graduated without workplace exposure. This programme was considered weak by most scholars (Gewer, 2010; Mazhinye, 2018; Wedekind, 2018) because it failed to meet the needs of the employer who perceives WBL as vital in vocational education qualifications.

In 2009, the Department of Higher Education and Training (DHET) was created. The NATED programmes were reopened by the Minister, and both NATED and NCV programmes were funded from the same budget line. The NATED qualifications were designed by the DHET and accredited by the Quality Council for Trades and Occupations (QCTO). The main aim of the qualification was to equip students with both theoretical and practical knowledge in specific career fields, therefore, the QCTO made it mandatory for the qualifications to have a WBL component. As an illustration, for the business courses, students spend eighteen months split between three levels (N4 to N6). Each level was divided into three different semesters, during which students attended theoretical classes. At each level, students attain a certificate. After eighteen months of theoretical learning, students are required to go to the workplace for WBL for another eighteen months. Thereafter, they graduate with a diploma in a trade that they would have trained for.

Despite the challenges of work placement faced by students, the integration of both theory and practice as provided for in the NATED qualification has been recommended by most scholars as it is known to develop the desired occupational competence in students (Billett, 1996; Gamble & Young, 2006; McGrath et al., 2010; Mutereko & Wedekind, 2016; Rauner, 2007). Therefore, the current NATED courses are specifically designed to prepare students to enter the workforce. Unfortunately, many NATED students are unable to find a work

placement. This is because most employers are not forthcoming as they distance themselves from training. Furthermore, training providers do not assist students in finding a placement for students. This reduces the students' chances of graduating and finding employment. This is unlike the German TVET system, where employers are willing and involved in training students.

In this section, I examined South Africa's approaches to achieving occupational competence, focusing on the unit standards qualifications, the NCV, and the NATED programmes. The unit standards qualifications approach aligns with the skills-based model found in Anglo-Saxon systems, emphasising short-term, skills-oriented training programmes. The programmes tend to separate theoretical knowledge from practical application, resulting in a narrow educational focus that does not adequately prepare students for the complex and rapidly changing work environment. This approach has been criticised for its inability to provide the vocational knowledge and competence necessary to meet modern job demands.

The NCV, introduced to improve TVET in South Africa, aimed to provide a broader, more substantial vocational education. However, its application failed due to the absence of a significant WBL component, essential for bridging the gap between education and employment. As a result, current NCV graduates may not be adequately prepared for the workforce due to the failure of this curriculum to meet the needs of employers and the demands of modern work environments.

In contrast, the NATED programmes require students to combine theoretical learning with a mandatory WBL component. While the challenges of finding work placements are significant, this approach has the potential to provide students with well-rounded competences required for their chosen careers, closely aligning with the German VET model. However, a significant challenge in this model is that training institutions do not assist students in finding work placements.

This section outlines the policy framework for the acquisition of occupational competence in three of South Africa's qualifications, NCV, NATED, and unit standards, which serve as pathways for acquiring occupational competence in the country. Although the NCV programme was designed to supersede the traditional NATED programme, this transition has not taken place due to employers expressing confusion about the NCV programme's emphasis

on theoretical learning and ignoring the acquisition of practical knowledge from the workplace. Consequently, both the NCV and NATED programmes continue to operate concurrently within the South African TVET system.

2.10 Conclusion

The concept of occupational competence has been applied in various contexts and is deeply intertwined with the institutional structures and labour processes specific to each country. Several authors have offered diverse definitions of occupational competence. In this study, I define occupational competence to mean a holistic capacity and demonstrated skill set that encompasses theoretical and practical knowledge and soft skills specific to a given occupation. This definition signifies an individual's readiness, expertise, and proficiency to meet occupation-specific standards and expectations, ensuring effective job performance.

This literature review was prompted by the various definitions provided by different authors, which consistently highlighted two key skill categories as essential components of occupational competence: technical competence and generic skills. This consistency necessitated a closer examination of these categories.

Technical competence refers to job-specific skills and knowledge, such as baking techniques for a pastry chef, whereas generic skills involve learned behaviour and attributes that are applicable across various contexts and are often influenced by individual predispositions. While technical competence, which is often detailed in a curriculum vitae, remains important because it is quantifiable, there is a growing emphasis in contemporary society and the economy on the value of generic skills. However, authors like Balcar (2016) argue for the simultaneous application of both skill sets, arguing that soft skills, alongside hard skills, significantly impact wage determination, emphasising the need for employers to recognise their combined importance.

The literature underscores the significance of a comprehensive approach to building competence, comprising theory, practice, and attitudes. Scholars like Mulder (2014), Wedekind and Mutereko (2016a), and Marneros et al. (2020) suggest that these components should not be isolated but integrated to develop occupational competence effectively. Consequently, the inclusion of previously overlooked soft skills in the curriculum is considered

crucial to enhance graduates' overall competence. This reflects the growing recognition of the value of well-rounded skills and attitudes across diverse sectors.

This chapter highlights the critical distinction between the theoretical (knowledge-that) and practical (knowledge-how) domains of vocational knowledge. Theoretical knowledge is conveyed through traditional teaching methods, is generalisable and communicated through language. Practical knowledge, in contrast, is rooted in skills and manual dexterity, is context-dependent and is acquired through WBL. In this chapter, I emphasised that practical knowledge encompasses more than mere skills; it also includes theoretical understanding, personal attributes, and social skills. While acknowledging the value of practical experience, the literature highlights the importance of integrating theoretical knowledge to enhance critical thinking and effectively address complex challenges. It cautions against marginalising theoretical knowledge, arguing that its inclusion in vocational education is essential for equitable participation, interactions and engagement. Scholars advocate for the integration of theory and practice in vocational training to develop competence, particularly in industries like hospitality, where complex skills are crucial. This integrated approach enables students to apply theoretical knowledge effectively in real-world scenarios, ensuring their meaningful contribution to their chosen fields.

In addition, I examined the two distinct vocational training approaches to cultivating occupational competence. The knowledge-based approach focuses on preparing individuals for highly regulated and secure professions, providing a sense of stability. This approach advocates for the acquisition of occupational competence in preparation for an occupation and career advancement. On the other hand, the skills-based approach caters to the demands of an open and competitive job market, prioritising the enhancement of 'employability.' This idea of building competence is based on the attainment of narrow skills with very little if any, conceptual knowledge involved. In this approach, skill is acquired for a particular task in a job. This distinction reflects the evolving dynamics within the field of vocational training and underscores the need for adaptability in today's rapidly changing employment landscape.

The South African context of vocational training presents a dilemma between short-term, skills-focused training and broader vocational education. The unit standards qualifications approach emphasises quick, skills-oriented programmes, potentially neglecting the

development of a well-rounded skill set necessary for a complex work environment. In contrast, the NCV curriculum aims for a more comprehensive vocational education but lacks a WBL component. This suggests a need to strike a balance between skills and broader vocational education to prepare students effectively for diverse job roles. The NATED programme, on the other hand, combines theoretical learning with WBL, perceived as valuable for practical skill development. However, the absence of employer involvement in assisting students with work placements is problematic. To bridge this gap effectively and prepare graduates for the workforce, it may be necessary to strengthen collaboration between educational institutions and employers to facilitate job placement and ensure alignment with industry needs.

This chapter has defined occupational competence as a holistic construct encompassing theoretical knowledge, technical skill, and relational capability, challenging narrow, outcome-based views of competence. Situating this understanding within both global debates and the South African vocational context lays the groundwork for analysing how occupational competence is cultivated through WBL. However, identifying what occupational competence entails is only one part of the inquiry; I must also examine how such competence is developed in practice. Chapter 3 addresses this by exploring WBL as a mechanism for cultivating competence, while Chapter 4 introduces the situated learning theory as the theoretical lens that allows me to conceptualise the WBL strategies as forms of social participation and identity formation. The main question of my study is: What is the specific contribution of work-based learning towards the development of occupational competence in hospitality students?

CHAPTER 3: Hospitality Education and Work-based Learning

3.1 Introduction

The previous chapter provided a comprehensive overview of occupational competence, emphasising the need for both technical and generic skills, the integration of theoretical and practical knowledge, and the importance of adaptability in vocational training. This foundational understanding is crucial for exploring the historical development of training processes within hospitality education. The following chapter builds on these insights by providing a historical perspective on how training processes in hospitality education have developed and adapted to meet industry needs.

This overview serves as a foundation for a deeper understanding of WBL. It defines and examines WBL, highlighting its significance, challenges, and the contributions of experts and communities of practice. Lastly, I explore the various learning strategies and modalities employed in WBL to develop competence in students.

3.2 The Training Process of Hospitality Education

Over the past 100 years, hospitality education has primarily relied on informal methods, with skills traditionally transferred through apprenticeships and on-the-job experience (Baum, 2002, p. 353). Novices learned through observing experienced workers and imitating them, through what Billett (1994b, p. 4) terms the apprenticeship approach. This learning approach allowed for the direct transfer of tacit knowledge and best practices within the industry. Traditionally, the industry focused on the development of technical skills in core hospitality areas such as the kitchen, restaurant, housekeeping and front office, with the workers mostly trained for specific tasks (Baum, 2002, p. 355).

Hospitality training in the mid-20th century underwent significant developments, reflecting the changing needs of industry and society. This period marked the introduction of formal hospitality education, with vocational schools and technical institutes establishing specialised hospitality programmes. The mid-20th-century curriculum emphasised practical skills such as food preparation, housekeeping, customer service, and front office operations, aiming to produce competent workers who could quickly contribute to the industry. However, many still entered the hospitality industry through informal pathways, learning from experts and

gradually advancing in their careers through practical experience. These early developments laid the foundation for the evolution of hospitality education into a more comprehensive and structured field in subsequent decades.

As we moved into the latter half of the 20th century, this foundational shift continued to evolve. There was a notable transition towards academic institutions, both public and private, offering formal hospitality qualifications, ranging from certificates to degrees (Baum, 1988, p. 37). This shift was influenced by the era of globalisation, which increased the emphasis on cultivating diverse skill sets and fostering cultural understanding within the industry. With hospitality qualifications now being offered globally, the number of students pursuing this field has risen significantly (Ruhanen, 2006, p. 35). This reflects a broader recognition of the importance of formal qualifications, challenging the traditional view of hospitality roles as predominantly low-skilled and service-based, especially in light of technological and economic advancements, and evolving customer demands (Busby, 2003, p. 355).

Consequently, there has been a discernible shift in the skills required by the workforce, leading to advancements in training approaches and the need for acquiring new knowledge and skills to meet the evolving demands of the industry. Although the focus of hospitality education is the development of skills through practical experience, the core rationale and priority within the programmes worldwide now is a complementary focus on integrating theoretical knowledge into training (Baum, 2002, p. 356). Wheelahan (2019, p. 104) extends Bernstein's (2000) argument by emphasising that theoretical knowledge equips graduates with critical thinking skills. This, in turn, fosters innovativeness in the ever-changing technological landscape and supports a more nuanced understanding of competence and work. In the hospitality context, the historical WBL from the workplace remains crucial and has not been abandoned. Rather than discarding it, there has been an effort to integrate theory to complement and support practical learning.

In summary, the evolution of hospitality education over the past century reflects a dynamic shift from informal apprenticeships to formalised academic programmes. Traditionally, skills were transferred through hands-on experience, emphasising technical proficiency in core hospitality areas. The latter half of the 20th century witnessed a notable transition towards academic institutions offering formal qualifications, driven by globalisation and the demand for diverse skill sets. Despite traditional perceptions of hospitality jobs as low-skilled, the

industry now requires a blend of theoretical knowledge and practical experience to meet the changing demands of the industry. As technological, economic, and societal shifts continue to shape the industry, training institutions must remain at the forefront of curriculum development to ensure graduates are equipped with the necessary occupational competence to thrive in the hospitality sector.

3.3 Defining Work-Based Learning in the Vocational Training Landscape

As the hospitality industry continues to evolve, the integration of theoretical knowledge with practical experience becomes increasingly crucial. Recognising this need, WBL emerges as an integral component in bridging the gap between theoretical knowledge and practical experience. To fully appreciate the impact of WBL, in the following section, I define the concept, explore its significance, understand the role of experts and communities of practice in facilitating these experiences and discuss the WBL learning strategies and modalities. Additionally, in acknowledging the limitations of WBL, I will provide an examination of its limitations.

The international demand for WBL has significantly increased. This increase has also illuminated a growing ambiguity regarding the different types of WBL. Scholars commonly use the term to denote various educational experiences despite the terminology employed across different contexts. These terms include specific formats such as apprenticeship, traineeship, or internship programmes as well as broader concepts like experiential learning, work-based experience, work-based learning, work-based training and work-integrated learning. As such, terminology and definitions for WBL may vary significantly across different industries and regions. Resultantly, the literature cited in this research may also use different descriptors to refer to the concept.

Abeysekera (2006), in his paper on designing work-based programmes, posits that WBL must move beyond merely connecting tacit and explicit knowledge to leveraging the novice's existing knowledge of work. Additionally, Abeysekera (2006, p. 5) describes "WBL to be a structured strategy integrating classroom studies with learning through productive work experiences in a field related to a student's academic or career goals". Similarly, McLennan and Keating (2008, p. 5) argue that 'WBL is the term normally used to describe educational activities that integrate theoretical learning with its application in the workplace.' To this effect,

the CHE (2011, p. 4) defines WBL as an umbrella term to describe curricula, educational and assessment practices across a range of academic disciplines that integrate formal learning and workplace concerns.

Elucidating WBL's core aim of preparing the student for entry into the workforce, Jackson (2015, p. 350) describes it as the practice of combining traditional academic study with exposure to the world of work in their chosen profession. Similarly, Sewell, Mason and Venter (2017, p. 205) highlight WBL as career-focused learning which integrates theoretical knowledge with workplace practical application within a vocationally designed curriculum. In the Australian context, WBL is typically a mixture of learning in a workplace combined with learning in a technical and vocational education institution, whether public or private (Bahl & Dietzen, 2019, p. 14). The above definitions are inclusive and share a common characteristic: they integrate theoretical knowledge and practical knowledge, involving a combination of learning that takes place at a worksite as well as in an educational institution.

The definition of WBL emphasises the integrative aspects of learning (Barnett, 2006; Biemans et al., 2004; Mulder, 2004; Mulder & Winterton, 2017; Rauner, 2007; Winch, 2011) as opposed to the narrow conceptions of learning-for-work that are premised on the Anglophone approach to training. Additionally, Jack (2011, p. 42) states that "colleges give students the knowledge and skills to be successful, but the employers have the responsibility to mentor and place students in positions where they can learn practical skills". Consequently, the emphasis of WBL is on structured activities which integrate theory and practice. This integration pertains to student learning that is globally recognised and achieved in various WBL approaches. Each approach encourages students to experience authentic work practice, applying their knowledge and skills in real-world contexts.

WBL Programmes ensure that work experience is relevant to the student's area of academic study. Consequently, the focus of the placement is on learning, with an emphasis on academic foundations and a clear connection to the knowledge and skills relevant to the student's qualification. Hence, Costley and Armsby (2008, p. 8) note that WBL should be an assessable component to ensure that the learning objectives have been met. Resultantly, there should be a standardised set of skills and behaviours incorporated into a qualification to be practised and assessed during WBL. Assessing WBL makes educational institutions important stakeholders in the preparation of students to meet future workforce needs and job demands.

Although these definitions come from various WBL literature, ranging from WBL in universities, TVET colleges, and other specific learning programmes, I argue that they are applicable across various TVET settings. Given the definitions above, my working definition for this study recognises and embraces the concept of WBL as any work-related learning which aligns both classroom theory and practical experience. This approach enables students to develop occupational competence, contribute to the economy and earn qualification credits. For the scope of this study, the phrase 'real work environments' does not allow for the inclusion of simulated work environments in WBL.

3.4 The Significance of Work-Based Learning in Hospitality Education

WBL, as highlighted by Marneros et al. (2020, p. 11), is a process by which individuals acquire competence by reflecting on their everyday experiences outside the traditional classroom environment. Within the hospitality industry, this method of learning not only equips students with the technical competence necessary for individuals to execute day-to-day tasks in the real world but also fosters the development of generic skills such as communication and interpersonal skills. Baum (2002, p. 353) emphasises that WBL programmes in the hospitality sector enable students to develop a comprehensive and adaptable skill set that enables them to develop competence, helping them to navigate the industry with ease. Work-based learning allows students to effectively incorporate theory into practice, adapt to changes, and solve problems.

Spowart (2011, p. 176) suggests that the WBL experience allows hospitality students to become more mature individuals by having the opportunity to work with mentors and other experts in the industry. Burke (2018) and Fleming and Eames (2005, p. 27), similarly, argue that hospitality industry experts guide and support students in the workplace and have a key role in helping students navigate their everyday activities, providing them with learning opportunities. It is widely accepted that completing WBL as part of a hospitality qualification significantly benefits graduates, as it contributes to the development of their occupational competence. Spowart indicates that WBL provides hospitality students with an array of technical competence and transferable skills. These competences are typically acquired through hands-on training and practical experience, while intellectual skills are developed through academic learning in educational institutions. Likewise, Sisson and Adams (2013, p. 135) posit that WBL

provides hospitality students with the skills that render them employable. Yorke (2011, p. 118) recognises the role of WBL in fostering the development of occupational competence among hospitality students, encompassing the knowledge and skills that enhance their employability.

As hospitality students step into the hospitality industry, they increasingly recognise the pivotal role of WBL as an indispensable component of their qualification. Widely acknowledged as a cornerstone of hospitality education, WBL is a valuable asset that offers students direct access to employment opportunities closely aligned with their field of study (Mazhinye, 2018; Wilton, 2012). Mazhinye (2018) further emphasises the significance of WBL, highlighting its unique capacity to empower students to effectively showcase their skills and capabilities to prospective employers, thereby making them stronger candidates for job interviews. WBL emerges as a transformative pathway, equipping hospitality students with the requisite tools and insights to navigate the workplace with ease.

Through WBL, hospitality students not only refine their technical competence but also cultivate essential soft skills (Marneros et al., 2020, p. 11). Similarly, Burke (2018, p. 383) contends that participation in such programmes leads to significant development in both interpersonal and technical skills. Burke (2018) further affirms that work placements make a significant contribution to students' self-awareness, self-management, and self-confidence. The consensus is that upon completion of the WBL component, students would have attained high levels of a range of competences, both technical and in the form of personal attributes like confidence to boost their occupational competence.

Busby (2003, p. 322), who studied hospitality internships, notes that WBL provides procedural knowledge identified as a hallmark of the professional practice of hospitality training, as it has the potential to develop students' technical competence through performing various tasks and activities in the industry. The technical competence that students develop includes baking, cooking, serving clients, and operating machinery, among others. The workplace activities or tasks that develop these competences include interacting with clients, assuming roles in the kitchen, using technological software and experiencing work procedures or corporate ethos through practice and observation of the experts in action.

According to Kamau and Waudo (2012, p. 55), WBL programmes enable hospitality students to stay updated with evolving trends and assist them in adapting to change and innovation, thus

equipping them with the competence to meet the demands of the hospitality industry. These programmes offer access to modern equipment, tools, and advanced service methods (Baum, 2002, p. 356), which Conole (2009) refers to as mediating artefacts, resources that facilitate a dynamic learning environment. These artefacts align with Wenger's (1998, p. 58) concept of reification, whereby abstract knowledge is made tangible through physical or symbolic forms. By engaging with reified artefacts such as recipe books, machinery, digital guides, and tools, students not only gain hands-on experience but also internalise the standards, norms, and practices of the industry. These tools function as scaffolds that support learning, particularly in environments where participation in the form of direct expert engagement or mentorship is limited or inconsistent. Occupational competence thus emerges from the interplay between reification (tools, artefacts, and systems that represent knowledge) and participation (students' active engagement in workplace tasks and routines) (Wenger, 1998, p. 62). When these artefacts are meaningfully integrated into WBL, they help bridge theory and practice, enabling students to develop skills and understanding in contextually relevant ways.

Through immersion in authentic workplace environments, students gain invaluable real-world experience, facilitating the acquisition of competence through the use of the latest technology, which proves instrumental in bolstering students' technical expertise (Baum & Odgers, 2001, p. 96). In industries like hospitality, where mastering technical skills is paramount, hands-on training with up-to-date equipment becomes indispensable. Through direct engagement with advanced tools, students not only develop proficiency in their operation but also gain insights into industry best practices and emerging trends. Moreover, exposure to modern machinery fosters innovation and adaptability, equipping students with the agility to navigate the evolving workplace demands effectively. Thus, access to the latest technology through WBL also equips students with the competence essential for success in the competitive hospitality landscape.

In conclusion, WBL stands out as a transformative approach in hospitality education, offering students invaluable opportunities to bridge theory with practice and cultivate a comprehensive skill set essential for success in the industry. As highlighted by the various scholars cited above, WBL empowers students with technical competence, fosters the development of transferable skills, and enhances their adaptability to evolving industry trends. Through hands-on experiences with the latest machinery and tools, students not only acquire practical expertise but also gain insights into emerging practices, thus preparing them to thrive in the industry. Moreover, the cost-effectiveness of WBL in providing access to up-to-date equipment

underscores its significance as a cornerstone of contemporary hospitality education. Ultimately, the integration of WBL into hospitality programmes not only enhances students' employability but also equips them with the knowledge and skills necessary to excel in their careers and contribute positively to the industry's growth and innovation.

3.5 Sharing and Transferring Knowledge: The Role of Experts and Communities of Practice in Work-Based Learning

The theoretical ideas that have been suggested to explain the nature of learning outcomes and processes at work focus on the social and cultural environment of the workplace (Lave & Wenger, 1991; Wenger, 1998). With this focus, a student engaged in WBL is positioned alongside practising professionals on either a one-on-one interaction with an expert (Fleming & Eames, 2005, p. 27) or as a part of a community of practice (Fuller, Hodkinson & Unwin, 2005, p. 51). Lave and Wenger's (1991) theory views WBL as an integral dimension of social practice, thus, participation in the social practice of the workplace inevitably involves learning. From this perspective, participating in social practice can be considered a way of belonging to a community.

Lave and Wenger (1991, p. 35) argue that learning occurs in authentic contexts and is inherently social. They emphasise the importance of participation, where novices learn from experts through observation, imitation, and interaction. This theory of situated learning aligns with the master-novice principle, where the novice learns by working alongside and receiving guidance from their master.

WBL fosters a master-novice relationship, which accords the novice an opportunity to work under the close supervision of a master in all aspects of a trade (Gamble, 2013, p. 220). Gamble (2013) offers the example of a master car mechanic in North Jutland whose apprentices became the best car mechanics in the region without him saying a word to them. This is evidence that WBL, through observing an expert, is enriching and builds an individual's competence. Tacit knowledge is absorbed through a prolonged process of working with a master practitioner as it allows novices to observe and participate in activities, learning new practices and new perspectives (Webster & Leger, 1992, p. 58). This experience also helps them develop an understanding of other people's tacit knowledge (Eraut, 2007a, p. 409). This mode of learning,

which includes demonstrations, observations, and listening, is important for hospitality students in WBL.

In the hospitality industry, students in WBL work closely with experts (Osborne et al., 2020, p. 8). Here, students experience close individual contact with experts and proximal situations in which they can ask for guidance or demonstration of practices and processes (Papier & Vollenhoven, 2017, p. 291). Experts or mentors embody the role of "old-timers" who possess valuable tacit knowledge accumulated through years of practical experience in the industry (Fuller & Unwin, 2005, p. 22). Experts create an environment conducive to learning by providing opportunities for students to participate, contribute, and gradually become integrated into the practice (Othman, Abdullah, Sulaiman & Shamsuddin 2011, p. 158). This environment fosters their development as competent practitioners within the hospitality industry.

Mentors play multiple roles in facilitating learning within the WBL process (Fleming & Eames, 2005, p. 27). They are the key personnel to consult during WBL. They act as instructors, guiding students through the intricacies of the industry; initiators, introducing novices to the practices and norms of the practice; aspirators, inspiring students to strive for excellence; partners, collaborating with students on tasks and projects; mediators, helping students navigate challenges and conflicts; counsellors, providing support and advice; and coordinators, organising learning activities and experiences (Othman et al., 2011, pp. 158–159). These roles illustrate the diverse nature of mentorship in WBL, where learning happens through active involvement in real tasks and interactions with expert others (Lave & Wenger, 1991; Wenger, 1998; Wenger et al., 2002).

Students in WBL engage in authentic activities through which they become apprentices, situated on the job (Billett, 1994b, p. 11). Students access learning activities on authentic tasks conducted in workplace settings. Access to authentic tasks encompasses more than merely acquiring technical competence; it also encompasses students' acquisition of soft skills. During the WBL process, students actively participate in the socially, historically and culturally embedded activities of the workplace and become enculturated into the shared norms, values, and practices of their professional domain (Wenger, 1998, p. 48). This immersion helps students develop occupational competence for their trades. Research conducted by Lave (1990) on tailors in Liberia provides plausible evidence of successful learning from practice and interacting with more experienced workers.

Besides working and learning from experts, Papier and Vollenhoven (2017, p. 286) argue that effective WBL can also be fostered by enabling students to work and learn in communities of practice. A community of practice refers to a group of people who share a common interest, profession, or passion and interact regularly to learn from each other, solve problems, and develop shared practices (Lave & Wenger, 1991; Wenger, 1998). Essentially, it provides a social context for learning and knowledge sharing, where members learn from each other through participation, observation, and engagement within the shared domain of interest.

According to Fuller et al. (2005, p. 50), organisations employ communities of practice to serve as learning laboratories where new practices, processes, and ideas can be tested and refined. Lave and Wenger's (1991) primary focus is the process by which new entrants to a workplace gain the skills, knowledge and habits necessary to become "full participants". Thus, people's motivation to learn is influenced by the integration of knowledge and its application. This is likely to occur when individuals participate, peripherally at first, but gradually more fully, in their chosen occupational field (Papier & Vollenhoven, 2017, p. 287). Participation in communities of practice is thus a pivotal element in cultivating 'knowledgeability' or comprehension of concepts within their specific contexts.

Hospitality students in WBL also participate in communities of practice where they develop occupational competence. According to Wenger (1998), community members are informally bound by their collective actions, ranging from participating in formal meetings or lunchtime discussions to collaboratively solving workplace problems. Their shared experiences and mutual engagement in these activities shape their shared practice. Within these communities, knowledge undergoes a process of creation, sharing, organisation, revision, and transmission (Kimble & Hildreth, 2004, p. 3). Fundamentally, it is through these communities that knowledge is effectively owned and applied in practical contexts.

In conclusion, recent theoretical frameworks have underscored the importance of the social and cultural environment in understanding WBL processes and outcomes. Central to this understanding is the concept of situated learning, as proposed by Lave and Wenger (1991), which emphasises the role of authentic contexts and social participation in learning. Within this framework, WBL emerges as a dynamic process where students are immersed in the practices and norms of their chosen profession, alongside experienced practitioners.

3.6 Work-Based Learning Strategies and Modalities

Billett (1994a, p. 4) argues that WBL employs guided learning from experts, situated within the work environment and a focus on learning activities on authentic tasks conducted in workplace settings. Access to these learning activities and authentic tasks is strongly supported by Lave and Wenger's (1991) situated learning theory. From this perspective, learning in the workplace is social and comes from experiencing and participating in daily life. A deeper examination of situated learning theory follows in chapter four. For the remainder of this section, I illustrate the different learning approaches that are utilised to assist students achieve occupational competence through WBL.

3.6.1 Learning through Hands-on Experience

It is important to note that the four learning strategies are used while students are engaged in authentic activities in the workplace, where they undertake real activities associated with their occupation (Billett, 1994b, p. 13). Jackson (2015, p. 352) argues that the ethos of WBL is based on the theory of active and experiential learning (Kolb, 1984), where students transition from visualising and listening and attempt to 'do' what has been demonstrated through replication of tasks. Here, students engage in tasks and activities which allow them to witness both the process and product of the actual task they are to become skilled in. WBL gives them access to experts, and the proper tools and standards are both explicit and implicit through engaging in these tasks (Billett, 1992a, p. 8).

This method of learning in the workplace is associated with John Dewey's (1986) concept of pragmatism, a practical approach to learning that emphasises the importance of action, experimentation, and experience in shaping competence in students. Rejecting abstract speculation, Dewey emphasises the significance of problem-solving and inquiry within real-life contexts. Central to his philosophy is the belief that ideas gain meaning and validity through their practical consequences. What is important in this learning process, according to Billett (1994a, p. 13), is that students gradually engage in authentic tasks, usually from more peripheral tasks to those tasks which are more central to their trade. Engaging with authentic tasks is desirable because students are exposed to a comprehensive range of experiences that they tackle in real time to serve real clients.

Hands-on activities allow students to understand their role within the completed task and address practical problems in realistic settings and conditions (Billett, 1992, p. 8). The emphasis herein is the importance of contextualising learning within real-world tasks and environments. Here, students should see their actions as essential components in accomplishing a task and addressing the challenges that they may encounter in practical situations. This approach aims to enhance the relevance and effectiveness of learning by connecting it to the competence and knowledge needed in authentic settings.

In his 1994 study titled 'Situated Learning: A Workplace Experience,' Billett elucidates the concept of guided WBL, which comprises four phases of learning strategies: modelling, coaching, scaffolding, and fading. These strategies are employed by experts to help students progress towards full participation. They underline an interplay of various learning modalities that include but are not limited to demonstrations, observation, listening, questioning, explanations and feedback (Billett, 1994b, p. 11). These learning modalities, as outlined by Vaughan et al. (2011, p. 16) help students to develop self-monitoring and self-correction skills and integrate the skills and conceptual knowledge required for expertise. Below, I discuss the four learning strategies used in the workplace.

3.6.2 Modelling

The modelling learning strategy involves an expert executing a task so that students can observe, listen and build a conceptual model of the processes required to accomplish that task. In such cases, experts demonstrate their tacit knowledge, show students how to execute tasks, and sometimes display the shortcuts of the job. This sentiment is supported by Billett (1994a, p. 13), who avers that much of what experts do is tacit and hidden from novices; therefore, for learning to take place, the expert's role is to make the tacit knowledge accessible to students. As a result, making verbal descriptions of the process is a useful method used in conjunction with demonstrations to develop students' conceptual understanding. In other words, during the demonstration process, the expert must constantly verbalise the reasons why things are done and the consequences of non-compliance (Billett, 1994a, p. 13). That being the case, the modelling phase allows students to observe task completion closely while simultaneously being informed of how the expert went about doing it and why. Jackson (2013, p. 101) posits that when experts model a task, students observe, listen and question for understanding.

According to Billett (1994b, p. 13), during the modelling process, students must be able to develop a conceptual understanding of the activities they are engaged in and relate this understanding to the overall activities of the occupation. Thus, listening to and observing experts in the workplace helps with the conceptualisation and approximation of workplace tasks. Billett (1993) in one of his studies titled *What is a setting? Learning in the Workplace* gives an example of pallet packers in a warehouse who were taken to a supermarket to see pallets being unloaded. Through such observations, the novices appropriated knowledge about why the pallets must be packed to withstand transportation and the importance of the merchandise arriving in good condition. Following the process of modelling, observing, explaining, listening and questioning, students are permitted to replicate the work procedures that they have observed. Lave and Wenger (1991, p. 72) describe this learning process as the "way in", denoting the phase when students observe experts and strive to emulate them. This illustrates how students learn from the periphery to the centre of the practice.

3.6.3 Coaching

During the replication process, experts coach students throughout the work process. Billett (1994b, p. 11) suggests that coaching consists of a process of observation and monitoring as students mimic the activities they would have observed the experts perform. During the coaching phase, students receive more active support and guidance from experts (Billett, 1994b). This involves direct feedback, clarification of concepts, hints, tips, suggestions, clues, tricks of the trade and personalised assistance tailored to each student's needs. Billett (1994b, p. 12) suggests that coaching is done through providing suggestions, offering highly interactive feedback, and ensuring that the learning process is closely tied to real-world situations in "situated feedback".

Coaching may also involve repeated demonstration of a task or part of a task. Supportive comments and positive reinforcement (Vaughan et al., 2011, p. 16) can be provided by experts as a part of the coaching phase. Coaching may also serve to direct students' attention to aspects of the task that are known but temporarily forgotten or overlooked. Here, experts assist students in refining their competence and understanding through targeted interventions and continuous dialogue, facilitating their progression towards mastery and autonomy in the workplace. In essence, coaching entails guiding students in the practical application of skills within the context of their goals. The coaching interaction directly addresses specific events or challenges

that students encounter while striving to accomplish designated tasks. Coaching aims to steer students towards resembling the actions of experts.

3.6.4 Scaffolding and Fading

Scaffolding, as it relates to learning, was first coined and defined in Wood, Bruner and Ross's (1976) study of adult-child interaction during problem-solving tutoring sessions. In their study, each child was paired with an adult to form dyads, each given a problem-solving task. The child was guided using appropriately calibrated support during the interactions, leading the child towards the successful completion of the assigned task. According to Wood et al. (1976, p. 93), this practice had six features, which included:

- recruitment, or piquing the child's interest in the task
- reduction in the degrees of freedom, to avoid overwhelming the child by using incremental steps in the problem-solving process
- direction maintenance, through keeping the child in pursuit of the goal
- critical feature marking, for drawing the child's attention to what is significant
- frustration control, to ensure that the child will experience minimal angst while completing the task
- demonstrating the solution to a step in the task, which the child imitates back in an appropriate form.

Using the six features in the exercise, the child received the necessary support to accomplish a task beyond their capabilities (Boblett, 2012, p. 2). Billett (1994b, p. 12) emphasises the importance of an accurate diagnosis of the student's current skill level and the task's difficulty as fundamental for such support.

Wood et al. (1976, p. 90) define scaffolding as the tutor's intervention that empowers a student to tackle a problem, execute a task, or achieve a goal beyond their unaided capacity. In like manner, Billett (1994b, p. 12) characterises scaffolding as the expert's supportive role, albeit at more of a distance. This support manifests through affordances tailored to the student's abilities to foster knowledge and competence acquisition. According to Boblett (2012, p. 4), scaffolding may involve additional suggestions, guidance or help, such as general reminders, serving as physical support. Moreover, through this approach, the expert might need to carry out segments of the overall task that the student cannot yet handle independently.

Vaughan et al. (2011, p. 22) argue that in scaffolding a student's learning, the expert must discern the opportune moment to gradually dismantle the scaffolding, allowing the student to take on more responsibility for completing tasks independently. This transition typically occurs as the student demonstrates growing competence, prompting the expert to systematically withdraw their supportive framework until the student can autonomously manage the entire task. This learning strategy is particularly important as students can move and engage with peripheral to increasingly complex tasks (Vaughan et al., 2011, p. 23). However, according to Billett (1995, p. 23), scaffolding is more than a learning strategy which goes from less to more complex activities as it needs to also provide the student with experiences which develop an understanding of the purpose of the work activities, their outcomes and the standards by which work has to be done. Therefore, the initial learning modalities utilised must include experiences which allow them to develop an understanding of the work processes in which they are participating.

The process by which the expert removes the scaffolding until a student can conduct the task autonomously has been referred to as fading (Billett, 1994b, p. 12). This more distant support might lead to decisions about providing opportunities to engage in a range of more complex tasks, bringing about creativity and innovativeness in students. Fading, as suggested by Billett (1994b), has a wider application than developing skills for trade work with which it is historically associated. The general utility of this learning strategy resides in its ability to develop the range of knowledge types and attributes required of skilled workers. Fading, on the other hand, signals students, readiness to take up a more central role, both functionally and socially, as they begin to appropriate the tools and discourses of the trade, clear instances of reification being internalised and enacted. Fading enables students to shift from peripheral participation to full engagement within the community of practice (Wenger, 1998).

While pedagogical strategies such as scaffolding, coaching, and fading play a central role in WBL, this thesis interprets them through the lens of situated learning. These strategies are not just instructional techniques but expressions of a broader process of legitimate peripheral participation, where students gradually move from observation to skilled practice within a social context. However, given the fluctuating availability of experts, the study also draws attention to the importance of mediating artefacts, tools and documents that allow students to orient themselves and progress even in the absence of direct supervision. These artefacts include visual aids, standard operating procedures, and recipes that scaffold learning in tangible

ways. Viewed through Wenger's (1998) framework, they represent forms of reification that codify knowledge and complement social participation. This interplay between participation and artefact use is central to how students develop occupational competence in workplace settings.

3.7 The Challenges of Work-Based Learning

Despite the reported benefits of WBL, research has highlighted the challenges that hospitality students encounter in workplace settings when constructing workplace knowledge. I argue that these should be understood and acknowledged in discussions of WBL. To improve WBL, the limitations should be considered and action taken to mitigate their impact.

WBL can become a deterrent to training if the quality of learning is not sufficient or is restrictive (Fuller & Unwin, 2003). Restrictive learning is characterised by narrow learning objectives and work that is structured on tightly defined tasks, such as those involving manual labour or basic technical tasks. This limits a student's participation in the primary activities of an occupation and constrains the opportunities for developing full occupational competence (Billett, 2014, 2019; Fuller & Unwin, 2003). As an illustration, Cornford and Gunn (1998, p. 555) argue that students working in the kitchen are sometimes assigned tasks in the scullery and other menial jobs, such as washing dishes and scrubbing floors. They are not rotated into the different departments but are instead perceived as cheap labour. Assigning students solely to menial tasks in the kitchen, without exposure to diverse departments, limits their learning potential and reduces their role to that of cheap labour, rather than fostering comprehensive competence development.

Furthermore, Costley and Armsby (2008, p. 569) contend that employers perceive WBL as requiring a significant commitment of resources, such as mentors, machinery, tools and time, which they believe could be allocated to enhance productivity and profitability elsewhere. Osborne et al. (2020, p. 6) further emphasise that organising WBL programmes that align with students' coursework and are practical and valuable necessitates significant dedication and time. Most establishments would rather channel these resources towards production.

Many hospitality businesses are reluctant to make WBL commitments, viewing it as a potential waste of operational time and profit due to the associated downtime. These businesses are

hesitant to assign key experts to students, fearing this may cause harm to the business. Moreover, supervising WBL alongside regular duties can be inconvenient for employees because it increases administrative burdens, such as occupational health and safety inductions, risk assessments, report writing, and maintaining WBL assessments for students (Osborne et al., 2020, p. 7), potentially detracting them from their primary responsibilities.

The distribution of skills within organisations that host students for WBL significantly influences their progression from novice to expert. Due to the size or specialised focus of the firms where they are placed, students undergoing workplace training often miss out on opportunities to cultivate what Fuller and Unwin (2004) describe as broad-based expertise. An example of this is an apprentice chef may receive extensive training in vegetarian cuisine but have limited exposure to other culinary areas such as meat, fish, dairy, and poultry (Nelson & Dopson, 2001, p. 60). If this student is placed in a vegetarian kitchen, they dedicate all their time to preparing vegetarian dishes, becoming proficient solely in that area. Without the chance to rotate through various tasks, departments, or functional areas, this student may not fully develop the skills necessary for a career in hospitality.

This restriction limits the opportunities for novices to evolve into experts skilled in multiple areas (Fuller & Unwin, 2003). Rather than having mastery over a broad variety of tasks, competence and information, students will achieve mastery over a limited set of tasks, skills and knowledge. This limitation suggests that training providers should pay closer attention to the skills that students are learning and practising in the workplace. Where the types of skills available for learning are limited, students should be encouraged to move across various organisations to acquire a broad foundation for the development of occupational competence within a specific domain.

Additionally, Billett (2001b, p. 6) identifies inappropriate and unhelpful work-related knowledge that is learned through workplace experiences. Unhelpful work-related knowledge includes the learning of practices that are sub-standard or are likely to cause error, including dangerous shortcuts that restrict the appropriate and effective development of students' competence. Students may learn sub-standard practices because they are mentored by industry experts who are not proficient in mentoring (Jackson, 2013, p. 102). Workplace mentors are not compelled to undertake any training in teaching or instruction (Cornford & Gunn, 1998, p. 559), a skill that is necessary for the training of students. The learning of sub-standard practices

has caused unintended and inappropriate outcomes, an effect often referred to as the hidden curriculum (Billett, 1993, 1994b, 1994a, 1998; Moore, 1986). The likelihood of a student developing into a broad expert depends on whether workplaces assign trained experts to mentor students and have a well-designed WBL programme that provides comprehensive learning. For a WBL programme to be successful, Abeysekera (2006, p. 18) argues that it should adhere to the principles of best practice, such as assigning trained mentors to students.

To conclude, WBL in the hospitality industry presents several challenges which necessitate careful consideration and action to mitigate their impact. While WBL offers invaluable practical experience, research highlights several hurdles faced by hospitality students in these settings. Cornford and Gunn (1998, p. 549), whose study is on WBL for culinary studies, emphasise that the quality of learning in WBL must be sufficient to avoid becoming a deterrent to training. Restrictive learning environments, characterised by narrowly defined tasks and limited participation, hinder students' development of comprehensive occupational competence. Additionally, employers may perceive WBL as requiring a significant commitment of resources and time, potentially hindering its implementation in hospitality businesses. Osborne et al. (2020, p. 7) note that mentoring students alongside regular duties can pose logistical challenges for employees and organisations, further restricting students' interactions and learning opportunities.

In addition to structural limitations, inappropriate and unhelpful work-related knowledge acquired during workplace experiences can hinder students' competence development. Billett (2001b) identifies instances where students learn substandard practices or shortcuts that restrict the effective development of competence and knowledge. Furthermore, workplace supervisors may lack training in teaching practical skills to students, contributing to the unintended outcomes of WBL, often referred to as the hidden curriculum. To address these issues, workplaces must assign trained experts to mentor students and implement meticulously designed WBL programmes aligned with best practices.

Despite these challenges, WBL remains crucial for preparing hospitality students for the industry's demands. However, companies must address logistical concerns and ensure adequate supervision and instruction to maximise the benefits of WBL. Additionally, efforts should focus on safeguarding company property and maintaining productivity while students engage in

WBL. By addressing these challenges and leveraging the benefits of WBL, the hospitality industry can be in a better position to develop students' occupational competence.

3.8 Conclusion

This chapter has explored WBL through its theoretical foundations, its application in hospitality education, and the strategies that support its implementation. The first section reviewed key theoretical perspectives on experiential learning (Dewey, Kolb), situated learning (Lave & Wenger), and socio-cultural learning (Billett) that highlight how knowledge is constructed through doing, social participation, and context. These theories underscore the dual processes Wenger (1998) identifies as participation and reification, which together shape how students gain access to, make sense of, and eventually contribute to professional practice.

The second section contextualised WBL within the hospitality sector, showing how practical engagement in real-world service environments is essential to developing occupational competence. Here, participation in authentic tasks and the reification of knowledge through standard operating procedures, customer service norms, and assessment tools become key features of effective learning. The hospitality industry, with its fast-paced and people-oriented nature, demands not only technical skills but also generic skills and professional identity, both of which are cultivated through active sustained engagement with others and in communities of practice.

The third section examined specific strategies and modalities of WBL modelling, coaching, scaffolding and fading, all of which serve to mediate the student's journey from novice to practitioner. These modalities facilitate structured participation while also translating tacit expertise into accessible forms, thus linking Wenger's concepts to pedagogical practice.

Collectively, this chapter argues that effective WBL depends on more than just exposure to work; it requires intentional design, meaningful engagement, and structures that support both social integration and conceptual understanding. By framing WBL through Wenger's dual notions of participation and reification, we gain a richer understanding of how occupational competence develops in real-world settings, especially in industries like hospitality, where learning and doing are tightly interwoven.

The pedagogical approaches discussed, such as coaching, scaffolding, modelling, and fading, provide structured opportunities for students to engage in authentic workplace practices. These strategies do more than facilitate task performance; they enable students to gradually move from peripheral to fuller participation in the workplace community, thus contributing to the development of occupational competence in its holistic form. This chapter has shown that WBL environments, when well-supported, offer students more than technical skills; they offer identity formation, confidence, and a sense of belonging. These processes resonate strongly with Wenger's (1998) view of learning as participation in a community of practice. In Chapter 4, this connection is formalised through a discussion of the situated learning theory, which gives a better understanding of how occupational competence emerges through active engagement with others, tools, and social norms in the real world of work.

CHAPTER 4: Situated Learning Theory and Work-Based Learning

4.1 Introduction

In the preceding chapter, the scholarly discourse on the vocational curriculum and the integration of theory and practice for competence development was explored. The emphasis was on understanding the relationship between theoretical and practical knowledge in technical vocational education and training. Particularly highlighted is the significance of the workplace as a complementary setting for developing occupational competence. Within the domain of TVET, theories have historically dichotomised disciplinary learning and practical learning, often categorised as formal/informal/non-formal learning (Eraut, 2000, 2004) and institutional/work-based learning (Billett, 1992, 1995, 2001). In the hospitality field, alongside theoretical emphasis, there is a growing call for a curriculum that prioritises practical application. This shift stems from the recognition that true occupational competence is cultivated through hands-on experience in the workplace, guided and supported by expert others, engagement with the community of practice and iterative engagement and involvement with practical tasks.

In this thesis, I support perspectives from theorists who argue that the workplace plays a critical role in building the occupational competence of students. These theorists argue that students participate in workplace activities through mutual engagement and social interaction with more experienced workers in authentic settings, resulting in enhanced competence. In this regard, I deployed the lens of the situated learning theory (Lave & Wenger, 1991; Wenger, 1998; Wenger et al., 2002) to explore the specific contributions of WBL and to examine what and how students learn in the workplace to build occupational competence. This theory, attributed to Vygotsky (1978), who is renowned as the father of the sociocultural theory, argues that skills are conceived of as domain-specific and not generic. Sociocultural theory explores how students learn by constructing meaning from their interactions with their surroundings.

Fundamental to Vygotsky's (1978) socio-cultural theory is the idea that social experiences shape how individuals think and interpret their world. In this theory, the student acquires knowledge and skills through social interactions, which are integral to their learning process. Sociocultural theory influenced Lave and Wenger's (1991) model of situated learning, which

postulates that learning is intricately tied to the context in which it is constructed. In this model, learning occurs most effectively within authentic settings, where individuals engage in meaningful activities relevant to their social and cultural environment. Similarly, Brown et al. (1989, p. 32) state that knowledge is situated, being in part a product of the activity, context, and culture in which it is developed and used.

I have also keenly considered the value and relevance of Lave and Wenger's use of the term "legitimate peripheral participation" and the idea of identity formation in the communities of practice (Wenger, 1998, p. 145) to understand and explain my empirical data. The concept of legitimate peripheral participation highlights the notion that novices initially engage in peripheral activities within a community before gradually progressing to more central roles as they gain expertise (Lave & Wenger, 1991, p. 28). This concept emphasises the importance of observing, learning from others, and being granted increasing responsibilities over time as a fundamental process of learning within a community of practice. The development of a shared identity within the community is also emphasised in this theory. As individuals participate in the community's activities, they not only acquire skills and knowledge but also shape their identity as members of that particular community (Wenger, 1998). The process of identity formation is central to understanding how learning takes place in the context of communities of practice, as proposed by Wenger.

Wenger (1998, pp. 55–58) introduces the twin concepts of participation and reification as central to understanding how learning occurs within communities of practice. While participation refers to active engagement in social practices, reification involves giving form to experiences through tools, language, symbols, and procedures. Together, the two concepts shape how knowledge is created, shared, and negotiated in practice.

Situated learning in communities of practice emphasises that learning is a social and contextual process. It occurs within groups of individuals with shared interests or goals, where participants engage in collaborative activities. These communities provide an environment where students actively participate, observe, and reflect upon real-world tasks. This theory focuses on the importance of social interactions, the development of a shared identity, and the integration of learning into practice. It asserts that learning is not just an individual endeavour but a collective, context-dependent, and ongoing process within these communities. These ideas within this theory serve as a useful theoretical resource in this study.

In this chapter, I explore the application of the situated learning theory in communities of practice, as outlined by Lave and Wenger (1991) and further developed by Wenger (1998). I explain the three concepts closely related to this theory: communities of practice, legitimate peripheral participation and identity formation. Finally, I discuss the limitations of the situated learning theory.

4.2 Communities of Practice and Work-based Learning: A Sociocultural Perspective

Lave and Wenger's (1991) and Wenger's (1998) concepts of communities of practice contribute to examining the meaning and processes of learning as part of social activity (Brown et al., 1989; Fuller et al., 2005; Fuller & Unwin, 2003; Papier & Vollenhoven, 2017). Billett (2001b) argues that learning is understood as a participatory practice which is an engagement with the social world. The idea of communities of practice draws from Vygotsky's (1978) sociocultural theory. The situated learning theory has influenced a shift away from the traditional learning theories, which viewed the learner as an empty vessel and passive receptacle of knowledge and learning as a discrete cognitive process removed from "the lived-in world" (Fuller et al., 2005; Wenger, 1998). Learning is often associated with classrooms, training sessions, teachers, textbooks, and homework. In contrast, Lave and Wenger conceive of learning as an integral part of everyday life and as a part of the individual's participation in their communities and organisations (Wenger, 1998). In this study, Lave and Wenger's (1991) idea serves as a useful theory in examining the learning experiences, modalities and practices available to students in WBL.

Lave (1990) suggests that effective learning can be fostered by enabling students to work and learn in communities of practice. This notion is defined by Lave and Wenger (1991, p. 91) as having been:

> formed by people who engage in a process of collective learning in a shared domain of human endeavour… In a nutshell, communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly.

By the same token, Wenger, McDermott and Snyder (2002, p. 4) perceive communities of practice to be "groups of people who share a concern, a set of problems, or a passion about a

topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis". Papier and Vollenhoven (2017, p. 286) define communities of practice as a set of relationships among persons, activities and the world over time. This definition emphasises the interconnectedness between individuals, their activities, and the broader world, unfolding dynamically across time. In this sense, learning occurs in the context of the everyday lived experience of participation in the world, which assumes that learning is human nature and occurs naturally in interaction with the environment, and is thus situated in the social context. One which assumes that learning is a social phenomenon, reflecting individuals' deep social nature as human beings capable of knowing.

Wenger (1998) and Wenger et al. (2002) assert that communities of practice are among the earliest knowledge-based social structures, tracing back to when people lived in caves and gathered around the fire to discuss strategies for hunting, the design of arrowheads, and which roots, leaves and fruits were edible. Wenger et al. (2002, p. 4) further offer examples of engineers designing an electronic circuit known as phase-lock loops who find it useful to compare designs regularly and to discuss the intricacies of their speciality. While these engineers do not work together every day, they meet because they find value in their interactions as they develop unique technologies and share a body of common knowledge, practices, and approaches. Thus, they share information, insight, and advice, helping one another to solve problems and discuss their aspirations and needs for the work that they do. In this way, they form a community of practice.

Similarly, Wenger (1998) asserts that communities of practice consider common issues, explore ideas, and act as sounding boards. They may create tools, standards, generic designs, manuals, and other documents or develop a shared tacit understanding. He further argues that "workers organise their lives with their immediate colleagues and customers to get their jobs done" (1998, p. 6). In doing so, they develop or preserve a sense of identity that allows them to feel fulfilled, enjoy their work, and meet the expectations of their employers and clients. As such, when communities of practice come together, they accumulate knowledge and are bound by the value that they find in learning together. This value not only contributes to the work that they do but also provides the personal satisfaction of belonging to a group of colleagues who understand each other's perspectives, develop personal relationships and establish ways of interacting (Fuller et al., 2005; Fuller & Unwin, 2004, 2005; Wenger, 1998). This concept is defined not only geographically, but also by the connections and relationships formed between

its members and the activity that brings them together. Thus, relations are built between novices and experts because the workplace is the primary location in which the community of practice manifest for students in training.

The community of practice does not only involve the technical know-how of a practice, but also involves a set of relations among persons, activities, and the world, over time and about other tangential and overlapping communities of practice (Lave & Wenger, 1991, p. 98). It is not merely a repository for technical knowledge and skills but also an intrinsic condition for the existence of knowledge. Likewise, Papier and Vollenhoven (2017) contend that the culture of practice refers to the activities that comprise and differentiate a practice and the social relations within that particular practice. According to Billett (1994b), the norms and practices are fundamental to the conduct of, and involvement in, vocational practice, and as such, they should be considered in learning aimed at building vocational knowledge expertise.

Hughes and Moore (1999) uphold that students in WBL learn by taking part in the practices of their colleagues. They further argue that students and experts at a worksite, shape their relationships, their use of resources (social, informational and material), and their activities using various types of knowledge in a coordinated attempt to attain particular common goals Consequently, in the process of doing the work, they encounter new information, knowledge and competence, and reorganise their conception of certain phenomena, resulting in learning. Therefore, effective learning in the workplace can be stimulated by enabling students to work and learn in communities of practice.

Authentic experiences in the workplace make a crucial contribution to developing occupational competence in students and preparing them for work. According to Trede, McEwen and Sheehan (2013, p. 95), authentic experiences cannot be replaced by "simulations, project work, role-play, or other non-in situ activities of practice-based education". The key difference in workplace environments is that students are exposed to and immersed in the sociocultural, physical, and material dimensions of WBL. Furthermore, apart from the novice-expert interactions, the workplace exposes students to the organisations' hierarchies, culture, professional conduct, artefacts and resources, as well as professional duties and repercussions of actions (Papier & Vollenhoven, 2017), which are not available in the college workshop. Participation in a community of practice, where individuals engage in shared activities and learning, complements Vygotsky's (1978) theory of the zone of proximal development, which

indicates that an individual can achieve more when provided guidance and assistance in achieving their objectives.

4.3 Legitimate Peripheral Participation: A Key to Learning in Communities of Practice

According to Lave and Wenger (1991, p. 29), "legitimate peripheral participation" provides a framework to parse the relations between newcomers and "old-timers" as well as their activities, identities, artefacts, and communities of knowledge and practice. This concept involves newcomers gaining access to a community of practice and all that membership entails. Full participation in a community of practice requires access to a wide range of ongoing activities as well as interaction with senior members and other members of the community. This includes access to information, resources and opportunities for participation (Lave & Wenger, 1991). In this way, learning is a collective endeavour, where individuals develop competence through working with others through a dynamic process of being engaged with, and participating in developing an ongoing practice within a community (Wenger, 1998, p. 95). Lave and Wenger (1991) emphasise the critical role of expert members in facilitating the integration of novices into a community of practice. They describe how novices engage with these experienced practitioners to gradually become full participants in the community. This engagement is crucial for novices to acquire the knowledge, skills, and social practices necessary to become proficient members.

The concept of legitimate peripheral participation emphasises participation in social practices as a necessary condition for learning. Consequently, one learns through immersion in the new community and absorbing its modes of action and experiences as part of the process of becoming a community member (Lave & Wenger, 1991). According to Brown et al. (1989, p. 10), legitimate peripheral participation elucidates the role of activity in learning and defines learning as situated and context-dependent. By the same token, Fuller et al. (2005) suggest that novices learn by engaging in activities and work processes alongside more experienced workers in communities of practice.

Lave and Wenger (1991) assert that this concept strives to account for learning from a social instead of a cognitive point of view. They argue that legitimate peripheral participation is a process which is characterised by social structures and social relations:

> learning viewed as a situated activity has as its essential defining characteristic a process that we call legitimate peripheral participation. By this, we mean to draw attention to the point that learners inevitably participate in communities of practitioners and that the mastery of knowledge and skills requires newcomers to move towards full participation in the sociocultural practices of the community (1991, p. 29).

Similarly, Lave (1996) argues that learning through legitimate peripheral participation within social structures and relations is highly effective and robust. She even questions the efficacy of traditional 'formal' educational practices in schools compared to this social learning approach. This social learning approach contrasts with perspectives that focus on the acquisition of knowledge by isolated individuals and emphasise the efficiency, techniques, and technologies associated with traditional school-based practices. This approach emphasises that knowledge is constructed socially through interactions with others, particularly within a community. Learning develops by relying on relationships and resources rather than being viewed as a solitary mental activity. Table 2 below shows the differences between Lave and Wenger's (1991) concept of legitimate peripheral participation and the traditional cognitive model of learning at a glance:

Table 2: The differences between the cognitive model and Lave and Wenger's (1991) theory

Cognitive model	**Legitimate Peripheral Participation**
Teaching	Learning
Classroom	In situ
Through the teacher	Through observation of experts (social)
A student learns from a teacher.	Student learns from community members (social)
Learning through a planned curriculum	Informal learning, driven by doing tasks and activities in the workplace
Learning is an automatic, cerebral process of alteration and incorporation of ideas.	Learning is about understanding how to behave, and what to do, and it changes identity.

Source: adapted from Cox (2005, p. 532)

Lave and Wenger (1991, p. 29) assert that:

> a person's intentions to learn are engaged, and the meaning of learning is configured through the process of becoming a full participant in a sociocultural practice. This social

process includes, indeed, it subsumes, the learning of knowledgeable skills from experts.

As such, through legitimate peripheral participation, novices inherit knowledge and skills from experts in the same manner as in the apprenticeship system (Hasrati, 2005, p. 558), where learning involves the three key stages: modelling, coaching and fading. As discussed in the previous chapter, these key stages illustrate how the newcomer transitions from the periphery to the centre of the community. They become increasingly active and engaged in the community's culture as the expert gradually 'fades'. Legitimate peripheral participation may also be considered as "the means of achieving continuity over generations for the community of practice" (1991, p. 114). Through the process of continuity-displacement, full participants are replaced either directly or indirectly by newcomers who will eventually become old-timers themselves. In other cases, as was found by Lave (1996) during research on Vai and Gola tailors' apprenticeships in Liberia, West Africa, it was found that apprentices often learn more from more senior apprentices than from direct interactions with a master. The findings in this case study suggest that much of the learning occurs not through a direct master-apprentice relationship, as the master is often seen as too imposing to address minor issues faced by novices. Instead, apprentices gain valuable insights and skills through their interactions with peers who are slightly ahead of them in the learning process.

In defining the phrase 'legitimate peripheral participation', Lave and Wenger (1991, pp. 35–37) argue that each aspect in the phrase is crucial and cannot be considered in isolation. They suggest that "its constituents contribute inseparable aspects whose combinations create a landscape, shapes, degrees, textures of community membership". They propose that "peripherality when it is enabled, suggests an opening, a way of gaining access to sources for understanding through growing involvement". The extent and quality of this access relate to the social organisation of and control over resources. Subsequently, Wenger (1998, p. 100) identifies the characteristics of the word periphery as "lessened intensity, lessened risk, special assistance, lessened cost of error, close supervision, or lessened production pressures". When newcomers join a community of practice, the tasks they perform are referred to as being "peripheral" (Lave, 1990; Lave & Wenger, 1991; Wenger, 1998). They are initially assigned low-level tasks, learning by imitating the more central work performed by experts. Over time, as they gain experience and competence, they progress to becoming masters or full participants themselves.

Lave and Wenger (1991, p. 95) state that "an extended period of legitimate peripherality provides learners with opportunities to make the culture of practice theirs". They further aver that from a general peripheral perspective, apprentices gradually assemble a general idea of what constitutes the practice of the community. Such a process, where novices begin in a peripheral position and progress to the central or focal function, is known as learning. The movement from the periphery towards the centre reflects the novices' growing occupational competence in the workplace.

Wenger (1998, p. 101) defines 'legitimacy' as "being useful, being sponsored, being feared, being the right kind of person, having the right birth". Lave and Wenger (1991) use the example of master tailors who first sponsor apprentices to grant them legitimate access to participation in the community's productive activities. Novices gain legitimacy by participating in social activities, which lay the groundwork for their full engagement. The key to legitimate peripherality is access by newcomers to the community of practice and all that membership entails (Lave & Wenger, 1991, p. 100). Where there is legitimate access within the community of practice, the learners will be able to understand:

> who is involved; what they do; what everyday life is like; how masters talk, walk, work, and generally conduct their lives; how people who are not part of the community of practice interact with it; what other learners are doing; and what learners need to learn to become full practitioners. It includes an increasing understanding of how, when, and about what old-timers collaborate, collude, and collide, and what they enjoy, dislike, respect, and admire. In particular, it offers exemplars (which are grounds and motivation for learning activity), including masters, finished products, and more advanced apprentices in the process of becoming full practitioners (Lave & Wenger, 1991, p. 95).

The theory of legitimate peripheral participation, according to Hasrati (2005), emphasises that despite novices starting at the periphery, they are considered legitimate members with access to the community. This approach highlights the importance of conferring legitimacy over mere instruction in shaping the master-apprentice relationship.

Wenger (1998) asserts that to learn, people form relationships and interact directly and indirectly in the workplace and that learning is mediated through objects, signs and other resources. As such, students learn through participation, which involves mutual engagement and social interactions within the community of practice using different media. According to

Fuller and Unwin (2005), the nature and breadth of what a 'full participant' constitutes and means vary according to the way relations within the relevant community of practice are structured. Wenger (1998, p. 55) uses the term 'participation' to describe the social experience of living in the world in terms of membership in social communities and active involvement in social enterprises. According to Wenger (1998), participation is a complex process which integrates doing, talking, thinking, feeling, and belonging. In this regard, participation is continuous and involves prolonged relations with other people, activities, and the world.

4.4 Identity Formation through Participation in Communities of Practice

Through learning in communities of practice, people may form what Wenger (1998, p. 181) identifies as:

> a shared sense of identity, whereby learning is not just acquiring skills and information, but is becoming a certain person, who is a knower in a context where what it means to know is negotiated concerning the regime of competence of a particular community.

Knowledgeability is closely linked to identity formation, implying that learning is transformative, shaping an individual into who they aspire to be through their participation in the community of practice. Wenger (1998) asserts that developing competence involves evolving into someone for whom that competence becomes a meaningful way of life. This perspective highlights how learning not only changes an individual's skills but also shapes their identity and personal history within the context of their community.

The concept of identity is perceived by Lave and Wenger (1991) and Wenger (1998) as a central element of the sociocultural theory. It is as fundamental as a community of practice, as the two cannot be separated and are each other's counterparts. Lave and Wenger (1991, p. 80) argue that the formation of communities of practice leads to the development of identity, suggesting that "the main business of a community of practice is the construction of identity", which gives it a human dimension. Identity in this sense is not just about technical know-how, but about everything about the community of practice, including how the members conduct themselves and how they relate to one another. Wenger (1998, p. 152) argues that "identities are formed through participation". As such, membership constitutes identity. By participating in the community, the novices begin to identify with it through the forms of competence that the membership entails. Moreover, Lave and Wenger (1991) assert that the changes that novices undergo within the community of practice are not solely of behaviour, but of a

transformation of their identities, from being novices to experts in their trade, and this affects who they become and how they view and act in the world. To this effect, Wenger (1998, p. 4) suggests that:

> participation … refers not just to local events of engagement in certain activities with certain people, but to more encompassing processes of being active participants in the practices of social communities and constructing identities concerning these communities. Participating in a playground clique or a work team, for instance, is both a kind of action and a form of belonging. Such participation shapes not only what we do, but also who we are and how we interpret what we do.

Wenger (1998) highlights how individuals construct identities through events of engagement in activities with more experienced workers within communities of practice.

The daily engagement and interactions of novices within their community of practice create relations that lead to who one is in the workplace, who knows what, who is good at what, who is cool, who is funny, who is friendly, who is central, who is peripheral (Wenger, 1998). Wenger gives an example of how a claims processor of an insurance company develops an identity within their community:

> becoming a claims processor … is both taking on the label 'claims processor' and giving this label specific meanings through engagement in practice. It is doing what claims processors do, being treated the way they are treated, forming the community they form, entertaining certain relations with other practices, and in the details of this process, giving a personal meaning to the category of claims processor (Wenger, 1998, pp. 151–152).

Thus, the individual's engagement in practice provides them with certain experiences of participation that lead to a particular identity. In this way, identities are negotiated while on the job and interacting with other members. There is a strong link between identity and practice, because "through the process of identification, the practice, the community, and relationship with it become part of one's identity" (Wenger, 1998, p. 182). Resultantly, identities are shaped by belonging to a community that has a unique identity, thus leading to a unique experience.

To identify with a community, one must belong to it and therefore be accountable to its regime of competence. In Wenger's (1998) definition of competence, the novices' identities are shaped through their engagement in activities and social interactions in the communities of practice.

In this way, competence development occurs in the context of engagement and interaction through doing, which also enhances identity development.

To this end, Wenger et al. (2002, p. 146) suggest that communities of practice require "joint activities between the novices and the experts so that the novices can build a meaningful sense of shared identity". Furthermore, "there should not be too much distance between the experts and the newcomers, which could create distinct classes … that prevent the community from developing a common identity". The need for joint activities arises because experienced peers represent the history of the practice, and are living testimonies to what is possible, expected, and desirable (Lave & Wenger, 1991; Wenger, 1998). These activities help novices develop the trajectories that assist them in building their own identities. In that vein, this concept highlights the significance of participation within the community of practice in identity formation and demonstrates that more experienced peers are not mere sources of information about the job.

The novices' engagement and interactions with the experienced workers create a set of possibilities to which they are exposed as they negotiate their pathways to developing their own unique identities. These are unique in that, despite what is said, taught, or prescribed within the community (Wenger, 1998), novices, once they gain access to the practice, quickly discern which identities are valued and work to develop those. As such, it is not the community but the novices themselves who define their identity. For this to happen, however, Wenger (1998, p. 184) posits that "engagement requires authentic access to the participative … aspects of practice". Therefore, participation requires the legitimacy to have access to the shared practice and thus enhances the development of identity through learning within the community. It is this access to participation that facilitates learning and identity formation. Alternatively, a lack of access to participation could inhibit learning and the formation of identity.

4.5 Participation and Reification in the Context of Work-based Learning

Wenger (1998) conceptualises learning as a social process that occurs within communities of practice. This powerful conceptual lens helps the understanding of how learning unfolds in workplace settings. At the heart of this framework is the dialectical relationship between participation and reification, which together provide a dynamic account of how knowledge is constructed, communicated, and enacted within practice-based settings such as workplaces.

4.5.1 The Concept of Participation

According to Wenger (1998, pp. 55–56), "participation refers to a process of taking part and also to the relations with others that reflect this process. It suggests both action and connection." He uses the term to describe the social experience of living in the world through membership in communities and active engagement in shared practices. Participation, in this sense, is more than observable action but is a complex, holistic process involving doing, talking, thinking, feeling, and belonging. As Wenger (1998, p. 56) clarifies, participation is "broader than mere engagement in practice," encompassing the social relationships, mutual recognition, and sense of belonging that arise through engagement, positioning it as a relational and meaning-making process central to learning and identity formation.

Wenger (1998) further postulates that participation refers to active engagement in the social world of work, where students interact with others, negotiate meaning, and develop competence through involvement in authentic tasks. It is closely linked to identity formation within the social contexts of practice, as novices begin to both perceive themselves and be recognised by others as competent members of a professional community. Far from serving as a mere backdrop to learning, participation is the dynamic medium through which learning, knowing, and being are integrally connected. "Engagement with the world is social, even when it does not involve interactions with others" (Wenger, 1998, p. 56). This highlights that participation is not limited to visible collaboration, doing a task, group activity or being physically present, as it also includes the ways individuals internalise social experiences, draw on shared understandings, and make sense of their roles within a community. As Wenger explains, "in participation we recognise ourselves in each other..." (Wenger, 1998, p. 58), suggesting that identity and meaning are co-constructed even in subtle, less overt interactions. Participation, therefore, is not only about external engagement but also about how individuals come to locate themselves within the social fabric of practice.

In the hospitality workplace, and particularly within pastry environments, participation involves engaging in tasks, working alongside experienced chefs, observing techniques, asking questions, and being gradually entrusted with more complex responsibilities. It also involves gradually acquiring the norms, values, and skills of the professional community. It is inherently

social and dynamic, encompassing the lived experiences of students as they move from peripheral to more central roles in the workplace.

4.5.2 The Concept of Reification

Reification, in contrast to participation, refers to the process of giving form to experience and meaning through the creation of tangible mediating artefacts like language, symbols, procedures, and tools. As Wenger (1998, p. 59) explains, reification spans a wide range of meaning-making activities from producing documents and tools to establishing rules, concepts, and representations that shape practice. Through reification, abstract ideas are made concrete and communicable. "...in reification, we project ourselves onto the world, and not having to recognise ourselves in those projections, we attribute to our meanings an independent existence" (Wenger, 1998, p. 59). This means that once reified, these artefacts can take on a life of their own, often becoming detached from the people and contexts that produced them. As a result, reified artefacts may come to be treated as fixed or objective truths, with their socially constructed nature often overlooked.

Reification is not simply about producing static artefacts such as posters, manuals, or procedures. It is a dynamic and ongoing process of making meaning concrete where these tangible forms are continually interpreted, reshaped, and reintegrated into practice. Reification is never final; its meaning is contingent on how it is used and understood within specific contexts, particularly through participation. Reified elements, such as mediating artefacts, gain significance only when they are interpreted and applied by students and practitioners through active engagement in practice. As Wenger (1998, p. 59) notes, "reification shapes our experience. It can do so in very concrete ways." In this sense, reification does more than represent practice, it also transforms it. The creation of artefacts not only reflects how individuals perform tasks but also influences how those tasks are experienced and enacted. As Wenger (1998) explains, tools do not simply make work easier; they impose particular structures, sequences, and modes of thinking that fundamentally reshape the nature of the activity itself. In workplace learning, this is particularly significant, as students often encounter established tools, procedures, and documentation that embody the norms and expectations of the professional community. Their engagement with these reified forms not only supports task completion but also shapes how they come to understand and perform their roles, thereby influencing both competence development and professional identity formation.

Wenger (1998, p. 59) uses the example of a word processor to illustrate how reification can shape practice: “a word processor, for instance, reifies a view of the activity of writing, but also changes how one goes about writing.” In this case, the word processor is a reified artefact of the writing process. It does more than facilitate typing, it transforms writing by introducing features such as copy-paste, spell-check, formatting, and easy editing. As a result, writing becomes more fluid, less linear, and more open to revision, thereby influencing not only how writing is done but how it is conceptualised. In the pastry context, Wenger’s insight suggests that reified artefacts such as recipe cards, hygiene charts, or the spatial layout of kitchen tools do not merely represent knowledge or standardise procedures; they actively shape how work is performed and how learning unfolds. For example, a colour-coded cleaning schedule not only communicates hygiene expectations but also structures how students manage their time and develop an understanding of cleanliness as part of professional practice. These reified forms serve to stabilise routine tasks and render complex, often tacit knowledge accessible to novices. In this sense, Wenger (1998) urges the recognition of reification not as a passive record of practice, but as an active force that shapes how individuals experience, interpret, and carry out their roles within a community of practice. It turns the intuitive and embodied aspects of professional knowledge into concrete, shareable representations that can be preserved, evaluated, and passed on.

4.5.3 Participation and Reification, The Two Dance

Wenger (1998, p. 62) emphasises that participation and reification form a dynamic pair, distinct yet inseparable. He describes them as a “unity in their duality” because, although they represent different processes, they are deeply interconnected. They are not opposites but mutually constitutive, with each depending on the other to make sense and to be effective. Their interdependence means that they gain meaning through their relationship rather than in isolation. As Wenger (1998) argues, to understand one, the presence and influence of the other must be considered. Participation alone can be unstructured without the guidance of reified forms; without the scaffolding of reified knowledge, learning may become inconsistent or fragmented. In the workplace, for instance, a student pastry chef might read a recipe (reification), but it is through working alongside a mentor, experimenting with textures, and responding to feedback (participation) that the full meaning of the recipe is realised. Conversely, reification remains inert and insufficient unless activated through practice. A training manual (reification) only becomes meaningful when interpreted, enacted, and understood by students through participation. Likewise, participation in a task is shaped and

guided by the artefacts, tools, and language (reification) that define the parameters and expectations of that task.

Wenger (1998) offers a helpful heuristic: the presence of either participation or reification should prompt inquiry into how the other is simultaneously at play. For example, when observing a hands-on training session (participation), it is equally important to consider the reified tools, procedures, or specialised language that structure and give meaning to the practice. The interplay between participation and reification enables meaning-making, shapes learning experiences, and sustains communities of practice. Therefore, they should not be viewed in isolation, but as co-constitutive processes that together illuminate how knowledge is constructed, negotiated, and enacted in workplace learning. Ultimately, it is through the dynamic balance of these two dimensions that meaning is negotiated, learning is enabled, and practice is sustained. As Wenger (1998, p. 63) explains, "this contrast between mutuality and projection is an important difference between participation and reification." Participation is relational and social, while reification is representational and objectifying. One involves live interaction; the other involves creating fixed representations. Both are essential, yet function differently in the learning process. To put it simply, participation is like engaging in a conversation by learning through interaction with others, whereas reification is akin to writing things down, capturing ideas in a form that can outlast their creators, though sometimes mistakenly treated as independent truths.

This dialectic offers a powerful lens for examining WBL. It moves beyond simplistic notions of "knowledge transfer" to highlight how knowledge is both embodied in social interaction and embedded in the material and symbolic artefacts of practice. Artefacts such as posters about hygiene, the use of machinery, or the tacit meanings behind culinary jargon all mediate learning. They do not merely reflect practice but shape it. Understanding this dynamic helps explain how expert chefs, for example, translate their tacit, sensory knowledge of dough consistency into measurable instructions for others to follow, or how intuition about kitchen safety becomes codified into reified artefacts like signage and checklists. The professional language used among team members, similarly, serves not only to communicate but also to signal competence, inclusion, and alignment with shared standards.

By applying this conceptual pair, this thesis moves beyond linear or transactional models of knowledge transfer. Instead, it highlights how WBL is situated, negotiated, and materially

mediated, demonstrating both the enabling and constraining forces at play in the learning process. The framework also enables a deeper exploration of how artefacts and participation are unevenly distributed across different roles, influencing what is learned and how learning occurs. Thus, incorporating Wenger's (1998) duality of participation and reification into the theoretical framework provides a more nuanced understanding of how occupational competence develops through both social interaction and structured forms of knowledge representation in WBL environments.

4.6 The Limitations and Implications of the Situated Learning Theory

Lave and Wenger's (1991) theory of learning originates from their analysis of how newcomers become members of a community of practice through the process of legitimate peripheral participation. They focus on the journey of newcomers from the periphery of the community to the centre, which is facilitated by their interactions with the more experienced workers and their increased participation in the activities around which the community is situated. However, this theory does not address the ongoing learning of the experienced workers themselves (Fuller et al., 2005; Fuller & Unwin, 2005). The theory emphasises learning as a progression from being a newcomer to a full participant, focusing on the experiences of novices. However, it tends to overlook the impact on communities when they integrate 'old-timers' from other entities. Old-timers hired from other establishments bring new skills and perspectives to the community. They not only share their expertise with existing members but may also learn from the host community. According to Fuller et al. (2005) and Fuller & Unwin (2004, 2006), the process of existing community members learning from skilled newcomers is not addressed by Lave and Wenger's theory. Furthermore, no account is made of how the old-timer employee who has achieved full participation may be continuing to learn (Fuller et al., 2005).

Over and above, Lee et al. (2004, p. 11) argue that:

> no account is taken of the role of teaching, how novices may have skills and knowledge that they may share with others or the role of formal education within work-based learning, and how this can also be seen to be a form of learning through participation.

Fuller et al. (2005), like Lee et al. (2004), believe that newcomers come to the workplace with already formed beliefs, understandings, competence and attitudes that may be adopted by the existing community. In this instance, prior learning has shaped the whole person who arrives at the workplace. While the old-timer may impart their expertise to the community, they could

also learn from the newcomer's fresh perspectives and experiences, a dynamic that the theory overlooks.

Lave and Wenger (1991) acknowledge that communities of practice are social structures involving power relations and that how power is exercised within such communities can make legitimate peripheral participation an empowering but mostly disempowering experience. When power dynamics are involved, a master is likely to become too much of an imposing figure for the novice's minor learning problems (Wenger, 1998), to the point where novices are afraid to approach them. As a result, the opportunities for novices to gain expertise and contribute to the creation of new knowledge become limited, and their ability to progress is also hampered.

There is little emphasis in the situated learning approach on how organisational factors relate to WBL (Lee et al., 2004). An analysis of such characteristics may shed light on the available opportunities for WBL (Fuller & Unwin, 2005) and the often overlooked barriers to learning which affect novices and other workers. Addressing such issues is crucial for developing a more comprehensive understanding of the opportunities available to both students and experts, as well as their ongoing learning experiences in the workplace (Fuller & Unwin, 2005). In this regard, Fuller et al. (2005) and Fuller and Unwin (2005) are concerned that the current popularity of the situated learning theory is a double-edged sword. On the positive side, as has already been mentioned above, it draws attention to the workplace as a vital site for learning.

The situated learning theory may not be universally applicable, as some complex subjects demand structured instruction and a foundational knowledge base. Critics argue that this theory's overemphasis on situated experiences may hinder students' acquisition of essential theoretical frameworks. Additionally, it may fail to adequately address issues of transferability, making it less suitable for preparing individuals for diverse and evolving real-world challenges. Yet, Wheelahan (2012, p. 150) argues that theory informs practice and practice enriches theory, which is especially critical for occupational competence building. This study notes that bridging the gap between conceptual understanding and hands-on experience is essential for a comprehensive grasp of complex subject matter and the cultivation of expertise in professional settings.

On the other hand, if conceiving all learning as situated has the effect of confining workers to a particular workplace because all learning is highly context-dependent, their opportunity to gain new perspectives, cross boundaries and participate in other communities of practice will be denied. Thus, their opportunity to acquire expertise and engage in the creation of new knowledge will be restricted, and their ability to progress will be inhibited (Fuller & Unwin, 2005). In summary, Fuller et al. (2005) assert that the concepts of legitimate peripheral participation and communities of practice offer valuable perspectives on the broader landscape of WBL. However, it is essential to recognise that institutional settings introduce complexity, and the various forms of participation within them are remarkably diverse. To gain a comprehensive understanding of all the factors influencing WBL, careful consideration of these complexities is necessary.

4.7 Conclusion

In this chapter, I interrogated Lave and Wenger's (1991) and Wenger's (1998) situated learning theory. Here, I cross-examined the three main concepts; the communities of practice, legitimate peripheral participation and identity formation to interrogate my data. In this case, I argued that learning is an integral part of social activity, contrasting the traditional models that treat students as passive recipients of knowledge. Grounded in Vygotsky's (1978) sociocultural theory, this perspective emphasises learning as a participatory practice embedded in everyday life and social contexts.

The communities of practice, according to Lave and Wenger (1991), represent groups of people collaborating to learn together within a specific field, exchanging knowledge and honing their skills through regular interactions. Historically, the earliest communities of practice involve early human tribes sharing survival tactics, contemporary examples include professional groups discussing specialised topics and refining techniques. These communities are bound by shared values and the mutual benefits derived from collective learning, highlighting learning as a holistic process encompassing knowledge and skill acquisition and communal engagement. In the context of WBL, this notion is relevant, as students learn effectively through participation in the workplace, where authentic experiences expose them to real sociocultural, physical, and material dimensions, significantly contributing to their occupational competence development.

The core principle of the situated learning theory revolves around legitimate peripheral participation. Here, I outlined how newcomers progress from the periphery to full participation within a community of practice. Starting with low-risk tasks under expert guidance, newcomers gradually acquire knowledge and skills, eventually contributing significantly to the community. This challenges the traditional cognitive model that views learning as an individual process of knowledge acquisition, emphasising instead the social construction of knowledge through interactions with experts in occupational competence development. It provides a holistic understanding of learning as a dynamic, socially situated process that transcends traditional educational settings, involving phases such as modelling (observing experts), coaching (receiving guidance), and fading (gradually taking on tasks independently).

The theory extends beyond the mere acquisition of knowledge and skills but also transforms and shapes one's identity. This concept emphasises that learning comprises becoming a person recognised within the community's regime of competence. As individuals participate in these communities, they mature into roles where their acquired competence becomes integral to their way of life. The argument in this case is that the primary function of work-based learning is to construct identity, highlighting that identity is not just about technical skills but encompasses how members conduct themselves and relate to one another. Through participation, individuals form identities that align with the community's values and practices. The transformation from novice to expert involves changes in behaviour and identity, influenced by interactions and engagement with experts who embody the community's history and practices. Thus, participation is both an action and a form of belonging that shapes who individuals become and how they perceive their work and themselves.

Lave and Wenger's (1991) situated learning theory, which emphasises legitimate peripheral participation, provides valuable insights into how newcomers progress within communities of practice. However, critics highlight several weaknesses. The theory primarily focuses on novices' learning trajectories and overlooks the ongoing learning of expert members or the dynamics when experienced individuals join new communities. Critics also note the theory's neglect of the role of formal learning within WBL, as well as the power dynamics that can influence learning experiences. Additionally, the theory's emphasis on situated learning may limit opportunities for broader learning beyond specific contexts, potentially restricting individuals' ability to gain new perspectives and participate in diverse communities. Fuller and Unwin (2005) stress the importance of considering diverse forms of participation and

institutional complexities in understanding WBL. While the theory underscores the workplace's significance for learning, its applicability may be constrained for subjects requiring structured instruction and foundational knowledge, posing challenges for addressing diverse real-world challenges comprehensively.

It is essential to note that the understanding of the situated learning theory has not been developed since Lee's (2004) and Fuller & Unwin's (2005) critiques. This concept continues to be employed in contemporary studies and has not been significantly replaced or revised. However, relatively little empirical research has explored how the situated learning theory functions in structurally constrained environments. As such, this thesis applies and refines this established framework in a new context, providing a timely and much-needed contribution to the evolving discourse on situated learning and occupational competence in WBL environments.

This chapter has outlined the theoretical foundations for the study, drawing primarily on Lave and Wenger's (1991) theory of situated learning, with particular attention to the concepts of legitimate peripheral participation, identity formation and communities of practice. To deepen the analysis, the study also incorporates Wenger's (1998) later work on participation and reification, which offers a valuable framework for understanding how competence emerges not only through social engagement but also through engagement with material artefacts. These artefacts serve as stabilising forces in the learning environment, especially when expert mentors are unavailable. By extending these theoretical ideas to the empirical context of hospitality WBL in South Africa, the study offers a situated and context-sensitive refinement of how occupational competence is acquired, constrained, and negotiated. This theoretical framing informs both the data analysis and the eventual contributions to literature and practice articulated in later chapters.

CHAPTER 5: Research Design and Methodology

5.1 Introduction

As elucidated in my introductory chapter, this study establishes the foundation for the research by framing WBL as a crucial element of TVET, particularly in addressing skills gaps and preparing students for the modern workplace. Hence the research question guiding the study is: 'What is the specific contribution of work-based learning towards the development of occupational competence in hospitality students?'

I have further outlined the research sub-questions once more to appreciate the purpose of undertaking the study:

1. What do hospitality students learn about pastry in the workplace that contributes to building occupational competence?
2. How is the theory learned in the classroom integrated into practice during work-based learning?
3. What are hospitality students' perceptions about the learning experiences, modalities and practices provided by work-based learning?
4. What shortcomings are pointed out by hospitality students and mentors regarding the learning experiences, modalities and practices provided by work-based learning?

In this study, I argue that the workplace is an authentic and real-life setting for learning to occur. Through a comprehensive review of the literature, I have illustrated that WBL is beneficial to students as it comprises social interactions and authentic activities. This study explores how WBL contributes to the development of occupational competence in students. Specifically, it examines what and how hospitality students learn about pastry and how this learning contributes to building occupational competence in the workplace. In this chapter, I discuss my research methodology, including the rationale for my approach, how I selected my participants and the strategies used for data collection and interpretation. The ethical considerations of the study have also been discussed. Lastly, I assess the validity and reliability of this study.

5.2 Qualitative research approach

Qualitative research methods provide a more nuanced and comprehensive understanding of the phenomena being examined (Babbie, 1990, p. 75). Qualitative research methods aim to

uncover deeper insights and understand the underlying causes of specific human behaviours. In qualitative research, researchers often gather data directly from the field, where participants experience the phenomenon under investigation (Creswell, 2014, p. 234). This involves obtaining detailed, first-hand information by engaging directly with participants, observing their behaviours, and interacting with them within their natural context. Therefore, the data collected is more authentic and nuanced. This approach permitted me to adjust concepts and questions on the data collection tools and methods as the research progressed, reflecting the emergent nature of qualitative research. The approach also allowed me to uncover insights into problems without making prior claims and assumptions.

5.2.1 Interpretative paradigm

This qualitative research study was situated within the interpretivism paradigm, which is particularly suited for examining individual identity and personal development within an experiential learning environment. This paradigm is based on the view that people socially and symbolically construct and sustain their organisational realities. It aids in generating descriptions, insights and explanations of events, thereby revealing the underlying systems of interpretations, meaning and the processes of structuring and organising (Krauss, 2005). Because interpretive theory building is known to be more inductive (Babbie, 1990, p. 80), it is better suited to qualitative methods such as case studies and ethnography (Scott & Morrison, 2005, p. 131).

The interpretative paradigm allowed me to capture the perceptions and experiences of the participants. These perceptions and experiences allowed me to interpret and construct a deeper understanding of the specific contribution of WBL to the development of occupational competence in hospitality students., I interpreted what I saw, heard and understood, based on my sustained and intensive engagements with participants through observations and face-to-face interviews. These two data collection methods granted me first-hand experience, truthful reporting and quotations of conversations with the individual respondents regarding their experiences in their natural setting. I ensured that the interpretations were not extracted from my background knowledge of the subject area, history, contexts, and prior understandings.

Here, I explored how students experienced learning in a real workplace environment from their perspectives as well as those of their mentors. I thus engaged with students' explanations of how and what they learned and the circumstances under which learning took place. Creswell

(2003, p. 15) holds that an interpretative paradigm generates data that is grounded in reality, as was the case with the students in this study who were engaged in real work activities in their workplace. The overarching emphasis in this study was on the students' learning experiences, modalities and practices available to them and what knowledge and skills they acquired to develop occupational competence during WBL.

5.3 Target Population

McMillan & Schumacher (2012, p. 143) define the research population as "that group of elements that conform to specific criteria and to which the researcher intends to generalise the results of the research". The term population itself refers to the establishment of boundary conditions that specify who was included or excluded from the study.

My targeted population comprised two target groups. The first was a group of Report 191 (R191) N6 hospitality students from a conveniently chosen TVET college who were attending WBL at a chosen hotel. I chose this group because I had easy access to the TVET college. Proximity made it convenient for me to engage with the college's work placement office, which supplied the participants' details. Requisite permission was sought from the relevant college before conducting the research (see Appendix A). I identified this group of participants through the college's work placement office. The group comprised students at various stages of their eighteen-month-long WBL programme, ranging from 3 to 18 months. Including students at different stages allowed for a broader perspective on their WBL experiences. Those who had just started provided insights into initial challenges and expectations, while those midway shared experiences of adaptation and growth. Students nearing completion offered valuable reflections on their journey and outcomes. This allowed me to assess how WBL progressed and evolved and how students' competence and confidence developed. The second target group were the selected students' mentors, I particularly selected mentors who had ten or above years of experience in pastry.

5.3.1 Population Sample and Selection

Creswell (2014, p. 239) defines a sample as a group of participants from whom the data are collected. A representative sample was used because it improved accuracy, was not costly and was less time-consuming than attempting to examine every member of the population. Selecting a representative sample was a key element of this research, it involved pre-planning

in terms of knowledge of the population that was sampled and entailed rigorous selection procedures. Qualitative researchers often use data obtained from the study of a sample to say or write something about the larger population. I identified purposive sampling as a sampling strategy. I selected my sample based on my knowledge of the population, its elements, and the nature of the research aims (Scott & Morrison, 2005, p. 221). This sampling type was appropriate to the study because I was studying the lived experiences and perceptions of this particular group.

The sample was thus representative of this demographic. Ten R191 N6 students and five mentors were selected for face-to-face interviews and observations. My sample may appear to be small, but it is not. Practically, I had another set of 15 conversational interviews with the participants during my prolonged periods of engagement and interactions during observations and face-to-face interviews with the participants in their workplaces. Each participant was visited several times, depending on the section the participant was working. Within the ten observations, I conducted informal conversational interviews with all the participants. The observation sessions of ten, averaging about five hours each, were staggered over four months, which was sufficient time for me to attain relevant insights. The collected information provided interim data analyses, some comparisons, and corroborated data to refine ideas and to experience the realities of WBL as experienced by the students. From there, I could analyse what and how students learned about pastry in the workplace and how this helps them build occupational competence while pursuing a qualification in hospitality.

Permission to conduct research was sought (see Appendix A) and granted by the college director (see Appendix M). The sample was purposefully selected based on the following criteria:

a) R191 N6 students attending WBL at a selected hotel
b) Registered full-time R191 hospitality services students
c) Have so far attended a minimum of three months of WBL to eighteen months at the selected hotel, and would have worked or are working in the pastry kitchen.

I applied these three criteria to the TVET college's placement officer, who then sent me the list of students who met the stated criteria, their email addresses, cell phone numbers and a confirmation of the institution that they were at. A list of forty-two students was sent to me.

I then sought permission from the institution (see Appendix B) where these students were attending WBL. Once permission was granted (see Appendix N), I sent letters through email to each one of the forty-two students whose information I had received, requesting them to participate in my research (see Appendix C). In this email, I requested that responses be sent to my email address within three weeks of email distribution. I selected participants as they responded to the emails on a rolling basis using criterion (c) until ten participants were reached. The study was voluntary, as I allowed the participants the choice to participate in the study through their voluntary responses to my email. The participants agreed to avail themselves of both the face-to-face interviews and observations before signing the informed consent forms (see Appendix E), which were sent through email to the selected participants. The return rate of the consent forms was 100%.

The group of mentors was also purposively selected on the basis that they worked directly with the selected students, thus forming a sample that provided rich data. Similarly, I requested from the training manager at the WBL institution a list of mentors from the pastry kitchen who worked directly with the selected students. This list included the mentors' contact details for communication purposes. I emailed letters to each of the ten mentors (see Appendix D) requesting them to participate in the research. I received the responses through email and picked the first five mentors who responded positively.

After the selection, I emailed them informed consent forms (see Appendix F) to sign. The response rate was excellent. Face-to-face interviews with the five mentors and workplace observations were conducted at the selected site to supplement information attained from the students. I received my ethical approval before I embarked on the recruitment procedures for my study (see Appendix O).

5.3.2. Participants' Biographical Information

Table 3 overleaf shows the summarised information reflecting the representative nature of the participants in the study.

Table 3. Participant biographical information

Participant code	Gender	Age	Race	Experience in the workplace	Participant Category	Qualifications
101	Female	26	Black	3 months	Student	N6 Certificate
102	Male	22	Black	5 months	Student	N6 Certificate
103	Male	25	Black	8 months	Student	N6 Certificate
104	Female	29	Black	11 months	Student	N6 Certificate
105	Female	30	Black	12 months	Student	N6 Certificate
106	Female	30	Black	12 months	Student	N6 Certificate
107	Male	29	Black	15 months	Student	N6 Certificate
108	Female	33	Black	15 months	Student	N6 Certificate
109	Male	31	Black	18 months	Student	N6 Certificate
110	Female	33	Black	18 months	Student	N6 Certificate
R1m	Male	51	Black	24 years	Mentor	Workplace Experience
R2m	Male	49	White	17 years	Mentor	Workplace Experience
R3m	Male	49	White	16 years	Mentor	Level 2 Bakery Certificate
R4m	Male	42	Black	14 years	Mentor	Workplace Experience
R5m	Male	35	Black	11 years	Mentor	Diploma in Hospitality Management

Source: Created by Author

The composition of the study's participants, which comprised ten R191 hospitality students and five mentors, was designed to capture diverse perspectives. The inclusion of both male and female students, aged between 22 and 33, promoted inclusivity and ensured the research accounts for the diverse demographics of students engaged in WBL, contributing to equity. Additionally, all the students possessed an N6 certificate, which qualified them to enrol for WBL. Their enrolment periods for WBL varied from 3 to 18 months. This diversity in workplace experience facilitated obtaining valuable, real-world insights into their learning and competence development in the WBL context. Those with longer WBL exposure allowed for deeper reflections on competence development over time. Students' varied experiences enriched the qualitative data, offering a broader range of perspectives for my study.

The mentors, all males aged 35 to 51, offered a mix of ethnic backgrounds, with three being black and two white. This diversity in participant demographics enhanced the study's potential for comprehensive insights into WBL, more especially considering factors such as age, workplace experience and ethnicity among mentors. All the mentors had more than a decade

of industrial experience, therefore, they possessed in-depth knowledge and experience in the field, providing well-informed and valuable insights that enhanced the quality of this thesis. In addition to that, three of the five mentors were trained in the workplace, one held a 3-year formal hospitality qualification, and one of them held a skills course accredited by one of the SETAs. None of the mentors held a teaching qualification. It is also important to note that all five mentors were male, as the original list provided by the training manager consisted entirely of male mentors. I assumed that the hotel employed more male pastry chefs compared to women.

5.4 Data Collection Methods and Procedures

Qualitative research has several methods of collecting data, as a result, most researchers often triangulate these methods so that there is credibility and legitimacy in the data. I triangulated two qualitative data collection methods to yield different insights on the contribution of WBL towards developing occupational competence in hospitality students to increase the credibility of the findings (Scott & Morrison, 2005, p. 133).

The process of data collection is described by Creswell (2014, p. 240) as a circle of interrelated activities and a process of engaging in activities that include but go beyond collecting data, mainly aimed at gathering good information to answer emerging research questions. Data collection can be divided into two information sources such as;

(a) people (interviews), observation of events
(b) physical documents (products such as student portfolios), assessments (tests) and various forms of documentary evidence such as evaluation reports

For this research, I collected data in two phases for both groups of participants. The first phase was the face-to-face semi-structured interviews, and the second phase was a series of workplace observations.

During data collection sessions, I considered the impact of the coronavirus (COVID-19) pandemic and the lockdown levels in place. At the time of data collection, the country was at lockdown level 1, therefore, the risks of transmission to both me and the participants were minimal, thus I proceeded with data collection. I, however, followed all national regulations, guidelines and protocols to prevent transmission. I ensured that masks were always worn, hand sanitising was adhered to, and social distancing was adhered to. I also ensured that there was

no exchange of stationery and digital devices between me and the participants during the data collection process. Each interview was between 50-55 minutes long and was done during each participant's lunch break to prevent downtime. Where possible and with permission, the interviews were audio-recorded, while minimal field notes were captured for analysis purposes.

Data collection was guided by a data planning matrix adapted from Vulliamy, Lewin, and Stephens (1990) as shown in Table 4 overleaf. The matrix enabled the coordination of the complex series of data collection activities. It also helped with focusing the study, collecting relevant data and ensuring that all the research questions were answered adequately.

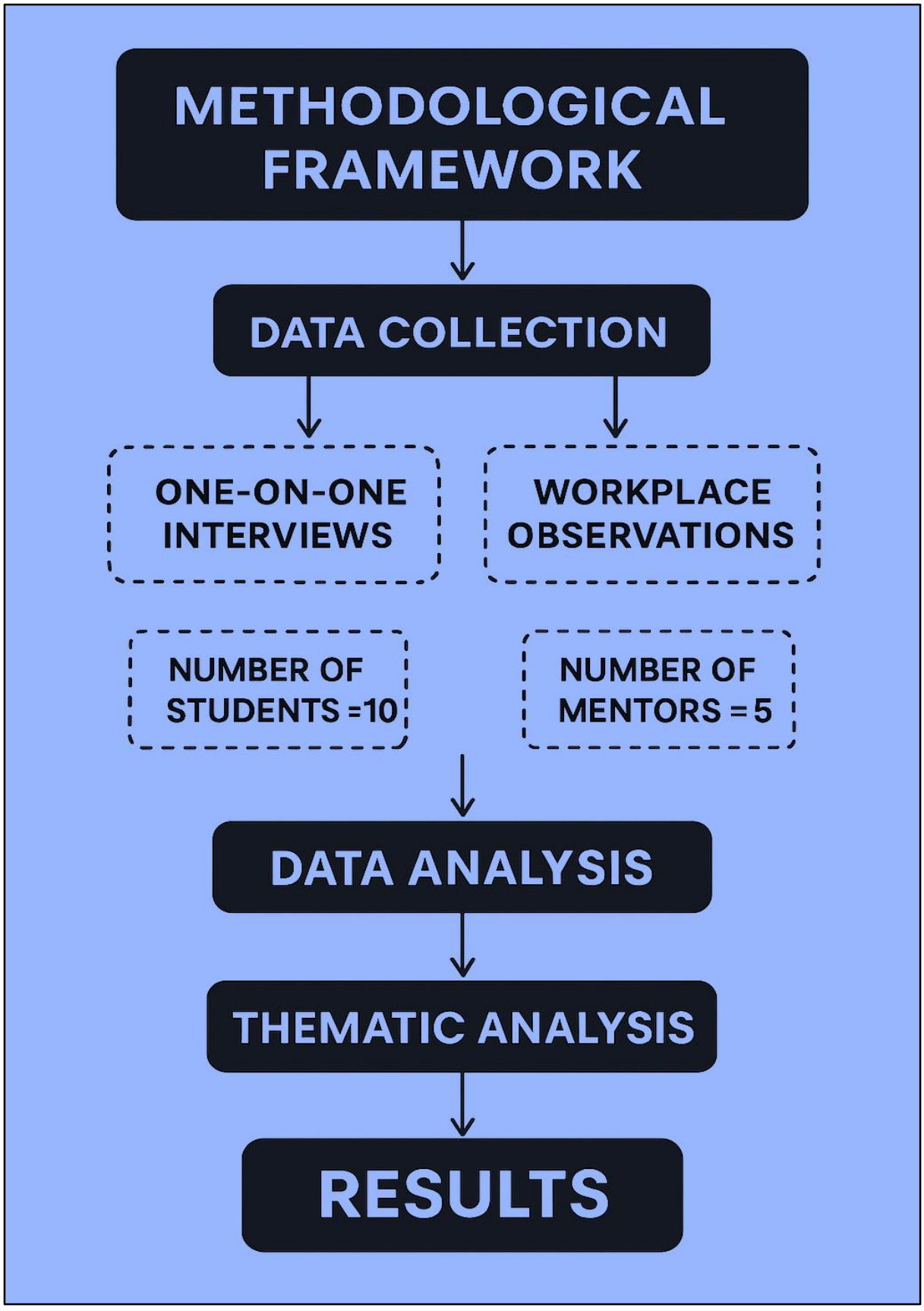
Table 4: Data planning matrix

Research question	Sources of data needed	Purpose	Methods
What do hospitality students learn about pastry in the workplace towards the development of occupational competence in pastry?	- Photographs - Video recordings - Participants statements - Informal conversational interview - Field notes	- To establish what competence students learn while in the workplace - To establish the activities that students are engaged in during work-based learning	Literature Interviews Observations
How is theory learned in the classroom applied by mentors in their interactions with hospitality students during work-based learning?	- Photographs - Video recordings - Participants statements - Informal conversational interview Field notes	- To establish whether the students link the theory learned in the classroom to practice towards the building of occupational competence - To establish how students learn while in the workplace - To establish the activities that the students are engaged in during work-based learning	Literature Interviews Observations
What are the hospitality students' perceptions about the learning experiences, modalities, and practices afforded them by work-based learning?	- Participants statements - Audio recordings	- To explore students' learning experiences of WBL. - To investigate the learning modalities used in WBL - To assess the students' satisfaction with WBL.	Literature Interviews
What are the shortcomings pointed out by hospitality students and mentors about the learning experiences, modalities and practices that are afforded them by work-based learning?	- Informal conversational interviews - Participants statement - Field notes	- To establish the shortcomings that are pointed out by students and mentors about the learning experiences, modalities, and practices afforded them by work-based learning.	Literature Interviews Observations

Adapted from Vulliamy et al. (1990)

Figure 2 overleaf is a methodological framework illustrating a visual representation of my research methodology, which offers clarity on the steps that were involved in collecting and analysing my data. This framework enhances the communications, visualisation, organisation, and transparency of my research methodology, thereby contributing to the overall credibility and understanding of this study.

Figure 2: Methodological framework from the data collection process



Source: Author's creation

5.4.1 Semi-Structured Face-to-Face Interviews

I conducted a series of in-depth semi-structured interviews (Creswell, 2014, p. 240), which are considered by qualitative researchers as a combination of formal and informal conversations. The interviews were guided by a broad outline of topics and issues that were discussed in the form of closed and open-ended questions.

I used semi-structured interviews to deepen my understanding of the contributions made by WBL towards the development of occupational competence in hospitality students. I used the interview schedule as a flexible framework rather than following it rigidly, allowing for the inclusion of emergent questions as the conversation unfolded. This approach provided participants with the freedom to respond openly and express their views in their own terms, thereby adding rigour, breadth, and depth to the study.

The interviews also gave corroborative evidence of the data obtained (Scott & Morrison, 2005, p. 134), as the semi-structured interviewing allowed me greater flexibility to introduce probes for expanding, developing and clarifying informants' responses. This relatively open framework for information gathering resulted in new themes and issues emerging during data collection. As postulated by Mason (1996), the most important strength of in-depth interviews is that they highlight the emotions and attitudes of the participants. I found this useful in identifying and describing their personal experiences of WBL in building critical occupational competence in pastry. I made use of two interview schedules, one for students (Appendix G) and the other for mentors (Appendix H), to solicit information from the two groups of participants. All interviews were conducted in English; I only used vernacular languages when necessary.

I interviewed the students and their mentors at their place of work. This process was interesting, albeit time-consuming and tiring, because I had to exercise a lot of patience to organise the interviews. Often, interview dates and times were rescheduled because the hotel became too busy, to the extent that participants were unable to take lunch breaks. Therefore, some of the appointments had to be rescheduled for when the participants were not at work. To ensure that the participants expressed themselves freely, briefing calls were made to each one of them during which the purpose of the interview was given. The familiarisation visits that I had before the collection of data helped me create rapport and non-threatening relationships with the participants. As I had previously interacted with some of the chefs and managers in other

contexts, these established relationships facilitated the interview process. I was, however, mindful of the need to maintain objectivity and avoided getting too familiar (Creswell, 2014, p. 136), which could have negatively affected my collection of credible and trustworthy data.

I managed to audio-tape most of the interviews after permission was granted. The interview recordings provided me with a more detailed, complete and accurate representation of the conversations. Recording the interviews allowed me more attentiveness as I did not have to take notes. The recording also enabled me to be more present in the conversation, which created a more natural setting that led to a more complete and continuous recounting of the experience and interpretation. I was more of an active participant in the conversation rather than a recorder of information.

I transcribed the interviews immediately after each session to capitalise on the fresh recollection of details, minimising transcription errors and the risk of data loss. This prompt transcription also facilitated participant review for accuracy and provided them with an opportunity to clarify their responses. I chose to use face-to-face interviews as focus groups would have infringed on the participants' confidentiality.

During the first three interviews, it became apparent that some participants found it difficult to express themselves in English, as it was not their first language. I, therefore, had to rephrase the questions, using simpler sentences and sometimes the interviewee's home language. This was to ensure that the participants understood the questions and to make them more comfortable with the interviews.

The first set of interviews was conducted with R191 students and the second set with the mentors. Examples of questions that these participants were asked included: How learning took place in the workplace, and what learning opportunities were afforded to students towards building occupational competence in workplace settings. I further asked them about the extent to which students apply the knowledge acquired at college in developing occupational competence. These interview questions assisted in answering the research questions related to understanding the specific role of work-based learning in building occupational competence.

5.4.2 Non-Participant Observation

Observations during fieldwork in a qualitative study fall on a continuum between complete observation and non-participant observation (Vulliamy et al., 1990). Non-participant observation is when field notes are captured on the behaviour and activities of participants at the research site (Scott & Morrison, 2005, p. 168), in this case, the pastry kitchen where the students were attending WBL. In observations, the prominence is on what the observer saw participants do and the researcher's application of meaning to the actions observed (McMillan & Schumacher, 2012; Scott & Morrison, 2005; Silverman, 2015; Vithal & Jansen, 1997).

With this data collection method, I sampled first-hand experiences through listening, watching and recording the participants' day-to-day engagements in the pastry kitchen, thereby providing real-time insights into mentors' and students' behaviours, interactions, and workflow. This method further corroborated data collected from the semi-structured interviews, thereby increasing the credibility of the findings. They provided detailed and definite information about pastry kitchen activities and practices that were difficult to establish during the interviews. I confined my observations to the pastry kitchen activities and practices because this was my research focus.

The observations required me to go to the participants' workstations and watch them while they performed the daily tasks assigned to them, and how they engaged and interacted with the available resources in the workplace. Here, ten observation sessions, averaging about five hours each, were staggered over four months (Appendix L). A five-hour observation over ten days ensured comprehensive data, capturing varied conditions and patterns, and facilitating more accurate analysis. I was able to cover two shifts within the ten days of observation. Additional sessions could have been conducted were it not for time and budget restrictions.

With permission, I took photographs and recorded videos of the workspaces in which the participants operated. I captured the critical work activities and resources used. In this respect, observed and recorded activities included the interaction of students with their mentors and other workers, imitation processes, observation processes, involvement in discussions, how tasks were executed, interactions with clients, types of tools and equipment used, working procedures and all other learning methods and styles that they were involved in. The capturing of videos and pictures enabled me to be an active observer. I strictly used the captured videos

and photographs for data analysis, which are saved and protected on my computer using a password.

Videos and pictures provided me with rich media of communication with a great amount of information that was communicated through multiple verbal and non-verbal cues, thereby enhancing the capacity of trustworthiness and credibility of my research. The two media helped give voice to the participants as these provided a more visceral form to communicate and interpret experiences and meaning through the recording of visual action and audio. Like the audio recording, both the video and the pictures provided more detailed, complete and accurate representations of the observation process, as most communication cues and details were captured for analysis, making the data richer. The use of these technologies facilitated the review and analysis of data several times during the analysis process, illuminating hidden details. Such recordings of multiple verbal and non-verbal cues helped me overcome environmental hazards such as background noise that disturbed my interpretation of the audio recordings.

Soon after the observation sessions, I made detailed field notes and filled in my journal and checklist (Appendix I) before I forgot crucial information. The journal served as a place for critical reflection. I also held some informal discussions with participants on aspects such as working procedures, practices, and what and how students learned in the workplace. This constituted the informal conversational interviews to complement the semi-structured interviews. However, I still had to maintain the requisite social distance to be able to collect the intended credible and trustworthy data.

5.4.3 Informal Conversational Interviews

These were conducted casually during observation sessions in the workplace. I conducted these informal conversational interviews to facilitate a relaxed observation environment while at the same time serving a verification purpose. It also allowed me to gather data not collected during face-to-face interviews. I asked questions in line with the aims of my research. I also asked questions relative to students' experiences and how they integrated theory learned in the classroom into workplace practice. Responses were captured in the form of field notes using pen and paper. These interviews were complementary to the observations and the information provided during the semi-structured interviews conducted earlier.

5.5 Establishing Trustworthiness and Credibility

Qualitative researchers are concerned with the accuracy and comprehensiveness of data collected to establish validity and reliability to persuade readers that the findings of the research are factual and worth reading (Bell, 2005). Table 5 below shows the five strategies that I used to establish the validity and reliability of the collected data and findings.

Table 5: Strategies used to collect data

No	Strategies used
1.	Prolonged engagement at the study site (workplace)
2.	Multimethod strategies of data collection and sources of data
3.	Member checking
4.	Thick descriptions
5.	Researcher as instrument

Source: Author's creation

Below, I discuss these strategies:

5.5.1 Prolonged Fieldwork

I had prolonged periods of engagement and interactions during observations and face-to-face interviews with the participants in their workplaces, which formed a natural setting to reflect lived experiences. Each participant was visited several times, depending on the section the participant was working in. Within the ten observation sessions, I observed student and mentor interactions, as students learned through coaching, modelling, demonstrations, observations and doing the work itself.

With mentor guidance, I observed students engage with machinery and tools used in the workplace and the day-to-day tasks and activities. I conducted informal conversational interviews with the participants during the observations. The observations of ten observation sessions, averaging about five hours each, were staggered over four months, which was sufficient time for me to attain relevant insights. This provided interim data analyses, some comparisons, and corroborated data to refine ideas and to experience the realities of WBL as experienced by the students.

5.5.2 Multimethod Strategies of Data Collection and Sources of Data

Multimethod strategies in data sources and collection methods permitted the triangulation of data within the inquiry. This is supported by Scott and Morrison (2005, p. 252) who aver that "cross-checking the evidence by collecting different kinds of data from different sources about the same phenomenon makes validation possible". The different strategies used in this study included face-to-face semi-structured interviews and observations. The data collection instruments that I used were interview guides (see Appendix G and H) and observation guides (Appendix I), audio tapes, cameras and video cameras. These helped me gain various insights about the specific contribution of WBL towards developing occupational competence, thereby increasing the credibility of the findings. For the most part, I substantiated data from the interviews from observations.

5.5.3 Member Checking

Member checking was important for me to validate the data that I had collected from the interviews with the participants. I did this in interviews by rephrasing questions and topics and seeking deeper and more nuanced meanings. I also picked out critical issues that were liable to multiple interpretations, I asked for clarity to ensure that what the participants said was what they meant. I also verified this through casual conversations in informal situations with participants during the observation process.

5.5.4 Thick Descriptions

I collected as much detail from each interview and observation session of the data collection process as I possibly could. Visits to the observation site yielded data on what students learned, how they learned, artefacts used, and work procedures available to students during WBL. I recorded these as detailed field notes using pen and paper and also captured pictures and video recordings. Semi-structured interviews, which were also relatively long, were audio-taped for accuracy. Such detail assisted me in bringing out emic perspectives during analysis, which focused on critical meanings from participants' points of view. I also used the recordings and resultant transcription to quote the participants verbatim. The thick descriptions of data from different sources illuminated a clear picture of the research findings.

5.5.5 Researcher as a Research Instrument

It is normal for each researcher to bring to every research their expertise, ideas and preconceptions; I tried my best to eliminate these before I conducted the research to prevent research bias. It is, however, difficult to completely mitigate researcher bias, but the triangulation of methods, my reflexivity through journaling, and member checking were the methods that I put in place to prevent this. Furthermore, the interviews and observations were guided by research questions and objectives, and not by my expertise, attitude, expectations, opinions, and tendency to seek answers that supported my preconceived ideas.

I, as the principal research instrument, had an adaptable role as I had to adjust my approaches according to context. I knew when to ask what questions, and I managed to probe and member-check to verify issues subject to varied interpretations. I also adapted my language to suit the participants' levels of hospitality discourse and subject content. Where I could, I used their vernacular languages so that there could be clear communication. I also attempted to minimise 'power and status' by building rapport with the participants to allow for their free expression.

Some of the semi-structured interviews were audio-taped, but some were noted down using pen and paper; however, the conversational, informal interviews during observations were recorded as field notes using pen and paper. I transcribed the audio recordings manually using Microsoft Word because the transcription software made errors. The manual transcription of data allowed me to become immersed in the data that I had collected and helped me understand the data better. To ensure validity and reliability, I, as a research instrument, listened to the audio recordings repeatedly so I could match them to the verbatim transcripts I had made. I then edited them to ensure accuracy. Above all, I used a device known as 'respondent validation' (Scott & Morrison, 2005, p. 215) to check on the validity of the conclusions. In this instance, I sent a detailed record of my observation notes and the verbatim transcripts of interviews that I conducted back to the research participants, who checked them for accuracy and confirmed that my interpretations and the data reduction that I made were fair and that I had not distorted the information that they had given. I made corrections where necessary. I regarded the participants' post-data perspectives as additional and valuable data for further reflection.

5.6 Data Analysis Procedure

Data analysis is the process of using logic to comprehend and evaluate the information gathered. I used the inductive approach to analyse the gathered information. With this method, what was important to analyse were: the statements of facts inductively derived from the interviews and records from observations.

I used content analysis to analyse significant statements and to generate meaning units. Working with collected data, organising it, breaking it down into manageable units, coding it, synthesising it, and searching for patterns is what Bogdan and Biklen (1997) define as qualitative data analysis. The most vital aspect of data analysis in a qualitative study is to discover patterns, concepts, themes and meanings through the direct interpretation of what was observed, the participants' experiences and what they reported. This involved reading through the texts, listening to audio recordings, and watching the video recordings to enable the identification of information relevant to the research questions and objectives.

The manual transcription allowed me to closely engage with my data, immerse myself in the context, and uncover delicate patterns and themes that were missed by the software I attempted to use. This method enabled a rich, context-specific understanding of the data, which was valuable because I was handling complex and subjective information. Using this method, I interpreted my data in a holistic and nuanced manner, resulting in a more comprehensive and insightful exploration of my research topic.

After transcribing the data, I coded and categorised it (see Appendix P). By using the colour-coded categories, I generated important core research themes and sub-themes. The core themes and sub-themes identified were:

- learning through others
    - learning through experts
    - learning in communities of practice
- learning by doing
    - integration of theory and practice
    - mimicking
- the role of mediating artefacts in WBL

These themes were informed by a cross-reference of the common emergent themes from my theoretical framework, literature review, data from interviews, records from observations, findings from similar research, my own expertise, objectives and research questions of this study. I contacted the participants to ensure further accuracy in the transcribed data and allowed for any questions and follow-up information. I presented my findings in a text format, and some responses were quoted verbatim.

The analysed data shows that during WBL students learn through social participation with experts and the community of practice. Here, students engage and interact with experts and the community in the actual practices of the workplace such as applying techniques, using tools, exchanging ideas, sharing knowledge and skills, and solving real-world challenges.

5.7 Ethical Considerations

Silverman (2015) and McMillan & Schumacher (2012) identify research ethics as informed consent, which involves providing adequate information and the disclosure of the nature and purpose of the research, including confidentiality and anonymity to participants. This is done to protect the human participants from physical and psychological harm during research. Informed consent is a process whereby the participant is allowed to make a free and informed decision to participate in research (Kimmel, 2001, p. 134); this decision must be legally binding. Thus, individuals' decisions to participate are voluntary and informed. Confidentiality, as reported by the Belmont Report (1978, p. 22) and Kaiser (2009, p. 1634), involves a commitment to keep private matters confidential and free from public disclosure unless there is consent to do so.

Based on this understanding, I deemed it necessary to inform the participants of all considerations underlying the research from the onset of the study. As such, all the participants understood the significance of the study and their role in the completion of the research study before they signed the informed consent forms. I also ensured that participants knew their right to terminate involvement whenever they felt that they could not proceed.

I requested informed consent from each participant to ensure that they voluntarily contributed to my study by considering the aims and objectives of the study. Letters of information were given to all participants about the purpose of this research. The information letter provided

information which clarified my role in this particular research as a postgraduate PhD student. Further, I indicated that participation was voluntary and they may drop out at any time and lastly that if they agreed to participate, every effort would be made to maintain their anonymity. I also provided them the contact details of my supervisors and that of the ethics committee, in case they wished to clarify the scope of the research, my role in the research and for the surety that they could refuse participation.

During the interview phase of the research, I restated the purpose of the study and clarified my role as a postgraduate student conducting academic research at the University of the Witwatersrand. Participants received an information letter that included the research title and outlined the study's primary objective: to explore what and how hospitality students learn about pastry-making to develop occupational competence in the workplace. The selection of the participating college was based on its offering of the N6 level R191 hospitality programme and its involvement in WBL. The hotel was selected as a research site due to its role in hosting WBL students from the chosen college. Hotel employees were invited to participate on the basis that they served as mentors to WBL students and had relevant professional experience as pastry chefs. Both the college and the hotel, as well as individual participants, were informed that the research findings would be shared with them upon completion of the study. To minimise downtime, face-to-face interviews at the hotel were scheduled during participants' lunch breaks. Observations and conversational interviews were conducted as participants performed their regular duties in the pastry kitchen, thereby ensuring minimal interference. All participants were briefed on the research procedures, and comprehensive information was provided to support informed consent.

In the presentation of findings and discussion, I did not identify verbatim comments using participants' real names to make certain that I conceal their identities. Rather, a coding system was adopted whereby each participant was identified by a particular code. I used codes 101 – 110 for students and codes R1m – R5m for mentors. I further assured the participants that the findings of the research were to be used strictly for academic purposes. I also informed them that the data collected from this research was to be kept safely secured by a password in digital form on my personal computer for future secondary analysis, with all identifying features removed.

I sought permission from the participants to audiotape the conversations during interviews and capture photographs and video recordings during observations. The audio recordings, pictures and video recordings were only used for data analysis, and these were secured in the same manner as all the other data. The research participants had the right to keep confidential information to themselves. Despite all the possible levels of potential limitations to the study, the participants did not impose any constraints in terms of participation and dispensation of information.

5.8 Conclusion

In this chapter, the methodological procedures that were used in the research, including the rationale for the approach employed, the selection of targeted participants, strategies for data collection and data analysis procedures, were discussed, and their relevance in this study was justified. I have also detailed the ethical considerations in the context of this research and explained issues of validity and reliability regarding this study.

CHAPTER 6: Findings from the Data

6.1 Introduction

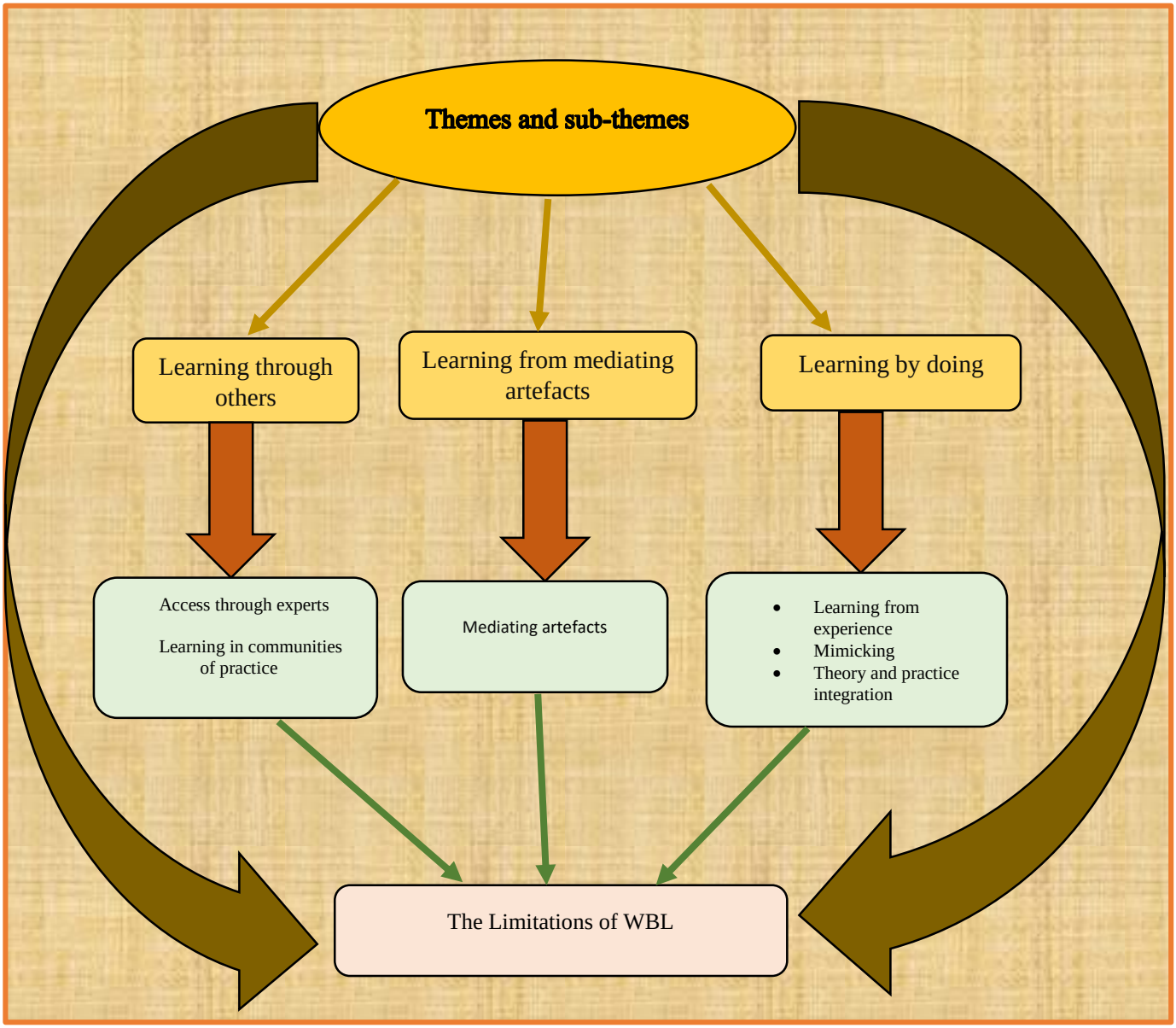
In the following chapter, I present my research findings on what hospitality students learn and how they learn in the workplace, specifically examining the contributions of WBL to developing their occupational competence. As previously indicated, I gathered data using observations and face-to-face semi-structured interviews, focusing on the sub-questions derived from the main research question. I thus organised the data around these sub-questions:

1. What do hospitality students learn about pastry in the workplace that contributes to building occupational competence?
2. How is the theory learned in the classroom integrated into practice during work-based learning?
3. What are hospitality students' perceptions about the learning experiences, modalities and practices provided by work-based learning?
4. What shortcomings are pointed out by hospitality students and mentors regarding the learning experiences, modalities and practices provided by work-based learning?

During the first three interviews, it became apparent that some participants found it difficult to express themselves in English, as it was not their first language. I, therefore, had to rephrase the questions, using simpler sentences and sometimes the interviewee's home language. This was to ensure that the participants understood the questions and to make them more comfortable with the interviews. The interview questions explored a range of related issues; as such, participants occasionally provided responses that extended beyond the specific question and addressed areas that were covered by other questions. Resultantly, extensive data sifting was done to identify emerging themes. I read through my data and developed and assigned codes and themes manually using Microsoft Word. This helped me understand the data and streamline the overall analysis process. The manual process enabled me to gather substantial evidence for the four main themes and three sub-themes that emerged. The themes and sub-themes were developed by cross-referencing common emergent themes from the literature review, data collected from interviews and observations, findings from similar research, the researcher's expertise, and the study's research questions and objectives.

In the following sub-sections, I have organised the findings from each theme and sub-theme according to the sub-questions, providing a comprehensive overview of the data elicited by each sub-question. Figure 3 below illustrates the themes and sub-themes, which are primarily based on the literature and an initial review of the data:

Figure 3: Themes and sub-themes



Source: Author's creation

6.2 Learning through Others

Participants expressed that they had learned through active participation and interactions with others in the workplace. This study acknowledges the relationships between students and their environment in terms of participation and engagement, recognising that much of WBL

occurred through interaction with others. According to the findings, WBL was often unplanned, haphazard and spontaneous, typically occurring in an ad-hoc manner. It involved informal strategies, as learning occurred while performing other tasks and was often incidental. In these situations, there was minimal control over the timing, location, or participants involved in the learning process.

However, learning was sometimes planned, particularly when meetings and discussions were scheduled. Here, WBL took the form of formal initiatives, such as coordinated training sessions where pastry chefs gathered to share knowledge and skills to enhance their practice.

Under this theme, I identified two sub-themes:

- Access to the expert other
- Learning in a community of practice

A significant finding of this study was the crucial role of the expert pastry chef in facilitating student learning. Consequently, I have prioritised outlining the findings from this sub-theme first.

6.2.1 Access to the Expert Pastry Chef

At the outset, students are considered novices due to their lack of practical workplace experience, relying solely on theoretical knowledge. At this stage, each student is assigned a personal mentor, recognised as a pastry expert, and is expected to work closely with them. The mentors are intended to guide, support and direct students' WBL to build their occupational competence. Learning typically occurs through one-on-one interactions, where a mentor demonstrates tasks, explains concepts, and observes the student. For the sake of this study, I have used the term expert to mean both the mentor and the experienced worker.

The concept of 'expert other' aligns with Lave and Wenger's (1991) situated learning theory, which emphasises the master-novice relationship in WBL. This theory highlights the role of what Lave and Wenger term an 'old-timer,' an expert who intervenes and guides the newcomer (student) through the learning process, utilising the mediating tools available in the workplace. The study demonstrates that students were not left to navigate the learning process independently, instead, they were supported through the presence of a mentor or an expert. This guidance, achieved through engagement and interaction, facilitated their learning. It was

found that learning through an expert occurred in various ways as part of everyday experiences and participation.

6.2.1.1 How students learned about pastry through the expert other

Students were reported to be exposed to various WBL modalities, including:

- Guidance and support
- Demonstrations and observations
- Question and answer sessions
- Explanations and listening
- Feedback to students

These methods of learning suggest that WBL can vary between being explicit and less explicit. Learning becomes more explicit when feedback is given and when comments and explanations are made. Conversely, as I observed, it can be less explicit when, due to time pressure, experts demonstrated tasks in a manner that appeared ingrained and intuitive, making it difficult to articulate the underlying processes.

Explicit knowledge depicts the direct acquisition of generalisable knowledge from other people (Eraut, 2004, p. 117). Alternatively, less explicit knowledge is the tacit knowledge that is unspoken, implicit and is gained through experience, often difficult to articulate or transfer directly, "that which we know but cannot tell" (Polanyi, 1967, p. 4). Tacit knowledge is typically acquired through working with experts who have developed the expertise to execute various tasks with precision, using what is often referred to as 'shortcuts'. For this study, I interpreted tacit knowledge to mean knowledge, skills, and abilities acquired by individual pastry chefs through experience.

6.2.1.1.1 '…an important practice in the workplace is a culture of mutual support and guidance…'[1]

Providing mutual support and guidance to students appeared to be a fundamental aspect of the WBL culture. This idea was reflected by Participant 101, who stated that 'an important practice in the workplace is a culture of mutual support and guidance received from experts' (April 2022). Support and guidance to students by experts are central to learning through work. Intentional guidance, support and sequenced access to workplace activities represented some

[1] Participant 101, 11 April 2022, p. 125

key workplace pedagogic practices. Students in the study expressed how experts guided and supported them in their work, enabling learning to take place. Similarly, Participant R1m described their interaction with students, asserting 'we always give them the support and guidance that they need' (June 2022). This reflects the mentors' commitment to providing comprehensive support and guidance to students in the workplace. Having undergone similar training, mentors expressed their empathy for assisting students in WBL programmes.

Traditionally, the role of an expert in WBL is to share their wisdom, knowledge and skills with the novice or student, as demonstrated by Participant 103 who states that 'they shared their wisdom and skills with us' (May 2022). The expert offers opportunities for safe practice, guiding and allowing students to practice and make mistakes in a non-threatening environment. This is described by Participant 104, who maintains that 'it felt safe… with all the guidance and support we got' (May 2022). This idea is further reiterated by Participant 101, who asserted, 'we appreciate our mentors so much for the guidance and assistance they offer to us…' (April 2022). Students valued and appreciated the presence of experts, whose presence gives [them] confidence in the tasks [they] do' (Participant 101, April 2022). Students affirmed that opportunities to work with mentors provided them with confidence as they performed tasks under their guidance.

According to the findings, when support and guidance are provided, the workplace potentially facilitates the learning of the hard-to-learn skills required for vocational practice. Participant 106 demonstrates this sentiment by affirming that 'the support given made it easy to grasp the skills that they showed us' (June 2022). The effectiveness of WBL hinges on the opportunities provided for students to participate and receive support and guidance from mentors. Participant R2m expresses their willingness to provide this support, asserting, 'I value all students who come for WBL, so I give them all the support that they need' (June 2022). Similarly, Participant R3m reflects on the pastoral care role that his mentor and other workers played in encouraging him during his WBL. 'I remember how my mentor supported me…it encourages me to help other students too' (July 2022). Both these mentors admitted to guiding and supporting students because they also received the same kind of support from their mentors during their training. Mentors also 'reinforced skills in students and helped them solve problems that relate to production' (R5m, July 2022). Further emphasising the importance of expert support and guidance in WBL.

I observed this in practice during my fieldwork, where a student learned how to perform more complex activities that used a range of skills, under the guidance of an expert. In this instance, the student was learning how to make a Bakewell tart, which involves preparing a sweet pastry, making the frangipane for the filling and decorating the tart before service. The mentor outlined the overall planned activities to the student. He did not directly instruct her on how to complete this task, instead, he used questioning to encourage the student to articulate her understanding of the process and its rationale. Based on this discussion, the mentor offered tips. Upon completing this task, the mentor provided feedback to the student, highlighting any errors in practice. This aligns with what Billett (2001a) terms as 'direct guidance', where the mentor, as the credible expert pastry chef, prompts the student to engage in critical thinking and action. The mentor, instead of simply instructing, used questioning to provide the student with access to information and encouraged her to think outside the box. Through constructing and articulating her knowledge in this interaction, the student was actively learning.

Participant 110, a student nearing the end of her 18-month-long WBL, reported that the guidance and support from experts helped her progress from being a novice to nearly a master, enabling her to use various machinery and prepare a variety of dishes independently:

> the experts I worked with in the pastry section of the kitchen were quite good at what they did. They did all their tasks with precision… thus they encouraged me to do the same; the support and guidance that they provided helped me attain the same skill with confidence… now I know how to use a dough mixer when making bread and rolls, and I can mix a sponge cake mixture manually, I can now make ice-cream without following a recipe, am now able to adapt any cheesecake recipe and turn it into my interesting recipe, I now know how to plate the desserts that I'd have made or been made by other pastry chefs… all thanks to the pastry chefs that I work so closely with… Like my mentor and all the other pastry chefs, I take pride in what I do, and I never take my work for granted just because am in training… I work like I'm an employee of this company (July 2022).

In this sense, 'experts are stepping stones to [students] learning' (Participant 106, June 2022). Demonstrating that learning came in the form of modelling, coaching, scaffolding and fading.

During my fieldwork, I observed this type of learning, where experts guided students closely, demonstrating how to complete tasks and then allowing the students to imitate these actions

while monitoring and correcting them as needed. I frequently heard mentors instructing students with phrases like, ‘no, you can’t work like this, you must work like that’ or ‘the easy way to do it is like this’ as they guided them through their tasks. Conversely, mentors also acknowledged allowing students to perform the work independently while maintaining a watchful eye to minimise mistakes. As R1m noted, ‘I later let them do the work but always under my watch’ (June 2022).

The study also demonstrates how mentors guide the students in developing the ‘problem-solving skills [that] are crucial abilities if students are to succeed in this industry’ (R2m, June 2022). Two types of problems that pastry chefs face daily in their practice were illuminated by this study, namely, operational-related and customer-related problems. Participant R4m stated that:

> we expect students to have problem-solving abilities, therefore, what we do is guide them through and cultivate this skill in them by supporting them and letting them solve problems. We first show them how it’s done, and then we let them do the same in our presence… when we are sure they can do it on their own, we then let them be (July 2022).

For the industry to thrive, these problems should be solved amicably. To resolve disputes, employees need strong person-to-person contact skills and the ability to adapt dynamically to meet the ever-changing demands of customers. To respond to these demands, graduates need decision-making capabilities to solve problems quickly and independently. As conveyed by Participant 106, ‘with the support that I got from the experts, I’ve learned to think on my feet and be patient with clients’ (June 2022). In this way, students acquired problem-solving skills from the guidance and support that they received from experts.

I observed an example of this when a student handled a client’s complaint about uncooked muffins, with assistance from their mentor. They successfully resolved the issue by politely apologising to the client and offering them additional muffins on the house.

Communication skills are another important attribute that students identify as developing through the support and guidance from experts in the workplace. Reflecting on their journey, Participant 108 reported, ‘my communication was so bad, I didn’t even think it was important to this industry not until I faced clients at buffet tables and in corridors, and other chefs in the pastry kitchen’ (June 2022). ‘I learned to communicate with clients through guidance from

experts' (109, July 2022). The students observed how expert chefs smiled at guests, used gestures, greeted and talked to them politely:

> my mentor guided and supported me as I developed my communication skills with other workers and with clients… I observed him smile, greet, speak and help clients at buffet tables. I'd imitate him, and support was always given (106, June 2022).

Students noted that they 'lacked confidence during buffet service because [they] wouldn't know what to say if it came to talking to and serving guests...but [they] improved a lot with time' (108, June 2022). Similarly, Participant 107 reported that with exposure, guidance and support from experts, '[they] can now communicate efficiently with clients during buffet service' (June 2022). This was evident during my fieldwork, where I observed a student receiving guidance on how to communicate with clients during service at a buffet table. The expert modelled the importance of greeting the client first, the use of correct registers and smiling at them. The student appeared to do this well, as she mimicked the expert. I heard her making use of the correct registers as she greeted the client. Participants generally perceived that competence development in handling the 'human' side of the business, such as effective interaction and communication with others, occurs in the work environment when engaging with real people. In this way, Participant 103 aptly notes that 'such support and guidance couldn't be provided by the classroom but by the workplace' (May 2022).

While students complained that the high volume of work hindered their learning and made it difficult to follow established procedures, they also acknowledged that the pressure helped them develop time management skills and balance productivity with learning. As Participant 101 noted, 'the pressure of work is too much... we managed because of the support we get' (April 2022). This student's experience illustrates that expert pastry chefs provided support and guidance, helping students endure the pressures of work and the long hours they faced. 'As mentors, we guide [students] on how to manage time and the importance of punctuality' (R4m, July 2022) and 'on how to endure the pressures of [the] work and the long hours [they] are exposed to' (R3m, July 2022). With expert support and guidance, students reported learning how to handle pressure while managing tight work schedules and long hours in the pastry kitchen. This support was perceived as a key factor in helping them develop time management skills and the ability to work under pressure, essential competences for a pastry chef.

This study highlights the significance of comprehensive support and guidance from experts in the workplace. Exposure to real-world scenarios and adequate time were essential for students' competence in WBL. Immersion in authentic workplace environments equipped them to handle professional challenges effectively in their trade.

Teamwork and collaboration were emphasised as crucial skills in the workplace, with experts playing a significant role in helping students develop these abilities over time. Participant 105 admitted struggling with this concept at the outset of their WBL, stating, 'I didn't know what it meant to be a team player' (June 2022). Similarly, Participant 110 provides an example of how mentor support and guidance enabled her to learn teamwork:

> when I was grouped in a team, I was guided on how to collaborate with others in executing tasks and how to lend a hand where it was needed… You must never underestimate collaborative work… this helped me function daily in the companionship of other chefs, and it gave me a sense of belonging… I can now interact with peers and other colleagues from diverse backgrounds. I've also learned the power of working together in executing tasks (July 2022).

Teamwork in the pastry kitchen was perceived to enhance production and allowed students to learn other competences, such as making friends, thus improving social skills (Participant 105, June 2022). Findings from this study suggest that where support and guidance are available, workplaces can facilitate the learning of the difficult-to-learn competences required for vocational practice.

In conclusion, students in the study reported that their mentors had opened possibilities they previously thought were inaccessible. For example, they were able to bake real goods served to actual clients and work in shifts alongside expert pastry chefs, experiences they had initially believed were impossible. The provision of support and guidance emphasises the significant emancipatory role of workplaces in providing students with valuable learning opportunities. For WBL to be effective, the way students are given opportunities to participate, receive guidance, and be supported greatly influences the potential for rich learning outcomes. These findings highlight that students' extensive exposure to expert support and guidance significantly enhanced their learning of technical skills and transversal abilities, boosting their confidence to execute tasks efficiently. The mentors also valued maintaining close contact with students, as it ensured that students performed their tasks correctly, knowing that experts were always nearby.

6.2.1.1.2 Mentors did not always have time to explain[2]

Interactions between students and experts occurred through everyday activities, which were often haphazard or unsystematic. Nevertheless, some instances of guided participation through these interactions were noticeable. Through such interactions, students reported learning 'better through observing their mentors and replicating their actions' (101, April 2022). Students preferred this method of learning because 'observing experts do the work motivated [them]' (108, June 2022). In this way, Watson (1980) maintained that demonstrations improve understanding, technique, and confidence. This process of learning is known as 'the way in', which refers to the period when students observe experts and attempt to imitate them. This indicates how students learned from the periphery (Lave & Wenger, 1991). However, students reported that with this method, experts did not always explain what they were doing or the reasons behind their actions.

Demonstrations and observations were found to be among the most common strategies used for skill acquisition during WBL, serving as key methods of modelling. In this study, the common forms of demonstrations were either incidental or intentional. Incidental demonstrations were informal and unstructured. In contrast, intentional demonstrations were prepared, structured, and deliberate, focusing on specific skills intended for student learning. Both types of demonstrations were recognised as conduits for acquiring tacit knowledge. What surprised me most during my fieldwork was that most demonstrations were carried out without any accompanying explanations. Describing their experience with this, Participant 110 asserts:

> most expert pastry chefs I worked with favoured using demonstrations, while I observed more than other methods. This to me was good but wasn't good enough without explanations (July 2022).

As such, students expressed concern about their understanding and mastery of skills when explanations were not provided. They believed it would be more beneficial if experts demonstrated and explained techniques while they observed. This idea is reiterated by Participant 101, who maintained, 'I learn through observing demos…but the moment explanations were not given, my mind shuts off' (April 2022). Similarly, Participant 103 states, 'I understood what they were doing once they started to explain their actions' (May 2022). It is perceived that through explanations, the expert can more specifically integrate and elaborate

[2] Participant 110, July 2022, p. 131

on knowledge in new ways, aiding the student in understanding their tacit knowledge. Participant 109 echoes this sentiment:

> I always watch experts at work as they demonstrate the tasks… they, however, seldom explain how tasks are done during these demonstrations; therefore, if one doesn't observe closely, they tend to miss out (July 2022).

Likewise, Participant 108 explains:

> experts would always demonstrate the different methods of doing work, we were expected to observe… For example, I've observed one chef knead yeast dough using his knuckles, and I've also observed him knead using the lower part of his palm… both methods made the dough elastic and developed very good gluten to assist in raising the dough, resulting in good yeast products... demonstrations went without any explaining, therefore it took me quite a long time to grasp these skills. I feel that if my mentors had explained the hows and whys, I would've grasped skills faster (June 2022).

Experts also relied on tacit knowledge for 'shortcuts, so it becomes very difficult to follow if they don't explain' (104, May 2022). Resultantly, students favoured simultaneous demonstrations and explanations in WBL as this significantly enhanced comprehension. Witnessing practical applications alongside detailed explanations provided a holistic understanding, clarifying methodologies and underlying concepts. They believed that this dual approach facilitated a quicker grasp of skills and knowledge, contributing to a more effective learning experience.

The mentors admitted to using demonstrations without explanations for the reasons outlined below. Industry experts believed that skills could be grasped through observation alone, without the need for explanations. They relied on the traditional apprenticeship method known as 'sitting by Nellie,' where apprentices were expected to watch and learn from an expert performing the job. Participant R1m confirmed this idea, stating:

> when I demonstrate, I break down tasks into subunits. I then demonstrate the skills involved in each subunit in sequence, allowing students to practice in each subunit before moving to the next (June 2022).

To mitigate the constraints of WBL, this expert suggested breaking down tasks into simpler, manageable units that students could handle individually, thus reducing the need for detailed explanations.

This notion was apparent during my fieldwork, where I observed a pastry chef demonstrating how to prepare flaky pastry to a student who keenly observed him. The chef did not speak throughout the task. Upon completion, he instructed the student to gather some ingredients and replicate the process while he moved on to the next task. I heard the student mutter: 'I wish he'd explained… I didn't understand a thing.' This demonstrated the student's desire for explanation and for tacit knowledge to be made explicit, which is challenging because tacit knowledge is rarely articulated. Conversely, Eraut (2007b) argues that tacit knowledge should always be combined with explicit knowledge for students to effectively develop occupational competence in the workplace.

Although I more commonly observed intentional demonstrations, some students reported incidental observations where they watched experts executing tasks without being aware. This reiterates the idea that 'learning in the workplace is haphazard and unsystematic'. Resultantly, students appeared to leverage these opportunities for their learning. Participant 103 maintained:

> over the shoulder of one chef, I saw him make a dough using just flour, egg yolk and sugar, and he then rolled it out… from my mind, I thought he was making biscuits, I was too inquisitive so I kept on observing only to notice later on that he was making sugar paste… a crust he was going to use for a banana flan to be served for dinner that evening (May 2022).

Correspondingly, Participant 105 reported, 'I need not an expert to call me for observation, most of the time I just find myself watching a chef execute a task' (June 2022). These remarks by students are an indication that learning in the workplace is neither structured nor planned. Because 'some of these skills are second nature to [the experts] … the only way to learn them is through observing…' (R4m, July 2022). In this way, each observation was worthwhile because every chef has a unique way of executing tasks. This significantly enhances the learning opportunities available to students, encouraging them to observe closely, as they would later need to replicate what they had observed to gain experience.

There were instances, however, where some mentors used demonstrations and explanations to help students understand how to perform tasks. Participant R5m states:

> we were always available to help students understand the use of machinery and equipment by demonstrating and explaining how they were operated… I've at several moments demonstrated to the students how to operate a dough mixer for mixing bread and use a bun divider for shaping doughnuts and other dough products, and many other

> pieces of equipment… what I mostly do is demonstrate and explain… I find they understand me better like that (July 2022).

Echoing this sentiment, Participant R2m reported their concurrent use of demonstrations and explanations, asserting that 'students learn better whenever explanations are given than when not' (June 2022). The goal of ensuring students' understanding was to maximise the effectiveness of WBL; otherwise, it would risk becoming a waste of time for them.

Students also found that this enhanced their learning, stating:

> my first time making ice cream, a pastry chef demonstrated how this was done as I observed, during the demonstration, he explained how it was made, why certain methods of mixing were done, and why the use of eggs and cream was vital… this made understanding very easy (105, June 2022)

In like manner, Participant 106 echoed:

> the demonstrations made were easy to understand and unpack if they were accompanied by explanations… I always compare the ones that come with explanations to those that are without. I grasp concepts better if concepts are explained during demonstration than if not…most of the time, the experts don't always explain (June 2022).

Similarly, Participant 107 suggested, 'I replicated a skill better if the demonstration came with an explanation' (June 2022). This approach allows students to observe both the process and the outcome of the tasks they engage in, and when explanations are provided, they develop a deeper understanding of the task. Resultantly, students can see expert actions as part of the entire task completion process if a description of how it is done is also provided.

6.2.1.1.3 I resort to asking questions[3]

Because of the rapport between the students and their mentors, the students in this study felt comfortable asking questions. Thus, a key finding in this research is that asking questions is an important 'inquisitorial engine' of learning. As illustrated above, experts were not always able to provide explanations during demonstrations, hence, the students took the initiative to ask questions whenever they felt they could. This then prompted the experts to provide some explanations, thus making WBL more explicit. Participant 110 noted, 'we had a lot to ask because when they demonstrated, they rarely explained' (July 2022). The study highlights the types of questions students asked while seeking to understand the hows and whys of various

[3] Participant 104, 12 April 2022, p. 135

tasks in the pastry kitchen. It suggests that these questions reflect students' need to grasp concepts within the pastry domain. Participants viewed this quest for understanding as a crucial component of an effective learning environment.

Students reported asking questions 'for clarification reasons' (101, April 2022) and to understand the concepts related to the competences they were learning. Although explanations were sometimes not provided, when they were, students found them too complex to understand. Their comprehension of the responses was dependent on the amount of pressure the expert was under. At other times, 'tasks [were] mostly completed too fast… experts' movements [were] too quick and [students] mostly miss[ed] out on how tasks are completed' (102, April 2022). Resultantly, as reported by Participant 104, 'I'm mostly left hanging, that's why I resort to asking questions' (May 2022). In this study, asking questions emerged as the most commonly cited WBL method, as students often missed one or more skills during observations. Participant 105 attests to this, asserting 'I understood better if all my questions were answered' (June 2022). This indicates that students understood concepts better when the tacit knowledge was verbalised.

The question-and-answer learning approach was important to students who were able to elicit explanations from their mentor through this approach (107, June 2022). When experts responded, tacit knowledge was made explicit and more accessible to students. Consequently, the successful acquisition of tacit knowledge often requires accompaniment by explicit knowledge (Billett, 2013; Eraut, 2004; Le Clus, 2011). As demonstrated in the previous section, WBL effectively incorporates both types of knowledge to build occupational competence. Participants indicated that when experts simplified their explanations, students were better able to grasp concepts more fully.

Although time constraints were a factor in whether questions could be answered, mentors confirmed, 'we allowed students to ask questions if time permitted' (R3m, July 2022). Mentors reported answering questions as accurately as possible to facilitate effective learning. Participant R2m ascertained:

> we always try to give correct answers to the best of our knowledge… but if one chef can't give answers they always refer the students to some other chefs… remember these are students, so we need to be on point with the information that we give to them because it is information that they could use to learn about pastry (June 2022).

This illustrates how expert pastry chefs assisted each other in providing students with as much accurate information as possible.

This study also highlights the importance of the relationships built between the experts and the students, which made students more comfortable interacting with industry professionals. This notion is illustrated by Participant 104, who stated;

> I became so close to all of them to the extent that I felt even comfortable asking them any questions that I might have had… I asked about what they were doing, what could have gone wrong, and how to prevent customer complaints…I asked such questions so I could attain new insights into how to execute different types of tasks and deal with difficult clients (May 2022).

Similarly, Participant 108 asserted:

> whenever I had issues, I could ask my mentor questions, and he would sit me down and explain the basics of what he was doing if he had the time to do so. If not, then he would postpone the session… he'd normally take me through the step-by-step processes of what was happening, which was useful for me to learn (June 2022).

This research clearly shows that students' positive relationships with mentors facilitated their ability to ask questions, which in turn aided their learning by clarifying intent, gathering facts, improving their grasp of principles, and elucidating the tacit organisation of the learning process. Participant 103 reflected 'I asked a lot of questions on the job, I felt lucky to be in such a space' (May 2022). Conveying their positive experiences with having access to expertise and the freedom to ask any questions they had.

The opportunity to ask questions enabled students to integrate theory with practical, real-world work. Participant 109 maintained that this integration helped them realise that their college learning complemented their WBL, asserting:

> when I asked about how to use ovens effectively during baking, to answer the question, the chef demonstrated and explained how to handle temperatures and oven shelves for different cake tin sizes… Through asking questions, I now know that if a cake is smaller, the oven shelf is higher and the temperature higher too, the opposite applies to bigger products… Once my question about oven use was answered, my baking skills improved… I had learned this theoretically in the classroom, and now here I was applying it in the workplace (July 2022).

For the most part, students were excited to realise the practical application of their college learning, providing them with a better understanding of theoretical concepts. As noted by Participant 110, 'once my question on oven use, which we had covered theoretically at college, was answered, my baking skills improved' (July 2022). These responses highlight the importance of systematic instruction in propositional knowledge before practice, as students reported a better understanding of their tasks due to the theoretical knowledge they gained in the classroom. More precisely, theory and practice should be seen as indivisible elements within the greater domain of vocational learning and should be taught as such. For students to learn effectively in the workplace, vocational programmes could be designed to face both ways; that is, towards the non-empirical world of ideas and concepts and the empirical world of practice and experience.

Participant R4m indicated that questions were asked even when the students were busy with tasks, 'they always asked me what the next step to take' (July 2022). The mentor emphasised that he did not want students to rely on a standardised approach. Instead, he encouraged them to carefully consider each dish and make thoughtful decisions about how to prepare and decorate it. Another participant reiterated this idea, stating that 'every dish is different and so there are different methods of making it' (July 2022). As such, this mentor reported answering questions by telling students to make their own decisions regarding the making, plating, and decorating of dishes.

Students reported asking questions to acquire new information, which exposed them to new ideas and new perspectives. Participant 106 reflected, 'we appreciate how our questions are tackled' (June 2022). Some mentors were reported to verbally respond to questions, while others used slower demonstrations when time permitted. This was evident during my fieldwork, where a student asked a chef why yeast dough needed vigorous kneading as compared to scone dough. The chef outlined the reasons and then illustrated by kneading the two doughs, and the two products were baked and compared. The scone was lighter, softer and fluffier while the yeast product was more elastic. The chef further explained that 'the differences in the two products emanated from the different amount of gluten required in the two products, and from the type of flour that [they] used' (R5m, June 2022).

I also observed another chef illustrating the difference between bread rolls that had been proved once and those proved twice following a question about this. Participant R1m maintained that

they ‘sometimes responded to questions through modelling, it made their understanding even better’ (June 2022). Consequently, students in WBL are often exposed to both practical knowledge and explicit knowledge through chefs’ demonstrations and explanations. Participant R3m demonstrates this idea, stating:

> we always try our best to answer the students’ questions… sometimes we explain to them, but some chefs prefer to answer by demonstrating and showing different processes and products to students… sometimes how much information we give depends on how much time we have in our hands… we are always busy with production (July 2022).

Although students appreciated these responses, they reported that most of the time these responses were rushed due to time constraints, thus disadvantaging the student.

However, in the knowledge economy, information is always at the disposal of students if they are keen to learn. Therefore, whenever the experts were unavailable, students reported using the internet for information. As noted by Participant 110, ‘I did further research using the internet if I felt that my questions were not fully answered’ (July 2022). However, relying on this resource may have limited opportunities for real human interaction.

To conclude, although experts were reported to be busy, they availed themselves to answer questions from students. This study shows that students were satisfied when their questions were explicitly addressed. Although some experts were perceived to provide poor explanations, they used demonstrations to answer students’ questions. By so doing, the workplace exposed students to both tacit and explicit knowledge which the students valued as assisting them in understanding concepts.

6.2.1.1.4 …prompt feedback was always given when it came to WBL[4]

Experts in the workplace were deemed to possess expertise and experience and were thus ideally placed to support students’ learning in the workplace. Students, on the other hand, appeared to value and appreciate the opportunity to learn from the feedback given by expert pastry chefs. Providing feedback was reported as an integral part of the WBL process as it was regarded to improve student confidence and motivation to learn. For this study, feedback emerged as information provided by an expert about aspects of students’ performance or

[4] Participant 106, 04 June 2022, p. 139

comprehension. It was the expert's response to a student's actions that aimed to engage, inform, and enhance knowledge and skill acquisition by addressing gaps between current understanding, performance, and the desired goal. Experts provided different forms of feedback to students to enhance learning. Feedback provided was sometimes implicit in the form of:

- a pat on the back
- a tick in the box.

Sometimes feedback was explicit as it came in the form of:

- complementing work completed by the students
- commenting on their work.

Students reported that the feedback was both negative and positive. Negative feedback, however, was unpopular as it sometimes created animosity between mentors and students. Students reported an appreciation of instant rather than delayed feedback. Regardless of how it was presented, most students reported reflecting on their feedback and accepting it as suggestions for improvement.

The frequency of feedback varied among the students as mentors were preoccupied with their primary roles as pastry chefs. Participant 103 asserted:

> 'although I had just started in the pastry kitchen, getting feedback from experts had helped me improve my baking skills and I wish all students could take feedback from their mentors kindly and seriously' (May 2022).

He acknowledges that the critique he received helped him improve, which subsequently helped him learn. Likewise, Participant 106 maintained 'prompt feedback was always given when it came to WBL, …we are mostly given feedback as we accomplish tasks' (June 2022). As such, students valued the feedback that they received from their mentors.

Students occasionally reported receiving negative feedback reflecting that it demotivated them. They expressed that 'the chefs enjoyed shouting' (103, May 2022) and that 'yelling instilled some form of fear in [them], impeding [their] ability to learn…' (103, May 2022). Similarly, reflecting on the impact of negative feedback, Participant 108 states:

> we liked the feedback that we received from the experts… however, at times the feedback we received as students was so negative and discouraging, that it drew us further apart from them (June 2022).

Students reported that ‘getting negative feedback was so disheartening’ (106, June 2022) and that ‘sometimes [they] even felt like shouting back’ (105, June 2022). Students expressed displeasure at being shouted at when they made errors and noted that ‘mentors could have made a lot of difference in [their] learning if they controlled their tempers’ (104, May 2022). This demonstrates that mentors can model diligence and friendliness in the manner in which they communicate feedback, highlighting that WBL relies on social and cultural practices. (Lave & Wenger, 1991, p. 22).

Although mentors often had limited time to provide feedback, those who did offer it did so while students were performing tasks and upon their completion. Participant 110 comments on how feedback was communicated, asserting:

> immediate feedback was given in the form of a pat on my back during and after the completion of tasks if I did well… and sometimes it came in the form of compliments… if I didn’t do well they’d explain where I’d have gone wrong… sometimes they’d even demonstrate the tasks again to ensure I got it right (July 2022).

Feedback provided during and upon completion of a task was reported to reinforce knowledge and concretising skills by promptly correcting mistakes, affirming competence, or debunking misconceptions. Students reported appreciating ‘feedback… received on an ongoing basis’ (104, May 2022). During visits, I saw some chefs patting students on their backs and saying, ‘good work’. I also heard verbal comments such as ‘it would have been better if’. At times, mentors took over from the students and demonstrated how the task should have been performed. Participant 106 reflected that ‘the more frequently and consistently feedback is provided, the better’ (June 2022), demonstrating their appreciation of the feedback they received.

When learning is followed up with immediate feedback, it allows students to pause, engage, and modify their actions to improve performance. According to this study, feedback that was provided instantly as opposed to periodically made WBL an active rather than a passive experience. This is reflected by Participant 103, who felt that ‘instant feedback provided immediate outcomes’ (May 2022). This feedback, as expressed by a mentor, was intended to help alleviate pressures and constraints on the mentor-student relationship, as it allowed for open interactions, and highlighted the strengths and weaknesses of student performance, enhancing the learning experience.

Participant 107 reported;

> each time I completed a task, the mentor gave me feedback, and if I was found to be competent, he signed off my task book… this has helped me build confidence and motivated me to work towards achieving my next goal… most skills are easy to grasp if you get feedback, negative or positive alike (June 2022).

This example indicates that feedback in the workplace is not always informal, formalised by the task book which acted as formative feedback on student performance in specified pastry activities that were also outlined on the Quality Council for Trades and Occupations evaluation sheet. Participant R2m maintains that they 'sign off [student's] task books once they can complete a task' (June 2022). Students reported gaining confidence and feeling empowered to work on the task independently once their task books were completed and signed off by the mentors. Participant 107 reflects on this notion stating that 'after signing off, he lets me fly away' (June 2022). This temporary assistance offered by the expert is aligned with Vygotsky's (1978) notion of scaffolding during mimicking and practice.

Expert support faded away once the students' task books were signed off and they were left to progress independently in that task. This process demonstrates how the student moved from the periphery of the community to its core, in a process termed legitimate peripheral participation (Lave & Wenger, 1991; Wenger, 1998). In this respect, the student became more active and engaged, thereby assuming the role of an expert in that task. As such, the formal feedback process boosts students' confidence enabling them to complete tasks independently.

In summary, different forms of feedback provided to students were regarded as critical to WBL as they helped the development of competence. Although sometimes mentors gave negative feedback; they primarily gave instant, clear and quality feedback which was found to reduce student uncertainty and encourage increased effort in their learning.

6.2.1.2 What did students learn through the expert in the workplace?

The mentors in the study perceived that for the students to be successful pastry chefs, they needed to possess transversal abilities such as communication skills, teamwork, problem-solving abilities, interpersonal skills, time-management skills and many others. The dominant discourse that arises from the skills debate within the hospitality industry is that transversal skills are necessary for employability in the industry. Marneros et al.(2020) argue that individuals require a broad range of these abilities to contribute to a modern economy and to

take their place in the technological society of the current age of globalisation. Marneros et al. (2020) refer to these abilities as 'generic skills'. For the sake of this study, I have used both words interchangeably as I could not find any differences in meaning between them. In addition to learning transferable skills, the students had access to the experts' tacit knowledge which they learned through demonstrations, observations, mimicking, explanations, and question and answer sessions.

6.2.1.2.1 I learned to communicate by interacting with experts[5]

Students' engagement, participation, and interactions with experts in real work environments were reported to assist students with developing communication skills. By engaging with experts, students could observe and replicate communication with colleagues and clients. Participant 107 reported 'my communication skills were poor at inception, I couldn't use gestures, wasn't able to greet clients politely, and wasn't aware that effective communication was essential' (June 2022). Similarly, Participant 103 expressed 'I used to be bad when it came to communicating with clients…I learned to communicate by interacting with experts' (May 2022). While this skill was not emphasised in the classroom it emerges as vital in the industry. A mentor reiterated the importance of developing communication skills, Participant R1m stated:

> luckily for the students, the workplace is one of the best places where communication skills can be learned… they work with us daily, and we demonstrate these skills as we navigate through our daily activities in the workplace… they have the opportunity to observe and learn from us (June 2022).

The mentors described how they modelled these skills for the students to observe and because students desired to identify with the experts, they mimicked them while mentors observed and provided feedback. Participant 101 maintained 'I want to be like them on completion of my training… so I do as they do' (April 2022). In a similar vein, Participant 109 stated:

> for one to be able to identify as a pastry chef, one needs to be equipped with a set of skills that only identify with them, more especially good communication skills… I've managed to blend in so well... the way I speak to clients is improving too… I've learned many such skills through observing and imitating the experts… I've even made friends with some of them (July 2022).

[5] Participant 103, 25 May 2022, p. 142

In WBL, students develop communication skills through their interactions with others. At the outset, students lack confidence because they don't know how to relate with clients and other workers (106, June 2022). Through the exposure, interactions and engagement students have with experts they learn to communicate efficiently with clients thereby improving their social skills as well (107, June 2022). Given their contact with clients, communication skills are crucial for pastry chefs. These skills help build rapport, resolve conflicts, and create a positive guest experience, which encourages repeat business.

Participant R3m notes that at inception 'most students were shy and couldn't communicate efficiently… most of them have improved a lot now, especially those who've been here for more than 6 months' (July 2022). This finding suggests that over time, students who engage in WBL opportunities significantly improve their competence due to prolonged exposure and interactions with experts.

6.2.1.2.2 We always work together in teams[6]

Teamwork is vital to the success of the hospitality industry because everyone comes with unique talents and skills. When these are combined and shared towards a common goal, it can provide establishments with a significant competitive advantage. Students expressed how working with other chefs helped them learn to work in teams. This helped them develop other skills and attributes such as communicating with and having respect for others. Participant 109 reported 'I've grasped some teamwork skills from experts through working in teams' (July 2022) while Participant 105 stated 'they grouped us into teams so we could work together for projects…this helped me learn to work with other people and in teams' (105, June 2022). The mentors substantiated putting students into teams, stating 'we always make them a part of the team; they pick up one thing or two from such teamwork' (R2m, June 2022). The students also reported that teamwork helped them make friends while at work. They confirmed learning from these social relationships and enjoyed working together. This is evident from Participant 108's reflection:

> during high production periods, we were made to work in teams together with other pastry chefs… the supervisor normally divided us into groups according to what pastry dishes we were making on the day… this has inculcated in me the ability to work in teams… I've learned to appreciate other people and the skills that they bring to the

[6] Participant 103, 25 May 2022, p. 144

> workplace and my learning… through these teams, I've also managed to make friends who even help me with personal problems (June 2022).

This enhances the nature of work in the pastry kitchen which requires the pastry chefs to work positively and cooperatively.

The students reported that the head chef emphasised a particular approach to teamwork, as this allowed the employees to share the fun aspect of their work. This sense of fun and camaraderie within the team was evident in the comments such as, 'I loved and enjoyed doing my work so much more so because we always work together in teams' (103, May 2022) made by participants during the interviews. This was also evident in how participants related to one another during my fieldwork. On two occasions, I arrived at the site early in time for breakfast service, during this time, I observed how students blended and coordinated with their colleagues. They looked like they were part of a team. One student watched over the buffet table to ensure that pastry dishes did not run out, another student was readily available at the tables to assist clients while the other chefs prepared more dishes to keep a constant supply for this service. As indicated by the mentors, teamwork was an important skill because it was regarded by the establishment as a key method in increasing production in the pastry kitchen.

6.2.1.2.3 We learned to keep ourselves and others safe[7]

Students in the study reported being exposed to high-performance work practices demonstrated by workplace experts. These practices as perceived by the students helped them learn skills that simulation rooms could not expose them to. This study refers to high-performance work practices as a set of specific work systems in place within the organisation in the study. Examples of such work systems are rules, policies and principles that keep the business running, such as following correct storage temperatures for food and adhering to proper cooking temperatures and hygiene rules and regulations. These, according to the mentors involve handling, preparing and storing food in a manner that best reduces the risk of clients falling ill from food-borne diseases. They also indicated that all the kitchen employees, including students in training, were expected to follow food safety principles to prevent food contamination and causing food poisoning. This principle is most important in the industry as exemplified by Participant R4m who states 'we instill this skill in students because we don't want our clients to fall sick' (July 2022).

[7] Participant 101, 11 April 2022, p.148

The students reported that experts enforced a high standard of performance so the business could remain competitive. Participant R1m, a mentor, maintains that they 'still expect students to be perfect at what they do to keep the business afloat' (June 2022). Students were expected 'to execute their tasks with precision' (103, May 2022). While it is important to deliver food timeously, the importance of food safety and sanitation cannot be undermined. This was reflected by Participant R5m:

> the correct practice of food safety and sanitation greatly improves efficiency, keeps productivity up, workers safe and client confidence high, as well as meeting or surpassing standards and thus avoiding untoward incidents such as having not only non-compliance fines or a potential shutdown (July 2022).

Despite hosting the WBL programme, the business still needed to maintain a high standard to serve the clients who expected the best service for their money. The business relied on repeat patronage, so it was crucial to maintain strict food safety and sanitation standards at all times.

The students expressed that working to perfection made the WBL process difficult. This is illustrated by Participant 109 who stated:

> we learned the hard way in the workplace, so much care was emphasised when it came to food safety, hygiene and sanitation… it had to be done to perfection with little room allowed for errors because even if we were students our products and services were served to real customers (July 2022).

Similarly, commenting on the focus on maintaining cleanliness, Participant 105 asserted:

> my mentor expected me to work to certain quality standards when it came to kitchen cleanliness because all the work I did always reflected on them, thus they watched over me closely such that I was made to repeat cleaning tasks if not done properly…this instilled in me the skill of perfection (June 2022).

In like manner, Participant 104 ascertained:

> the chefs aimed for very high-quality standards themselves, so they expected me to follow suit... It is normally expected of anyone in the hospitality industry to do a good job… this is because competition is too high, if a client isn't happy they'll go elsewhere for the same product, meaning loss of profit, which translates to a loss of business (May 2022).

Correspondingly, commenting on cleanliness practices, Participant 108 stated:

> the pastry chefs were very sensitive and serious about the cleanliness of the area we work from and the machinery that we use, if a spot was missed they normally sent me back to repeat the cleaning process…it made the whole learning process awkward (June 2022).

Cleanliness is fundamental in the hospitality industry, ensuring the safety and well-being of both staff and clients. Consequently, all tasks relating to food safety, hygiene, and sanitation, whether performed by students or by the chefs themselves, are required to be completed with precision to avoid any comebacks and costly mistakes.

One of the most critical factors students reported learning in the pastry kitchen was the importance of temperature control in preventing the growth of pathogens in food. This is exemplified in the words of Participant 107 who maintains that 'for safety, perishable foods must be held at cold temperatures' (June 2022). Bacteria, like other microorganisms, grow slowly at low temperatures, multiply fast in mid-range temperatures, and are killed at high temperatures. Students reported learning the importance of correct storage and cooking temperatures, ensuring that ingredients are kept for longer and dishes are cooked through from the inside out. They maintained that this helped to prevent the growth of food-poisoning bacteria like salmonella and staphylococci. This is reflected by Participant 103 who maintains that they 'learned to fight against microbial organisms that cause food poisoning' (May 2022). Because the pastry kitchen uses highly perishable ingredients that are susceptible to bacteria, students were taught proper handling techniques from the moment of receiving to storage, and throughout food production. Participant 107's experience exemplifies this notion:

> I've learned that most ingredients used for making desserts were highly perishable, for example, milk, eggs, and cream… when receiving these from the supplier we ensured they were delivered at a temperature of below 7℃, and we immediately stored them at 5℃… and were cooked at temperatures above 75℃, a temperature high enough to kill harmful bacteria (June 2022).

This is an important principle that should be followed in every kitchen and as suggested by Participant R2m, 'making pastry is not all about serving baked products and desserts, but about their safety as well' (June 2022). In like manner, Participant 107 reported how his mentor emphasised hygiene and safety during food production:

> my mentor always told me that hygiene and safety came first… he said that the client wasn't supposed to fall sick from the food coming from our kitchen… I've learned a

> lot about the storage temperatures for the food items that we use, more especially for perishable goods... and about the temperatures used during cooking (June 2022).

Food-borne illnesses can be fatal, resulting in the closure of businesses that do not follow regulations. Restaurant inspectors ensure that eateries comply with sanitation compliance, food storage practices and food handling compliance so that the food that they serve is safe for human consumption.

While the primary goal of restaurants is to provide delicious meals to guests, they must also ensure that their dishes are safe for consumption. Besides emphasis on storage and cooking temperatures, serving temperatures were reported to be important if food poisoning was to be kept at bay. Students reported learning to serve and present food at temperatures that inhibit the growth of bacteria, stating 'I now have an understanding of the essentials of serving food temperatures to protect clients' (104, May 2022). Food should neither be too hot to consume nor too cool to the point where disease-causing bacteria are likely to grow. The mentors 'emphasised to the students to serve hot food hot and cold food' (R3m, May 2022) to ensure that their restaurants would serve food safely and protect guests' well-being. Participant 105 explained:

> every dish I make is supposed to be finished at a high standard. My mentor always urges me to watch the serving temperatures for every dessert; cold ones like cheesecake were served cold at 5℃, hot ones such as malva pudding at 65℃ and frozen ones like ice cream at -18℃… they don't expect the customer to complain over our products and the service we provide, therefore, my mentor ensures that I complete all the tasks well and perfectly (June 2022).

The students learned to use warming appliances, such as bain-maries, slow cookers or warming trays to maintain hot temperatures. For cold desserts, such as cheesecake, they were taught to present chilled on a bed of ice to help delay the food from warming up and reaching the temperature danger zone temperature of between 6℃ and 60℃.

Personal hygiene which involves the fundamental practices of cleaning, grooming, and caring for one's body is crucial for every food handler. Kitchen staff are required to maintain personal hygiene to prevent the spread of bacteria and disease and reduce their exposure to chemicals and contaminants that could cause illnesses. The first principle that students reported learning was using personal protective equipment (PPE) to prevent exposure by forming a barrier over the skin. This equipment is worn in the kitchen to minimise exposure to hazards that cause

serious kitchen injuries and illnesses. These injuries and illnesses may result from contact with hot items, chemicals, electrical, mechanical, and other kitchen hazards.

The kitchen PPE is the chef's uniform, important as it 'protects [staff] against injuries and contaminants in the kitchen …We learned to keep ourselves and others safe' (101, April 2022). Students were required to change into a clean set of PPE before each shift, and to replace it with clean PPE should it become too soiled during a shift. The students also learned why PPE must be kept clean at all times (108, June 2022).

Students also learned the importance of hand washing, learning how to wash and scrub their hands with clean water and soap to remove bacteria and other contaminants to prevent cross-contamination which can cause illnesses. Participant 102 emphasised that mentors 'were strict about how [they] washed [their] hands' (April 2022). This study found that hand washing was done before and after using the restroom and before or after every process in food production in the kitchen as reported by Participant 104:

> as part of the kitchen personnel, we are expected to wash our hands before, during, and after food preparation and before we take breaks to eat, drink, or smoke… to control the spread of germs that can cause flu and the common cold, we are told to wash our hands whenever we cough, sneeze, or blow our noses… our mentors always supervised that this rule was followed (May 2022).

The mentors also emphasised the proper washing of hands to prevent the transfer of bacteria to other surfaces such as table tops, equipment and food.

In addition to learning about food safety, hygiene and sanitation, this research also found that the workplace ensured that students received first aid training during WBL to prepare them for emergencies that could arise in the pastry kitchen. First aid was reported to focus on the student's ability to respond to remote urgent crises and resolve them immediately. Participant 101 maintains that they received first aid training during their first week (May 2022). According to the students, first aid training prepared them for a variety of situations and gave them the confidence, knowledge, and skills to manage various incidents quickly, correctly, and efficiently.

The pastry kitchen utilises hot and hazardous equipment that can potentially cause injuries, such as ovens, slicers, knives, and mixers. The first thing learned during first aid training was

to ensure that their safety is a priority. Students became more aware and alert to potential hazards posed by the pastry kitchen environment, noting that 'keeping yourself safe isn't being selfish, it's being practical' (R1m, June 2022). By maintaining safety, food handlers not only protect themselves but also contribute to a safer work environment, reducing the risk of accidents that could lead to temporary or permanent disabilities and potentially saving the company from costly liabilities. Students like any other chef were expected to manage mishaps that occurred in the kitchen.

To conclude, this study shows the competences that students learned through their access to experts in the workplace. The students reported learning to follow high-performance work practices, primarily aspects of hygiene rules, safety and sanitation and were required to comply with these in the pastry kitchen. These included complying with food storage, cooking and serving temperatures for desserts to ensure that the food served is safe for human consumption. First aid training was provided for students to help save themselves and others. This research also found that students learned how to maintain clean kitchen surfaces and equipment and the importance of washing their hands appropriately using clean water and soap. These aspects were instilled into the students by experts.

6.2.1.3 The Challenges in Work-Based Learning: Mentor-Student Dynamics

Conversely, some feedback from students highlighted frustrations regarding their relationships with mentors. Students felt that mentors and other experts did not devote enough time to them even though WBL occurred predominantly through interaction and engagement with and through experts. The main challenge in the student-to-expert learning scenario was the production pressures of the real work environment. Mentors were often constrained by their production schedules and the need to meet profit targets, which limited the quality of learning that students could receive. As Participant 108 noted 'the mentors and expert chefs are not always available… therefore very little learning takes place' (June 2022). Students reported that mentors were frequently preoccupied with their daily tasks, particularly on days when the establishment hosted functions. The intensity of the production schedules sometimes led to students being overlooked during their WBL experiences.

Due to these constraints, students reported being assigned what they described as menial tasks within the pastry kitchen. Participant 105 recounted:

> if the hotel is busy they send us to the scullery to wash dishes all day because they don't have time for us… this happens so often because of the number of functions that are held on-site… it's a disadvantage if such happens because we don't get to learn much of the important things we are supposed to do (June 2022).

Participant 107 echoed similar concerns, noting that while learning primarily came from interaction with experts, the mentors' busy production schedules often led to students spending time scrubbing floors and organising storeroom shelves (June 2022). Mentors themselves admitted that they were sometimes too busy with production and that their heavy workloads sometimes impeded their ability to fully assist students in their learning. As Participant R1m explained:

> we're frequently too busy to be helping and guiding the students… besides production for the demanding client, we do a lot of administration duties like buying and the operation of new software and applications that we sometimes struggle with as they're changed more often… we, therefore, make students do chores that don't require our attention like washing dishes to keep them occupied (May 2022).

To avoid downtime, experts assigned students cleaning tasks that needed minimal supervision, only returning to more direct instructional roles when the kitchen was less busy. Students perceived these busy schedules as a significant limitation to their WBL experience. Some mentors believed that the workplace was primarily a site for productivity rather than for learning, due to their continual preoccupation with operational tasks.

An intriguing observation emerged regarding the experts' strategic focus on their production schedules. This emphasis serves a dual purpose: first, to ensure customer satisfaction and encourage repeat business in the highly competitive industry, and second, to maintain employment stability by adhering to strict schedules, which is crucial for job retention within the industry. This finding highlights a broader issue within the industry—namely, a lack of appreciation for the value of WBL. Mentors often prioritised their production schedules over the needs of students, revealing a perceived lack of commitment to the significance of WBL. This prioritisation undermines the value of WBL for students and diminishes its overall impact.

On a particularly busy day, during my fieldwork, I observed that new students in WBL were assigned tasks such as scrubbing floors, washing dishes and rearranging storeroom shelves, while the experienced pastry chefs and older students focused on actual pastry work. When I inquired about this, Participant R3m explained 'we are busy today, so we don't have time for

students' (July 2022). Additionally, I saw students completing the written requirements of their task books during working hours, time that could have been better spent on pastry-related tasks and activities to learn. Participant 101 remarked, 'we at times get to complete our task books when the mentors are not available' (May 2022). Ideally, students could have completed their task books during lunch breaks or after hours and submitted them to mentors the next day. Using work hours to complete task books seemed like an inefficient use of time that could have been more effectively spent on learning. Instead, mentors could have allowed students to observe their work, providing a valuable learning opportunity when direct guidance was unavailable.

There were instances when the workplace appeared to undervalue students' learning experiences by assigning them to tasks deemed easy and requiring minimal oversight. These tasks often did not provide opportunities for meaningful mentoring or skill development, reflecting a lack of serious engagement with students' educational needs. This was expressed by Participant 103:

> they regarded us as cheap labour, and they made us do what they called easy tasks, tasks that didn't help us build skills as pastry chefs… they made us grease baking sheets and pans, and clean machinery that they'd have used for the day… when we asked to do jobs that relate to baking and other pastry related technical chores, they told us they didn't have the time to take us through such difficult and complex tasks because they had no time for that (May 2022).

Even when experts were not busy, they would assign tasks that did not need their mentorship and direct guidance. These sentiments were supported by Participant 108 who maintained:

> we are at times made to do easy tasks… for example, greasing all the baking tins that were required during preparation time, I watched the ovens to ensure the products that were being baked didn't burn… during service time I became the watchman on the buffet tables, I replenished when dishes ran out… yeah on such days I'd say that there isn't much learning for me (June 2022).

Students felt that these tasks did not contribute to developing the occupational competence required of a pastry chef. Instead, these tasks were irrelevant as compared to the requirements outlined in their task books.

It emerged that expert pastry chefs often showed reluctance in actively supporting students' learning, leading to students being assigned repetitive tasks unrelated to their future roles. This

dynamic suggested a perceived animosity between experts and students, with experts fearing that empowering students might threaten their positions. Such an attitude, viewing students merely as runners rather than integral participants, hindered effective WBL and obstructed the reproduction of expertise within the profession. This presents a significant challenge to the effectiveness of WBL initiatives.

In addition to the previously discussed dilemma where most experts preferred using demonstrations over explanations, Participant 110 explained that experts 'couldn't explain because of what seemed to have been language barriers' (July 2022). This challenge was also expressed by Participant R2m who explained that 'most chefs here are trained on the job; they didn't go to college or university, so they lack the theory for explanations' (June 2022).

On the other hand, it was reported that some mentors possessed poor communication skills. This was noted by Participant 108 who stated 'some of the mentors we got have difficulties explaining, and their communication skills are poor and so couldn't express themselves' (June 2022). Some chefs were unwilling to explain concepts to students due to their attitudes and because they perceived it to be a waste of their time, as expressed by Participant 106:

> I've noticed that some experts have an attitude towards students as they feel we waste most of their time… so they would rather keep working without explaining to us…we are made to watch very closely lest we lose out… one chef at work told me that if a chef doesn't want to talk to you then you must just stand there and watch them work, that way you also get to learn a thing or two (June 2022).

Some experts did not appear to be willing to assist students with their WBL, and students opted to learn by observing experts who were engaged in their daily tasks, which they found difficult.

During my observation, I noted an expert in 'transmission mode', with minimal student interaction. This expert appeared to be in a hurry to complete a task and move on to the next one. The student could not ask questions although it was evident that he did not understand what the mentor was doing or what was required of them. This participant noted 'the task was completed too quickly, no explanation was made, I didn't understand a thing' (104, May 2022). According to Lave and Wenger (1991), WBL depends on the quality of engagements and interactions between the master and the novice. A lack thereof renders WBL ineffective and meaningless.

A trend in the data confirms that students gained significant learning from expert pastry chefs during their WBL experiences. However, like any other learning institution, there was unintended participation and unintentional learning in the WBL environment, which did not always lead to desirable outcomes. Reportedly, students also learned negative things from the experts. These included, among others, bad practices, disadvantages of the field, and how to shirk their duties. Participant 109 recognised that 'in the workplace, we also learned a lot of bad practices that are difficult for me to say' (July 2022). Students also stated that they gained insights into 'company politics' which was not always pleasant. It is important to recognise that WBL may not only involve positive aspects but can also reinforce existing negative features of the workplace.

According to the data, mentors provided students only with information they considered pertinent. They withheld certain details due to students' limited knowledge and experience, as some of the information was too technical for them to understand. Participant R3m suggested that 'it's not all the information that we can share with students, we protect our trade… sometimes we do it so that students understand better, some info is too complicated' (July 2022). In this way, they selectively share information deemed pertinent to ensure efficient learning. They focus on the relevant details, thus, streamlining the acquisition of essential skills, preventing information overload and allowing students to grasp key concepts for practical application in the workplace, thereby, enhancing the overall effectiveness of their learning experience. Participant R4m divulged 'we can't explain everything to students, withholding information is one strategy we use to preserve status in the relationship between ourselves and the students' (July 2022). The relationship between students and experts appeared to be socially determined, which influenced both the type of knowledge and skills shared and how they were communicated. Pastry chefs withheld proprietary recipes, advanced techniques, and industry insights to maintain their status and perceived expertise in the eyes of students.

In summary, a recurring issue was that expert pastry chefs were often too busy to provide effective learning support, leaving students feeling abandoned and powerless, and hesitant to seek help or clarification. Additionally, poor communication was common among mentors who, due to a lack of confidence and low self-esteem, struggled to explain concepts even when demonstrating tacit knowledge. It became evident that students understood concepts better when tacit knowledge was complemented by explicit explanations. The next section will detail

how learning occurred and what students gained from their experiences in the community of practice.

6.2.2 Learning in Communities of Practice

As indicated in Chapter Four, a community of practice is defined as a group of individuals who collaborate and support each other in their journey to acquire and deepen their knowledge. Wenger (1998) points out that knowledge is not only based on interest or geographical area but on practice. 'Practice' in this sense refers to group activities in which individuals with similar interests can take part (Wenger, 1998). By getting involved in a practising community, one can develop their practice by sharing experiences, knowledge, and ideas with others involved in the same pursuit. In this study, pastry chefs in a community of practice interacted and learned together regularly. Students in this research formed part of this community of social practitioners albeit with a peripheral role. In this research, the term community of practice denotes this group of pastry chefs who learned as a collective. Additionally, they used the same pastry-related jargon, interacted frequently, and used the same tools of the trade. This is different from learning through the expert, where learning was primarily between the student and the expert.

Knowledge within the community appeared to advance through both informal and formal exchanges of emerging ideas, which were collectively refined until they were institutionalised as new products, services, processes, and practices. These dynamics align with Wenger's (1998) characteristics of communities of practice. Students, who had legitimate access to this community, reported acquiring significant knowledge through active participation and interactions with members possessing varying levels of expertise. According to Wenger (1998), participation encompasses a complex integration of doing, talking, thinking, feeling, and belonging. In this context, students engaged in a continuous and immersive relationship with the chefs and their activities. This extended involvement allowed them to gain and benefit from a rich repository of knowledge and skills within this community of practice.

The following section focused on how learning took place and what students learned through the community of practice. Students reported being part of collective gatherings where the community came together to share some knowledge on new developments in the trade, brainstormed solutions to problems, tested new techniques for new recipes on the menu, and

assisted one another in refining old techniques. According to the data, some meetings such as training sessions were formal and were held:

- during less busy hours
- during lunch breaks
- before and after a shift
- during formal training gatherings (on-site and off-site).

Others were less formal, such as those held as impromptu meetings as the community worked. Although learning in this community of practice was intended for the entire community, in this study, I only focused on the students' learning.

6.2.2.1 How students learned about pastry through the community of practice

In this community, individuals with varying levels of knowledge and experience collaborate, share, and learn together, effectively integrating everyone's abilities. Participation in this community provided students with access to a diverse range of expertise, aiding them in overcoming technical challenges, driving continuous improvement, and adapting to the trade. Knowledge transfer occurs through demonstrations, explanations, and the practical application of skills, as well as through dialogue and discussions among members.

Initially, as newcomers to the workplace, students began on the periphery. Over time, they progressed to active involvement in professional activities. This transition involved observing, listening, asking questions, mimicking, and practising mastering competence. Below, I detail how students were incorporated into the practice and how information was shared to facilitate their learning.

6.2.2.1.1 … we were accepted members of the group[8]

The workplace emerged as a blend of supportive and constraining factors that together fostered a WBL culture. Students learned through active participation, involving mutual engagement and social interactions within the community of practice, utilising various media. The pastry kitchen environment was characterised by collaboration among supervisors, expert pastry chefs, newly employed pastry chefs, and students. Together, they formed what can be regarded as a community of practice.

[8] Participant 108, 10 June 2022, p. 156

In this community, participants, regardless of their level of expertise, engaged in collective learning within the shared domain of pastry, aiming to enhance their performance. While students reported significant learning from the expert pastry chefs, the data also highlighted that they frequently learned through regular interactions and knowledge-sharing gatherings with the broader community of pastry chefs.

Both mentors and students highlighted how students were welcomed into the community of pastry chefs, a process reflecting what Lave and Wenger (1991) described as legitimate peripheral participation. Students were granted legitimate access to the community, gaining full membership while still learning to become fully integrated participants. This form of participation provided students with the confidence that they could engage within the community, albeit in a peripheral role. Participant 108 noted, 'we were accepted members of the group; thus, we knew we could attend any meetings that they called' (June 2022).

Being part of the community also allowed students to share their own experiences within the pastry kitchen. As Participant R1m stated, 'we always made the students a part of us; they learned better through the interactions we had together' (June 2022). Students appreciated this inclusion, feeling that their ideas were valued and that they could contribute meaningfully. This was reflected by Participant 110, 'they allowed us to vocalise the experiences we had attained thus far from the pastry kitchen'

Similarly, Participant R5m acknowledged, 'students' contributions were considered and valued; they also helped us to grow and learn' (July 2022). Involving students in this way fostered a sense of common ground and identity within the community, as expressed by Participant 108:

> …the community embraced us seamlessly and made us a part of them, I and the other students were encultured to the pastry kitchen's practices and they fostered the growth of our knowledge and skills as we participated within the community… they accepted our contributions even if we were just students, it made learning so much easier… none of us complained about being left out… we felt so much at home because we felt we belonged with them (June 2022).

The group of pastry chefs effectively integrated students into their practice, facilitating their growth in occupational competence. Students, along with the rest of the community, engaged in collaborative activities and discussions and became actively involved in the latest

developments within their field. This engagement allowed students to contribute to innovations in the pastry kitchen. Participant 103 remarked, 'the group of pastry chefs has contributed to building meaningful social connections with us…they were so accommodating' (May 2022). The community inspired students to contribute and participate by guiding and supporting their learning, fully embracing them into the practice of pastry chefs. Students conveyed a sense that the workplace valued them for both who they were and who they aspired to become.

6.2.2.1.2 The group collectively brainstormed problems to find solutions[9]

According to reports, the pastry kitchen encountered problems that had to be solved amicably so the community could succeed in its practice. Resultantly, they frequently came together during less busy hours to brainstorm solutions for both client- and technical-related issues that arose during food preparation and service. Participant 104 noted:

> we came together during less busy hours to brainstorm on problems faced during production… we would come up with solutions together... the problems were put up with the group first, written out on a board, why they happened, how to solve them, and what must be done so that they don't happen again. …we solved problems collectively, and everyone gave input (May 2022).

Likewise, Participant 108 asserted:

> when the kitchen was less busy, they'd call us together because we sometimes needed to brainstorm and see how best to solve some of the problems that we as a group encountered during food preparation and/or service (June 2022).

According to the study, students also participated in brainstorming sessions where they reported gaining skills in problem-solving. Participant 106 remarked, 'they made us a part of the group, they made us contribute during these sessions even with the little experience, I learned from that' (June 2022).

The community of pastry chefs often united to address problems that individuals could not resolve alone, aiming to enhance their operations. They would sometimes dramatise scenarios to facilitate understanding and then brainstorm solutions together. As Participant 109 noted 'at times scenarios were dramatised making it easy to understand, the group collectively brainstormed problems to come up with solutions' (July 2022). Students reported that paying close attention during the modelling sessions significantly enhanced their understanding.

[9] Participant 109, 04 July 2022, p. 157

Following brainstorming sessions, the community made a concerted effort to compile and document the strategies and lessons learned into a knowledge base accessible to all members for future reference. As noted by Participant 105, 'after such sessions, documents were created and archived' (June 2022). The solutions developed were also implemented by members in their daily activities. Students highlighted their active engagement in these learning processes.

From my observation, these meetings not only took place during less busy hours but also occurred as impromptu meetings held as the community continued with their daily activities. For instance, if a community member encountered a problem they could not solve, the community manager quickly summoned the community to a corner to assist in resolving the issue. As such, problems were resolved quickly. This would also occur when a community member discovered a more efficient way to solve a problem during food production. During my fieldwork, I observed a community member call for an impromptu meeting where he shared his newly discovered way of preventing curdling in creaming mixtures with all of the other members. The listeners (including students) appeared to benefit from this member's shared experiences. In this way, the community shared experiences and knowledge, informally and flexibly. Participant 106 explained how they integrated these experiences into their repertoire of skills, 'I have to say that it was a very nice experience to listen to other people's experiences on how they solved problems, I added such experiences to my skills basket' (June 2022). Impromptu meetings were commonly held and were important to WBL.

According to the study, members frequently consulted with one another when challenges arose. While students did not always participate directly in these discussions, they were generally present and attentive. For instance, one day I observed a student closely listening to a conversation among pastry chefs about how to quickly set jellies to enhance production. After the discussion, one chef was visibly pleased with having suggested a solution that was accepted by the group. The student reported gaining new knowledge indirectly by listening to the discussion and observing how the community members shared knowledge and brainstormed solutions. The student noted, 'I learned problem-solving from listening to community members in a discussion' (103, May 2022). Even when not directly involved, students benefited from these discussions, learning by observing and listening to the exchanges of knowledge and problem-solving strategies among community members.

This study illuminates that members developed a shared repertoire of resources, including experiences, stories, tools, and methods for addressing recurring problems—essentially, a shared practice. They recognised the value of harnessing the naturally occurring resources that arise when people work and learn together.

6.2.2.1.3 We gathered to share information and techniques[10]

Knowledge sharing was reported to be a prevalent practice among pastry chefs and is increasingly important in businesses, as it facilitates the learning and assimilation of new knowledge for organisational advancement. Beyond embracing students and collaborating to address operational challenges, the community also convened to exchange both new and traditional pastry techniques. This sharing of techniques involved transferring tacit knowledge between members, which significantly contributed to students' learning of pastry-related knowledge and skills. Participant 109 noted, 'we gathered as a group of chefs to share information and techniques on making new and old dishes helped us learn' (July 2022).

The community used these meetings to share specialised professional expertise and knowledge. Students reported that during these sessions, new dishes were experimented with, showcasing the introduction of new techniques. To avoid repetitive menu items, the group periodically introduced new dishes, which required learning new work techniques. Participant 104 asserted that 'when new dishes were to be introduced on the menu, the community would gather to learn the new skills involved…we were no exception' (May 2022). The community was invested in ensuring that all members, including students, developed the competence needed for pastry production and to uphold their practice. An exceptional member took the lead in teaching the essential techniques for making new dishes. Students reported that this collaborative learning within the community of practice enabled them to master skills for creating trending desserts, such as suspended cakes. As Participant 109 shared, 'I've learned to make trending desserts such as suspended cakes' (July 2022). Students expressed a strong sense that the community was opening up possibilities for them to achieve and pursue what they valued in their professional lives.

The mentors also described how they enjoyed learning in a group and integrating the students into this community, acquainting them with workplace practices, and promoting the

[10] Participant 109, 04 July 2022, p. 159

development of their competence as they participated in the work. Participant R2m articulated: 'we make new dishes together with the students…we mostly learn from one another' (June 2022). This participant highlighted how the community took collective responsibility for managing the knowledge and competence required for their work. They worked together to invent new pastry dishes for inclusion on new menus, ensuring that all members, including students, were involved in learning and applying new techniques. This collaborative approach allowed the community to effectively manage and share their expertise while continually innovating. He stated:

> we've just come up with two other types of cakes that we serve for dessert to our clients; one that we add gelatine bubbles to, the jelly art cake and the 3D cakes where we bring our clients' favourite characters, animals and scenes to life through baking with the lifelike dessert trend… whenever we have new recipes, we always make time to get together and learn the techniques involved (June 2022).

Similarly, Participant 110 described how the group came together to learn techniques for new dishes:

> one expert chef who had some knowledge about the new dish would take the lead to explain how the dish is made, and then demonstrate the how-to part… we all watch in a group and individually replicate it, but we are sometimes made to work in pairs to prevent wastage… it is fun learning together… more and special attention is given to us the students and the new employees as this involves learning new techniques (July 2022).

I discovered that organising community members into smaller groups of less than seven during meetings was essential because they seemed more likely to engage actively. Demonstrations and observations proved to be more effective when the group was smaller. This allowed for better visibility, as the coach had a more manageable space to move around and provide one-on-one coaching during imitation. This reduced fatigue for the coach and enhanced the effectiveness of the learning process.

The data shows that this community of practice not only gathered to share and learn new techniques but also to review and refine existing ones. They deliberated on old techniques to find improved methods and deepen their expertise in areas of concern to the community. These techniques were demonstrated, observed, explained, and replicated, modalities that students appeared to find comfortable. As noted by Participant R1m 'besides dealing with new dishes, we sometimes came together to refresh on old techniques that were a matter of concern to

members' (June 2022). Experienced community members demonstrated, explained and led the discussions on how to perform these, while other members mimicked them. Participant 109 explained:

> meetings didn't only take place to learn new techniques, we sometimes also met as a group of pastry chefs to help each other with old techniques, these were most demonstrated by experienced members. For example, in one meeting they demonstrated and explained the creaming method in cake making, and after that, a discussion about this technique was held. Later, we were made to replicate what we'd seen… such a learning process helped us as students learn different technical aspects of pastry (July 2022).

Practical knowledge was primarily shared by experienced members who possessed extensive knowledge and were observed by other members. The community was made to replicate. Participant 106 also explained how they learned through the community of practice:

> they made us watch them as they demonstrated at first and then they'd let us imitate, they also allowed us to make mistakes as they said it was part of the learning process… this was how most of us learned to make most dishes… besides, participating in such activities got us closer to the group… making it easier for us to learn better (June 2022).

I observed this community of practice while in one of their meetings. It appeared to be a practical knowledge-sharing session. While a member demonstrated how to prepare choux pastry, a pastry known to be challenging to most pastry chefs, the rest of the community observed. Explanations were provided during the demonstration and this was followed by a mimicking and coaching session. Learning appeared to occur.

These sessions were also sometimes organised externally. Expert pastry chefs in the South African Chefs Association (SACA) were organised for on-site visits to share new knowledge and skills through demonstrations and discussions of new techniques for new products on the market. SACA is a body for South African chefs, a community of practice for all South African chefs. Its primary goal is to share the knowledge and skills of its members with aspiring chefs through international food promotions, competitions, workshops, educational conferences, and a variety of other learning opportunities. An advantage of membership in this association is access to continuous information on new recipes and changes to industry standards and regulations. Participant R1m explained that 'SACA pastry chefs are sometimes organised for site visits to share new knowledge and skills for new pastry products' (June 2022). Students expressed their excitement, noting that interacting with SACA chefs and 'learning from them

was like a dream come true for most of [them] as students' (104, May 2022). Meetings with SACA leaders were organised by the on-site community leaders, for all members to attend. The training sessions with external community members were conducted in the same manner they did internally.

To develop expertise and competence in the learned techniques, students reported applying their skills through daily work routines, with guidance from expert community members. As Participant 110 explained, 'in the kitchen, we practised the skills we had learned, which helped to solidify them' (July 2022). Experts encouraged students to experiment with these techniques and then report back to the community on their progress, challenges, questions, and learning. Participant 107 further noted, 'members of the community gave us feedback… which also helped us improve' (June 2022). Feedback from community members enabled students to become familiar with the community's conventions. With this feedback and active participation, students appeared to become more self-sufficient, progressing along their 'inbound trajectory' (Wenger, 1998), toward achieving 'mastery' in the community of practice.

Most of the meetings I observed involved face-to-face discussions and dialogue, featuring either an internal or external expert addressing a specific topic of concern. Meeting sessions were generally conducted during the formal training sessions arranged by community leaders. During these meetings, the content was explicitly presented to community members, but the underlying information that the speakers aimed to convey was more tacit, often shared through personal experiences or thoughts. Knowledge was made more explicit through sharing, dialogue and discussion. Participant 108 described their experiences of the meetings, stating:

> we'd engaged in dialogue and discussion about concerns, passion for a topic, as well as to deepen knowledge and improve expertise, and one internal or visiting expert chef would lead such discussions' (June 2022).

By the same token, the mentors stated that community meetings were held to deepen members' understanding of specific topics or to reinforce important aspects relevant to pastry chefs. Participant R4m expresses their enjoyment of these meetings stating, 'it feels good to learn together because we always share good practices' (May 2022). The discussions were seen as opportunities that encouraged reflection on their practice as pastry chefs. When these reflections, interactions, and engagements took place, the students gained new insights. The meetings formed significant learning experiences for students, as noted by Participant 105 who reflected, 'information that most of us weren't sure of was shared… thus enabled learning'

(June 2022). Clarity-seeking questions were asked and answered during and after discussions, allowing a space for learning. According to the students, these gatherings helped them learn new skills and knowledge, and how to navigate their work environment.

The community did not view students as 'tabula rasa' or as empty vessels with no prior knowledge. Participant 107 notes, 'besides us being new to the community we were made a part of the discussions, we also contributed the little knowledge we had' (June 2022). Similarly, Participant 104 asserted:

> the chefs consider us to have some form of knowledge in pastry even if we don't have workplace experience, therefore they allowed us to be a part of the discussions. We are happy to share whatever information we have… which too help us to learn (June 2022).

The discussions encouraged active participation from students who could share their thoughts, ideas, and opinions with the community. This assisted 'to build confidence and self-esteem through engaging in discussions' (104, May 2022). Confidence and self-esteem are important competences in the industry. Participant 108 reflects on this experience:

> I and the other students were encultured to the workplace's practices, and they fostered the growth of our expertise as we participated in their knowledge-sharing discussions… We felt so much at home… my confidence progressed because of this type of learning (June 2022).

I observed students' contributions during meetings, and they reported learning more effectively through participation**.**

Discussions and dialogue were both formal and informal. Participant 107 describes that the group 'would frequently meet during lunch to share knowledge on different aspects' (June 2022). Students noted that the community's lunch-break discussions and dialogues were the main sources of knowledge-sharing on how to perform specific tasks and solve problems. Participant 106 describes these interactions:

> we normally sit during lunch breaks and share information about the occupation, especially on how to tackle some tasks and how to do them quicker… Sometimes it is about how to solve problems in the section. … Sometimes we discuss matters that help us in becoming better pastry chefs… Now I know that to be a good pastry chef requires me to work on my personality first, have the right attitude, be able to work with others and then focus on both personal and kitchen hygiene, and improve on my technical competence in pastry making, only then can I identify with all others (June 2022).

These dialogues and discussions also helped to develop communication skills.

The SACA workshops, illustrated above, were provincial. These offered students both learning opportunities and the opportunity to meet other students to compare their WBL experiences. Participant 110 described these interactions:

> in addition to expanding our knowledge and skills that are on offer when we go out for workshops with SACA, we also managed to compare the skills we had attained thus far with other students at our level from other institutions... we also managed to share our experiences of the pastry kitchen with them (July 2022).

Students gained a sense of themselves and their work about the community and the industry at large. Participant 107 reinforced this benefit, stating, 'for measuring yourself to see where you are at and to pick up some new skills that the community pastry chefs at our site can't offer' (June 2022). Participant 108 described how she and a junior pastry chef attended training with a community of pastry chefs at the SACA kitchens to learn how to prepare 'some of the trending pastry dishes such as waffle ice cream and Neapolitan checkered cakes' (June 2022). The students expressed their appreciation for how SACA enabled them 'to meet up and interact with the gurus of the industry in the country' (109, July 2022). This engagement with industry experts is suggested as an element of successful WBL. According to Lave and Wenger (1991), effective learning where students can build knowledge and skills is promoted by enabling them to work and learn in communities of practice. Similarly, Lave (1990) maintains that learning that occurs within social structures and relations is powerful and robust.

What seemed particularly exciting and rewarding for the students was that the environment for learning was friendly, allowing them to have fun and participate freely. While the focus remained on enhancing the productive aims of the pastry kitchen, learning within the community of practice also appeared to expand the students' freedom to participate more fully in wider social life as citizens. However, 'leaders of the community made sure that meetings were regulated to avoid derailing meetings' (109, July 2022). Based on both the reports and my observations, the workplace seemed to offer a mix of supportive factors that combined to build a strong, collective WBL culture, accommodating the students' need to learn. As Participant 108 reflected, 'such gatherings helped me learn new knowledge and skills to survive in the work environment' (June 2022). Furthermore, the sharing of knowledge and skills defined the community's identity and collective achievements, contributing to both the students' learning and higher productivity among the other chefs.

In summary, the community of pastry chefs appeared to have fully integrated the students into their practice through what seemed to be legitimate peripheral participation. This approach allowed students to gradually move from the periphery of the practice to its core. By becoming part of the community, students were able to attend knowledge-sharing meetings and workshops organised by community leaders, whether on-site or off-site. These meetings were reported to be both formal and informal. The community convened to brainstorm solutions for issues encountered during food production, share new and traditional techniques, and discuss topics and concerns relevant to their practice. These engagements and interactions were described as ongoing. The subsequent section will detail the findings regarding what students learned through their participation in the community of practice.

6.2.2.2 What students learned through the community of practice

Social participation within the community of practice and exposure to work-related activities appear to have exposed students to the tacit knowledge that experts in the community possessed, thus, they learned the technical competence related to pastry. In addition to acquiring practical knowledge from the community, the study also highlights that social interactions contribute to the development of generic skills, such as problem-solving, teamwork, and communication skills. These abilities are vital for students' occupational competence in their trade as pastry chefs. The findings below illustrate the kind of competences that students learned through knowledge-sharing with the group of pastry chefs.

6.2.2.2.1 We captured technical skills in pastry[11]

Students reported learning important technical skills from the training workshops organised by the community. This was noted by Participant 103 who stated, 'as students, we also learned from the training sessions held, where new and old techniques were workshopped' (May 2022). Similarly, Participant 110 describes how the knowledge-sharing meetings helped her develop practical skills in pastry making:

> I have learned to mix a sponge cake mixture manually, I can now make ice cream without following a recipe, am now able to adapt any cheesecake recipe and turn it into my interesting recipe, and I now know how to plate desserts … all thanks to the pastry

[11] Participant 110, 21 July 2022, p.166

> chefs that have always organised gatherings so we could share techniques… we captured technical skills in pastry (July 2022).

Some of the technical skills that the students reported learning from the community of practice include among others, cake making, pastry casings and 'cake icing, more especially butter icing and the use of yeast' (106, June 2022).

Participant 105 ascertains that they 'learned a lot of skills from interacting and working with the community' (June 2022). The community of expert chefs acted as coaches for the students allowing them to practice and correct their mistakes. In the business world today, communities of practice are recognised as a means to capture tacit knowledge and transform it into explicit knowledge. This process makes valuable insights accessible to students and significantly contributes to the creation of new work-related knowledge.

6.2.2.2.2 We met to discuss the use of the machines and tools[12]

Students described how the community also met to give each other insights on the use of the latest machinery in the trade. Participant 105 explained how the community of practice assisted them in learning to use machinery sometimes not available to them at college, 'I learned to use most machines and tools through the discussions in some of the meetings' (June 2022). Participant 110 reiterates this idea:

> we met to discuss the use of the machines and tools… the discussions held were sometimes about the efficient use of machines and tools in the pastry kitchen… such sessions were eye-opening for people like us. Under discussion was how to operate them, and how to clean and handle them safely… we even went to the extent of using them practically with close supervision and monitoring from the community members to ensure we used them correctly… it is from such engagements that I now know how to use a dough mixer when making bread and rolls, I can now also use the dough sheeter and roller (July 2022).

While under instruction from the members, students' activities were closely monitored by the experienced members who were said to have always been on hand to help them use machines correctly. The experienced members took over if the students found it very difficult to operate some machines, and 'they made [students] observe while they demonstrated again' (105, June 2022). However, even with the help of more experienced members, standing watch under

[12] Participant 110, 21 July 2022, p. 166

instruction requires a significant amount of knowledge, so students were not allowed to use the sophisticated machines that were deemed as expensive until they had accrued enough experience to operate them.

Participant 104 reflected on how the group assisted their learning:

> my involvement with the group of pastry chefs has helped me learn how to use the most crucial equipment in the trade…. our college kitchens are so under-resourced and contain only basic equipment such as electric stoves and ovens; the sophisticated equipment such as dough mixers, ice-cream making machines and most utensils that we use in the workplace are not there... this was one of the reasons why it was difficult for me to use most of this equipment when I first came here (May 2022).

The use of trade tools is a fundamental skill for all pastry chefs, as it is integral to their professional identity. Proper use of these tools affects the quality of the final product, the time required to complete it, and the volume of finished products produced. To enhance efficiency in the pastry kitchen, every pastry chef needs to be knowledgeable in the effective use of these tools.

The mentors in the study unanimously agreed that learning to use machines and equipment was essential for students to acquire the technical skills needed to become competent pastry chefs. Mastery of these skills would enable students to meet employers' needs, thereby contributing to economic growth. Additionally, the correct use of machinery enhances productivity by generating more output with less manpower and in less time, leading to improved product quality and a higher production rate, which ultimately drives greater business success.

6.2.2.2.3 Self-doubt turned into confidence[13]

In addition, to learning technical competence, students reported increased confidence.

- 'I learned to communicate as I slowly became eloquent by participating in discussions' (109, July 2022).
- 'I had self-doubt but that's not a problem anymore; it's a thing of the past, self-doubt turned into confidence' (104, May 2022).

Students reported that their confidence was boosted because of positive responses from the community.

[13] Participant 104, 26 May 2022, p. 167

6.2.2.2.4 To be a pastry chef one has to be very meticulous[14]

Accuracy was a skill that students reported learning from the community of practice through knowledge-sharing sessions. A proficient pastry chef is meticulous, paying close attention to the precise measurement of ingredients, cooking times, and temperatures to ensure client satisfaction. As noted by Participant R4m, 'to be a pastry chef one has to be very meticulous in everything they do, from the simplest to the most complex tasks' May 2022).

Being meticulous involves mastering culinary techniques, accurate ingredient measurement, using the right temperatures and preparation times, employing correct machinery and tools, and adhering strictly to safety and hygiene procedures. Participant R1m emphasised, 'baking is an exact science, meaning there is no room for making mistakes and correcting them later' (June 2022). For instance, insufficient baking powder can result in a dense, flat cake, while an excess of salt can ruin the entire product.

Safety and hygiene were critical concerns within the community, with most knowledge-sharing sessions focusing on these aspects. This was described by Participant 110:

> safety and hygiene in the kitchen were taken very seriously... this year alone we've held about three meetings where information on safety and hygiene was shared amongst the community… mainly about keeping microbes at bay and ensuring that the food production units are clean (July 2022).

Similarly, Participant 102 described how they 'learned the accurate use of sanitisers, disinfectants, detergents, and hot water, and how to wash hands effectively to keep the bacteria count very low' (April 2022). This responsibility is crucial; as even minor mistakes could have significant cost implications for the establishment.

The study highlighted that members regularly met to share knowledge on working smart and maintaining high standards, ensuring that client's needs were met and fostering repeat business in a competitive industry. Students valued these opportunities for learning the trade's intricacies, which are vital for success in the hospitality sector.

[14] Participant R4m, 05 July 2022, p. 168

6.2.2.3 Challenges Posed by Learning in Communities of Practice

Learning in the communities of practice posed some challenges to WBL. Being a member of the community was voluntary, therefore some pastry chefs with high levels of expertise chose not to participate for various reasons. Some members 'of the community avoided the knowledge-sharing discussions because they were shy' (105, June 2022). The students perceived that some pastry chefs could not share their expertise, opinions or insights with others 'because they were not so sure about themselves and the information to be shared' (107, June 2022). The mentors also perceived that 'some chefs aren't members because of cultural and language differences with other members' (R1m, June 2022). However, such evasion was detrimental to other members, including students, who could have benefited from learning new skills. Each member has a unique way of disseminating tacit knowledge, and missing out on these opportunities meant that students were deprived of valuable insights and expertise.

Subsequently, 'some members couldn't join the knowledge-sharing meetings because they didn't trust other members' (102, April 2022). This study suggests that members were not able to trust the accuracy and validity of the knowledge shared either because they disregarded the kind of training other chefs had gone through or their level of expertise. Generally, the trust developed among members is based on their ability to learn together, care about the domain, respect one another as practitioners, expose their questions and challenges, and provide responses that reflect practical experience. This was reflected by Participant R4m:

> if you have established networks within the community and you know the other members and trust their expertise, it is easier to be open to sharing knowledge and utilising the available knowledge in the community…this is the problem we've had within our community… some members aren't sure if they can trust knowledge coming from other members (July 2022).

'Some members prefer to share knowledge with smaller groups' (R1m, June 2022) whose training they believed was credible and with whom they had a long history of collaboration. Participant R5m maintained that 'the belief was that the communities of practice mechanism may work better within establishments where practitioners have an established relationship and a long history of working together' (July 2022). These issues were seen as an impediment to WBL because if chefs were hesitant to become members and share their expertise, students would also be denied access to potentially shared knowledge.

The members of the community are the chefs involved with the production in the pastry kitchen, however, 'sometimes these meetings didn't get to happen as scheduled because members that form part of the community were busy with production' (109, July 2022). Work pressure has increased in recent years because companies were setting higher profit targets following a drastic decrease in demand during the COVID-19 pandemic. As noted by R2m, 'there's so much pressure in the work we do as pastry chefs to meet profit margins set for the year' (June 2022). With the rise in local, regional, and international travel, the hospitality industry is experiencing a resurgence, leading to a competitive environment among establishments. This increased pressure on production has resulted in fewer opportunities for community members to meet for knowledge-sharing sessions. As the study indicates, this has deprived individual members, including students, of valuable chances to share and gain additional knowledge, which hinders the effective operation of the community of practice and limits WBL.

For communities of practice to thrive, members need to manage their time effectively and ensure regular interactions and meetings, even amidst tight production schedules. I believe that setting aside dedicated time for knowledge-sharing can help members exchange expertise amicably, providing students with valuable insights and learning opportunities.

Despite the challenges associated with learning through the community of practice, it appears that the community was an integral part of the overall support structure that facilitated student learning in the workplace. Students particularly appreciated how the learning sessions were organised, valuing the opportunity to collaborate and share knowledge with the group. They were pleased with the chance to engage with experienced members and benefit from their insights, which contributed positively to their learning experience. This is expressed by Participant 109 stating, 'I appreciated having learned together with this community, they were so helpful and supportive of my learning' (July 2022).

From the observations gathered, it is evident that highly contextualised knowledge was shared among group members. They co-developed tools such as recipes, addressed common issues, and collaborated to generate new ideas. This collaborative environment facilitated problem-solving sessions and allowed members to refine their expertise within a community of knowledge workers. Both formal and informal gatherings involved a shared vocabulary and mutual understanding of the subjects discussed.

The findings indicate that students' participation and engagement with the community, through communal activities and the continuous formation of a shared identity, were crucial to their learning. Initially, students were legitimately accepted as members of the group and began their learning journey from the periphery by listening, observing, and imitating—a process Lave and Wenger (1991) describe as the 'way in'. Over time, as their expertise grew, they progressed from the periphery to the core of the practice.

6.3 Learning by Doing: A Hands-On Approach to Occupational Competence Development

The findings in the study show how students learned through performing tasks and activities through learning by experience. In this learning approach, students were exposed to knowledge and skills through direct practice and experiencing the work in the pastry kitchen. Although many challenges were reported in learning by doing, students' responses were overwhelmingly positive about developing occupational competence that corresponds with the pastry chef's job description. Students also reported feelings of satisfaction and pride associated with completing complex and challenging tasks with minimal assistance from their mentors. Furthermore, students perceived that the approach allowed them to practice the daily activities and tasks which promoted occupational competence development, as they were required to demonstrate acquired competence and abilities in real-work situations.

While there were several beneficial learning outcomes for students through learning by doing, the exercise seemed to have been daunting and frustrating, and not all students were prepared for it. I found that students' responses ranged from excitement, involvement and appreciation, to apathy, withdrawal and confusion. The difficulties associated with this learning approach as reported by the students, included team conflict, mentors' tight work schedules, communication breakdowns, limited time for practice and difficulties in applying the key theoretical concepts to tasks and activities.

In this section, I focus on how hospitality students learned about pastry through practical experience with the work, I then detail the findings on what they learned from this experience. Finally, I present the findings on the challenges students faced.

6.3.1 How students learned by doing

Students were reported to be engaged in everyday activities and initially performed tasks autonomously, although they received help at the outset. The WBL activities appeared to involve dynamic interrelationships between social, cultural, and linguistic practices, providing students with opportunities to develop their occupational competence in pastry.

6.3.1.1 Doing the work allowed me to experience work from a different perspective[15]

Students reported that being granted the opportunity to gain practical knowledge through hands-on practice allowed them to see and experience work in the pastry kitchen from a different perspective. As expressed by Participant 103, 'the opportunity to do the work has allowed me to experience work from a different view' (May 2022). They felt that working in a real environment, where they prepared actual dishes for real clients, provided an experience that the simulation room at college could not replicate.

Participant 105 noted, 'doing the work allowed me to experience work from a different perspective' (June 2005), reflecting on gaining a better understanding through practical involvement and establishing stronger connections between the theoretical concepts learned in the classroom and real-world situations. Participant 107 expressed, 'sometimes it was so difficult to understand the concepts we learned at college because they were not complimented by practice' (June 2022). Students report that concepts became easier to understand once they were connected to workplace practice. In this way, this approach to learning helped students translate ideas into action. Kolb (1984) refers to learning through experience as being dynamic and holistic because it unifies thought and action.

Similarly, mentors affirmed it was not easy to grasp a concept from only an explanation since it is easy to forget. They maintained that the best way to learn a skill was through practice. Participant R2m explained:

> I think the best way students learn is by doing the actual work physically and practically, as I feel that it gives them a better understanding. If you tell them how to do something, it's not easy for them… but once you let them do it themselves only then do they show understanding (June 2022).

[15] Participant 105, 03 June 2022, p. 172

Participant R1m reiterated this notion explaining how learning by doing helped to build occupational competence in students:

> to learn, students, need to be exposed to the work itself… therefore, I say that they learn better by doing… they need to be actively involved in repetitive tasks daily so they can attain the skills… exposure to work does the trick but we have to be available to help…when I was still a student myself, I mostly learned by getting my hands dirty (June 2022).

According to the mentors in the study, mastering knowledge and skills required students to engage directly with the practice itself. Being hands-on and "getting one's hands dirty" was considered the most effective way to develop occupational competence in their trade. This approach allowed students to broaden their horizons by transitioning from being newcomers to performing tasks independently. Although learning through doing is a fundamental aspect of WBL, students still showed a reliance on expert guidance even when expected to work autonomously. Mentors had to continue supervising their work to ensure that procedures were followed, and standards were maintained.

Students in the study believed that they learned most effectively through hands-on practice, particularly because the workplace provided opportunities to repeat tasks multiple times. As observed by Participant 109, 'I understood better as I practised and repeated tasks' (July 2022). The real-world production setting offered significant benefits, including exposure to repetitive tasks, which helped build students' confidence and contributed to their development of occupational competence. Participant 110 reflected, 'I can now handle most knives comfortably because of the frequent practice that I've had' (July 2022). The repetition of tasks seemed to solidify students' skills and support their acquisition of new, work-related knowledge.

In this case, the learning-by-doing approach contrasts with the WBL method used by apprentices in the 1950s, known as 'sitting by Nellie.' This British expression referred to learning a job by observing an experienced worker without the opportunity to replicate actions or actively engage in tasks. Learning was limited to observation alone, with no hands-on practice allowed.

In contrast, Dewey (1986) argues that relying solely on observation is an ineffective learning method because learning is an active process involving engagement with the environment and

reflection on experiences. Dewey posits that active participation is essential for effective learning and skill development. Thus, the hands-on, experiential approach to learning, as emphasised by Dewey, represents a more effective method for enhancing student skills and fostering meaningful learning experiences.

Students in the advanced stages of their WBL confirmed that they acquired most skills through prolonged practice, which provided a practical experience distinct from the more theoretically oriented collegiate setting. As WBL progressed, students engaged in a broader range of activities and tasks, contributing to their development of competence. 'Experience is the best teacher' (107, June 2022), reflecting the value of hands-on experience. Students reported being actively involved in baking and other related tasks, with frequent hands-on opportunities enhancing their learning. They emphasised that 'getting my hands dirty has helped me learn' (109, July 2022). Mentors confirmed that around 94 per cent of a student's time was spent performing tasks, integrating them into the regular work schedule. The workplace also exposed students to tasks beyond their curriculum, with some activities not listed in their task book. Although students sometimes felt that these additional tasks were a waste of time, I believe that this broad exposure contributes to shaping them into more versatile professionals capable of handling a wide range of pastry-related tasks.

I observed students progressively working autonomously. Participant 105 confirmed; '…I worked with the assistance of the expert at first, but I was later allowed to work alone…' (June 2022). According to Lave and Wenger (1991), students in WBL have the opportunity for legitimate peripheral participation in a wide range of learning situations. This was evident in how experts first demonstrated a task before giving students the responsibility. At this stage, the student progressed from a minor role of observation and imitation to that of carrying out small, designated tasks to more significant ones with supervision. Through assuming more responsibility for larger tasks, students eventually achieved independence. For example, at the outset, they were only permitted to whisk egg whites when making a lemon meringue pie, the more complex aspects of making the dish were completed by the mentors. With more practice, they were then allowed to make the whole complex dish.

Exposure to practice helps students transition from the periphery to the centre of expertise, improving their skills over time. This notion is described by Participant 106, 'learning from experience has enabled me to improve the way I execute tasks and helped me refine what I've

learned' (June 2022). Hands-on experience is considered the most effective teacher because it engages individuals' senses directly. Dewey (1986) argues that psychomotor learning involves the coordination of multiple senses, including the brain, hands, and eyes, in actions that demonstrate both fine motor skills, such as using precision tools and gross motor skills in performance. This active, sensory engagement is crucial for developing and refining practical skills.

Learning by doing allowed students to gain experience in a variety of roles, allowing them to determine which duties best suited their skills and where they could practice and learn more. Participant 105 reflected, 'I realised I was strong with yeast goods but weak with creaming as a mixing method' (June 2022). Following this, this student noted that she had to do more practice on creaming in making cakes. They indicated that learning through experience allowed them to practice directly the skills they intended to use in their career. This hands-on approach helped broaden their knowledge base and refine the skills they sought to develop. This is illustrated by Participant 108:

> through exposure to practice, I noticed I wanted to pursue making desserts rather than the bakery side…this allowed me to learn and practice new skills that may be helpful in my intended role (June 2022).

This participant stated that learning by making desserts assisted her in learning common dishes that use gelatin, the tricks in making frozen desserts, and many other skills that are commonly used on different menus. Active participation in the WBL process offers students greater gratification in learning.

Although students were expected to work independently, they were closely monitored by mentors to ensure their safety, and compliance with regulations, track learning progress, provide targeted feedback, and facilitate effective problem-solving, contributing to a quality and impactful learning experience. This ensured that the food and service offered by students met the standards of the hotel. This is reflected by Participant 105, 'I do the work by myself, but the expert had to be close by for most of the time' (June 2022). Monitoring students closely was essential to minimise errors, reduce food waste, and ensure proper use of machinery. This not only helped maintain cost-efficiency for the hotel but also ensured a smooth and effective operation in the pastry kitchen and service areas.

Xunzi, an early Confucian scholar, famously said "What I hear, I forget. What I see, I remember. What I do, I understand." This perspective reinforces the importance of active student participation, as advocated by Lave and Wenger (1991). To achieve true learning, students must engage not just through listening and observing but by actively performing tasks themselves. Pring et al. (2012, p. 6) support this view, arguing that individuals gain a deeper understanding by doing tasks directly. They point out that this hands-on approach is how carpenters and bricklayers develop a practical grasp of the standards expected in their trades.

6.3.1.2 I valued the mistakes that I made[16]

During observation, I saw a student making cupcakes using the rubbing-in method, when she noticed that the product had a closed texture, she made the next batch using the creaming method. As students engaged in hands-on tasks, they reported discovering that some approaches were more efficient than others. They detailed how they discarded methods that did not work for them. This is reflected by Participant 101, 'it was good to work on my own because I was able to do a trial and error' (April 2022). These 'mistakes' became a valuable part of the WBL process because, as expressed by Participant 101, 'they helped me learn…' (April 2022). This idea is reiterated by Participant 104 who stated:

> in learning through doing, I am allowed to make mistakes and then correct myself… it makes learning a lot more fun and easier… we are allowed to make mistakes and learn from them… as we are permitted to execute tasks on our own… we learn a lot from that (May 2022).

Students learned not to fear mistakes, but to value them, in what they called 'trial and error'. Participant 102 stated, 'I sometimes practised through trial and error to perfection …I valued the mistakes that I made' (April 2022). They highlighted how experience allowed them to make mistakes, and how they learned from those mistakes.

During an interview in July 2022, Participant 109 recounted a significant learning experience involving a mistake that could have been costly for the hotel. He admitted to incorrectly placing a decimal point in the sugar amount when standardising a muffin recipe. If not corrected, this error would have resulted in either a product with significantly too little or too much sugar, adversely affecting the quality of the product and potentially damaging the hotel's reputation. The student described this mistake as a life-changing lesson, saying, 'I was lucky that the worst

[16] Participant 102, 12 April 2022, p. 176

did not happen for me to learn'. He acknowledged the mistake as a careless error that could have led to the disposal of the product and a waste of labour, power, and time. He reflected, 'I felt awful about it but I'll never forget this mistake'.

While students recognised the value of learning from their errors, they also understood the low tolerance for costly mistakes. Such errors not only lead to financial losses but can also jeopardise client relationships, potentially resulting in a decrease in revenue and, ultimately, the closure of the business. Therefore, students were closely supervised to minimise errors and maintain operational efficiency.

6.3.1.3 I could understand what I was doing because of the theory that I did[17]

From the findings, the learning-by-doing approach effectively bridged the gap between theoretical knowledge gained in the college setting and its practical application. Students reported actively engaging in work activities where they applied classroom theory to real-life situations. This approach encouraged higher-order thinking, allowing students to personalise the subject matter and develop a deeper understanding of concepts.

Students felt that learning by doing enabled them to put their classroom knowledge into practice, which in turn boosted their confidence in working in the pastry kitchen. For instance, the basic knowledge they had acquired on health and safety, as well as the use of equipment and tools, proved invaluable. This practical application of their knowledge helped them adapt quickly and perform effectively in the work environment. Participant 107 expressed this by saying:

> for me it was so fascinating to be able to bring the theory to workplace practice, now I have had the chance to do things practically, and the theory we covered at college has made it easy for me to understand the practice (June 2022).

The students' comments suggested that their college learning was complementary to their WBL, and both were seen as necessary for the successful completion of the programme and the attainment of knowledge and skills that are required to become a competent pastry chef. Participant 105 reflected:

> at N5 we did flour and flour mixtures as a theory topic… and here in the workplace, the pastry kitchen involves the use of flour and flour mixtures. I can now identify the

[17] Participant 108, 10 June 2022, p. 179

> different types of flour and their uses in the pastry kitchen… I can now tell apart strong flour from weak flour. This I couldn't do while at college because we didn't have the luxury of time… now I've had the chance to do these things practically… which gives me a better understanding of the theory I learned earlier (June 2022).

The participants acknowledged that learning by doing enabled them to understand the theory that they were exposed to while at college.

Students described and explained how they solved the problems they were confronted with in the workplace. To illustrate Participant 104 reflected:

> at times we were confronted with problems during production, I once failed to measure ingredients accurately in making bread dough… in such cases, one is required to think quickly because the one thing that we can't do is throw away whatever ingredients we've used, it's a waste and loss in profit. So what I did was determine what it was I'd inaccurately measured, I'd put in a lot of water, so I solved the problem by bringing the classroom to the workplace; I added more flour, sugar, salt, yeast and butter to balance up the water content… such aspects of problem-solving in making yeast dough we did at college, and through doing I was able to apply the skill in the workplace (May 2022).

The students described how they addressed problematic situations by applying the knowledge they had acquired in their institutional studies to real-world problems in the workplace. They detailed their process of evaluating issues, devising solutions, and integrating theoretical knowledge into practical practices. This approach enabled them to effectively tackle challenges and refine their problem-solving skills within the pastry kitchen.

It seems that the theoretical knowledge students acquired in college was frequently referenced and applied during their WBL experiences. This integration of classroom theory into practical tasks is a key aspect of WBL. During an observation, a mentor demonstrated how to make shortcrust pastry for Cornish pasties. The mentor encouraged the student to recall and apply her knowledge of other pastries and their uses in cookery, as well as the general rules for making pastries. The student successfully responded, showing her familiarity with the subject matter. The mentor then continued with the demonstration, providing explanations and encouraging the student to ask questions as needed. The mentor used "what if" scenarios to prompt the student to think beyond textbook examples and apply theoretical knowledge to various practical situations. This method effectively bridged the gap between theory and

practice, helping students adapt their classroom learning to real-world contexts in pastry-making.

Despite the demanding nature of production in the pastry kitchen, students found that their extensive theoretical background from college significantly facilitated their ability to master tasks. They believed that their classroom theory provided them with the necessary understanding to make sense of their practical work. For instance, they reported applying the Maillard reaction concept, a key concept in the browning of food during cooking and baking to enhance their competence in the kitchen. This application of theoretical knowledge to practice underscores the value of integrating classroom learning with real-world experiences. Participant 104 describes this concept:

> the maillard reaction is a chemical reaction between amino acids and sugars that gives browned foods their desirable brown colour and flavour, such as the crust of bread or the golden-brown colour of pastries (May 2022).

Understanding the Maillard reaction is essential for pastry chefs because it affects the taste, colour, and texture of baked goods. In practice, pastry chefs can use this knowledge to adjust baking times and temperatures, achieving the desired level of browning and flavour development. This is expressed by Participant 108 who stated, 'I could understand what I was doing because of the theory that I did' (June 2022). They might experiment with various sugars and ingredients to influence the Maillard reaction and create distinctive flavour profiles. Additionally, techniques such as glazing or caramelisation can be employed to enhance this reaction, adding complexity and depth to their products. By mastering these principles, pastry chefs can elevate their creations and achieve greater precision in their baking.

Students reported 'learning in the authentic workplace environment was vital to the integration of theory and practice' (106, June 2022). Students also affirmed attaining 'real' learning experiences and acquiring vital skills from the workplace that they could not have gained from a book alone. WBL afforded students the opportunities to practically apply the theory that was taught within the academic setting, thereby, helping them to learn better in the workplace.

Even though the methods of work taught in the college classroom appeared to be different from how the workplace operated, students reported connecting it to practice in the workplace. Participant 101 reported:

> I've thus far learned and been exposed to the different storage areas within the pastry kitchen… these include the dry stores, the walk-in freezers, and refrigerators… I've practised stock-taking; I've been exposed to the use of electronic bin cards… I didn't know that one day I'd be exposed to such practices… at college, the syllabus emphasised the use of manual stock-keeping, in this place everything is electronic… I however managed to still link the two, with difficulty though (April 2022).

Although the students were excited about this connection, they admitted that it was a daunting task. This is because college syllabi emphasise traditional methods of work, with students still learning to do tasks manually as reflected by Participant 102 who maintained, 'we still mix dough by hand…and many other tasks' (April 2022).

It seems there is a notable gap between the current Report 191 syllabi and the technological advancements seen in modern workplaces. Students are exposed to advanced technologies and equipment in the industry, such as computers for stock records and programmed mixers, which are not adequately covered in their training. This gap highlights a lack of alignment between educational content and industry practices, emphasising the need for improved communication between training providers and industry professionals. Both parties should collaborate to ensure that students receive relevant and up-to-date training that prepares them for contemporary work environments.

6.3.1.4 They mostly made us do menial jobs[18]

Students reported that learning through practice helped them boost their confidence in the pastry kitchen, although 'at times the production schedule was tight and we had to do a lot of work' (106, June 2022). When the production target increased, students were expected to work faster, they were thus exposed to more work than they could handle, and at times failed to keep up the pace. Students lagged because they lacked the expertise and were unable to use shortcuts when executing tasks, thus slowing down production. Resultantly, 'if the pastry kitchen was busy, they mostly made us do menial jobs like scrubbing floors, because they said we slowed the whole production process down' (101, April 2022). Because of the high standard expectations of the hotel, students were excluded from the production schedule if expert guidance was not available on the day.

[18] Participant 101, 11 April 2022, p. 180

Similarly, mentors affirmed that when the kitchens were busy, they had to meet the hotel's production target, and did not have time to guide, monitor and direct students. Participant R3m noted:

> on very busy days we don't have time for students, we're busy with the core business of the hotel, remember we're not paid to train students but for production, hence we make them do tasks that don't need our attention like washing dishes and packing storeroom shelves (June 2022).

During busy periods in the pastry kitchen, the workload often left little room for direct guidance and monitoring from experts. Despite this, the students' involvement in repetitive tasks, such as washing dishes and scrubbing floors, contributed to their development. These seemingly menial tasks helped them enhance their kitchen hygiene and safety skills. Additionally, while they were not directly involved in pastry-related tasks, students had the chance to observe experts perform these duties, allowing them to continue learning by watching and reflecting. This experience underscores that even during high-pressure times, students can still gain valuable insights and skills from their environment.

6.3.2 What students learned by doing

Students reported a range of valuable insights gained through hands-on learning, contributing to their overall occupational competence. Their experiences highlighted several areas of technical and generic skills development. They developed technical competence in areas such as mastering various kitchen tools and equipment, applying diverse baking techniques, and refining their skills in decorating and presenting pastries. They also learned effective plating techniques and adhered to essential kitchen hygiene and safety standards. In addition to technical skills, students acquired a range of generic skills. They became adept at working under pressure, which enhanced their ability to perform efficiently in a fast-paced environment. Problem-solving skills were developed as they navigated and resolved challenges encountered in the kitchen. Improved communication abilities allowed them to interact more effectively with team members and clients, while heightened punctuality emphasised the importance of being on time and meeting deadlines.

This section provides a comprehensive overview of the experiential learning outcomes, elucidating the practical knowledge and versatile skills students acquire through active engagement in the workplace.

6.3.2.1 Practice makes perfect[19]

Among the activities I observed, students were involved in a range of tasks including the storage of pastry commodities, cleaning surfaces and storage areas, dishwashing, and preparing various pastry dishes. They also engaged in decorating pastries and serving them at buffet tables. This hands-on approach to learning exposed students to the technical skills integral to the pastry field. Students noted that the increased exposure from performing these specific jobs or tasks greatly contributed to their skill development and understanding of their trade. Participant 104 explained:

> I did a lot of practice by doing the work itself. The things that I was involved in include the making of ice cream, cheesecakes, apple pies, pecan pie, carrot cake, bread rolls, eclairs, profiteroles and many more… I was also permitted to decorate these desserts as well. Learning by doing has helped me learn, that observing alone was not enough (May 2022).

The students shared that their mentors allowed them to undertake tasks with minimal supervision. Initially, they made some mistakes, but they quickly learned from these errors and managed to regain their composure and proficiency. Participant 109 maintained:

> now I know how to use a dough mixer when making bread and rolls, I can mix a sponge cake mixture manually, and I can now make ice cream without following a recipe, am now able to adapt any cheesecake recipe and turn it into an interesting recipe… all thanks to my mentor who allowed me to experience the work… practice makes perfect (July 2022).

During my observation sessions, I witnessed students performing various tasks, including the preparation of different pastry dishes. Over time, through repeated practice, they perfected these dishes.

I also watched students use various tools and machinery such as dough mixers, dough sheeters, dough rollers, slicers, cake mixers, a bun mould, provers, cake tins, pastry brushes, and many other tools regarded as the pastry chefs' tools of the trade. Before they could use them, however, tools were identified and instructions on how to use them were provided. As reflected by Participant 103, 'practice has helped me to identify and use these pieces of equipment, tools, and machinery used in pastry' (May 2022). Similarly, Participant 106 reported, 'learning by experience has exposed me to the machinery linked to pastry, which I value so much' (June

[19] Participant 109, 04 July 2022, p. 182

2022). Because the use of machinery was regarded as the most fundamental skill for any pastry chef, the students appreciated the opportunity to practice that the workplace provided them.

6.3.2.2 I grasped soft skills the hard way[20]

Despite their limited experience, students were sometimes involved in the kitchen's busy moments, performing tasks integral to daily operations. This exposure to high-pressure situations allowed them to develop crucial soft skills such as time management, teamwork, communication, problem-solving, and confidence. Participant 107 noted, 'I learned to work under pressure through learning by doing, I grasped soft skills the hard way' (June 2022). They observed that these skills were absent from their college curriculum and could only be acquired through real-world WBL, which provided experiences that simulation rooms could not. Working under such pressure in a real environment helped them build resilience and handle critical issues with minimal assistance, thus deepening their practical understanding and competence.

I witnessed that on particularly busy days, senior students worked in teams with other pastry chefs. The teams efficiently worked through tasks assigned to them for the 6 am breakfast service. The teams worked under pressure to meet the high volume of breakfast dishes required for that day. There was little mentor-student interaction and the senior students worked independently. The senior students attributed their ability to handle these demands to their extended time in the workplace, which allowed them to learn through continuous practice and experience. As noted by Participant 110, 'we have been here for long, we have been doing most of these things that's why' (July 2022). This underscores the critical role of time in WBL, as it helps build confidence and competence through real-world experience.

Mentors noted that, like all chefs, students in the pastry kitchen were expected to adhere to strict punctuality. Participant 107 remarked, 'being involved in the actual work taught me punctuality' (June,2022). Punctuality was a key skill honed through their practice. Participant 101 reported:

> this section of the kitchen is the major player when it comes to breakfast service which is at 6 am… what this translates to is that we get to work a lot earlier so we can serve freshly baked goods… we arrive for work at around 3.00 am because the shift begins

[20] Participant 107, 09 June 2022, p. 183

> at 3.30 am... we work as fast as possible to be able to serve on time and it's important to be punctual (April 2022).

Similarly, Participant 104 noted:

> work-based learning is so different from learning in the classroom, for everything you do, you follow laid down procedures and besides, you can never be late for work, otherwise, the day would be catastrophic. It was quite difficult for me at the beginning but with practice, I'd say I've blended in; am now always punctual for work (June 2022).

On two occasions I arrived at the site at 3 a.m., 30 minutes before the breakfast shift began for observation. I observed the punctuality of the students and their mentors who were on that shift. Everyone on the shift arrived on time, which was reflected in the logbook they all signed.

Students also learned troubleshooting in the workplace. In the real-world context, students learned the multiple solutions to challenges and were encouraged to seek unique solutions to hands-on tasks. They 'had to be tactical when dealing with problems' (R1m, June 2022). The mentors 'assisted them to solve problems like pros' (R5m, July 2022). Participant R2m maintained:

> we expect students to build problem-solving abilities while on WBL, therefore what we do is cultivate in them this special skill by letting them solve problems; some of the problems directly involve dealing with clients, which can be very tricky because the business depends on them… Some problems were operationally related… they should, however, be able to solve any of these to succeed in this industry… We first show them how it's done… we then, later on, let them do it on their own as they do their everyday activities, with our support (June 2022).

For the industry to thrive these problems should be solved amicably. Participant 103 noted, 'problem-solving is not something we learned in the classroom… practice in the real work environment and expert guidance has exposed me to this vital skill' (May 2022). Students on the other hand perceived that learning by doing exposed them to a range of workplace challenges that assisted them to develop problem-solving abilities, a competence that most employers require hospitality graduates to have (Marneros et al., 2020). Participant 106 reported:

> through doing the work in the workplace, I've had opportunities to solve problems as they arose… in the workplace, we were faced with difficult situations and difficult clients almost daily. Clients demanded the impossible and we had to deal with them…

> I've learned to think on my feet and how to be patient. If I hadn't done that I wouldn't have survived… to add on to that if one doesn't have problem-solving skills one never wins especially in collaborative settings where we always find ourselves … it was very possible to derail the work of the entire team if you failed to solve problems (June 2022).

During one of my observation sessions, I saw a student handling a situation at a buffet table where a client complained about undercooked muffins. The student managed the situation with composure, politely apologising to the client and offering muffins from a different batch at no charge. The issue was resolved amicably. Meanwhile, an expert stood nearby, observing and listening to the interaction between the student and the client.

Communication has been previously discussed as a vital skill developed through WBL. Participant 103 reiterates the importance of this skill and how they learned through experience:

> interacting successfully with other workers and customers as I went about my daily chores in the workplace helped me build communication skills… this has improved my listening skills together with the way I communicate… I learned to communicate by helping clients at buffet tables … I also learned to communicate with my colleagues whenever we were placed in teams and had to work (May 2022).

Communication skills were considered essential not only for pastry chef roles but for any position in the hospitality industry. Respondents emphasised the importance of interacting effectively with individuals from diverse cultural, educational, and age backgrounds, given the industry's broad clientele. Both groups of participants agreed that the ability to manage interpersonal interactions and handle 'human' aspects of the business is best developed in the workplace, as the classroom cannot fully replicate these experiences. The consensus was that competence in managing interpersonal relations and effective communication is acquired through practical experience in the work environment. This is displayed in the extracts below:

> it is quite important to be able to communicate efficiently and effectively on a one-on-one basis and with multitudes of people in this industry especially if clients are to be kept happy… this mostly happens through practice… it is the workplace that exposes students to such skills (109, July 2022).

Similarly, Participant 107 stated:

> I learned to interact and communicate with team members and with clients through practice in the workplace…the classroom didn't teach me how to communicate with others, a skill that I feel will make me a better graduate (June 2022).

I observed significant teamwork within the pastry kitchen, with students actively participating in various teams. One mentor highlighted the importance of team communication, noting, 'poor communication between team members is costly to the company' (R1m, June 2022). He emphasised that cultivating a culture of strong team communication was crucial for the kitchen's efficiency. Students reported that their involvement in these teams allowed them to develop effective communication skills, fostering a sense of belonging among team members. This sense of belonging contributed to higher engagement and satisfaction with their tasks and activities.

6.3.3 Challenges that Students Faced through Learning by Doing

Students in the study highly valued learning by doing, noting that it significantly solidified their acquired competence. However, they also expressed concerns about the stress and fatigue associated with this approach. Many students disliked the high-pressure environment where productivity was prioritised, leaving little room for mistakes. Participant 102 remarked, 'it was mostly stressful because we weren't allowed to make mistakes and waste food' (April 2022). Some students expressed a preference for observing mentors and experts rather than actively participating, as they felt overwhelmed by the demands placed on them. Participant 101 noted, 'we were placed on the production line even if we felt that we weren't ready' (April 2022). They felt that being assigned to production schedules before they felt adequately prepared caused significant anxiety, as they were under intense pressure to perform flawlessly. This stress was compounded by the fact that their work was served to real clients who expected high-quality products and services.

Students experienced minimal margin for error, as mistakes could adversely affect the institution and potentially lead to a decline in business within the highly competitive industry. As a result, students felt that they had very limited time for practice, with Participant 103 remarking, 'there was no time to practice' (May 2022). Time constraints often prevented them from repeating tasks, which was crucial for skill development. Both students and mentors highlighted the importance of repetitive practice for honing skills. However, students felt they had not been given sufficient practice opportunities, which they believed hindered their development of occupational competence. It appeared that the workplace prioritised production demands over student learning, with practice integrated into regular work duties rather than treated as a separate activity.

Despite the emphasis on learning by doing, students often sought supervision from experts to ensure their work was performed correctly, with Participant 109 noting, ‘when I do the work myself, I always want monitoring from my mentor for assurance’ (July 2022). However, students were aware of the experts’ tight production schedules, which led to reduced availability for direct supervision. As Participant 110 remarked, ‘they’re not always available when we need them’ (July 2022). Consequently, students supplemented their interactions with experts by using resources such as recipes, audio recordings, manuals, magazines, books, and videos. Nevertheless, they felt this approach was inadequate without direct human contact, stating, ‘we were forced to use other resources for referencing because of the mentor’s busy schedule’ (108, June 2022).

Mentors acknowledged that due to their production commitments, there were times when they had to allow students to work independently. As Participant R2m explained, ‘the students wanted us to be close by all the time, which was impossible because we had other jobs outside mentoring’ (June 2022). In the context of WBL, mentors juggle dual roles—fulfilling their responsibilities as regular pastry chefs while also guiding students. Consequently, mentors often prioritise their duties as pastry chefs to ensure job security and contribute to the business’s profitability, sometimes at the expense of their mentoring responsibilities.

Some students expressed concerns about the pressure of work and long hours, which they found exhausting and challenging for maintaining concentration. This, they reported, sometimes hindered their learning. Participant 106 maintained, ‘although the long hours were tiring and stressful, they cultivated endurance in most of us’ (June 2022). Students in the hospitality industry often contend with extended working hours and are expected to uphold punctuality, manage their time effectively, and balance productivity with learning in the workplace.

In summary, the WBL process began with observations, progressed to imitation, and eventually allowed students increased autonomy as they gained confidence in their abilities, though an expert’s oversight remained constant. Both students and mentors agreed that learning in an authentic workplace, where students could apply observed skills, was essential. They noted that practical engagement deepened their understanding, revealing the limitations of learning solely through observation and listening. Practising tasks enabled students to translate theoretical knowledge into actionable skills, thus solidifying their competence. Learning by

doing was recognised as crucial for consolidating acquired skills, with the added advantage of learning from mistakes through trial and error while minimising waste. The research highlighted the importance of practical experience in a real-world setting and the value of accessing expertise during everyday work activities.

6.4 The Role of Mediating Artefacts in Work-Based Learning

In the context of WBL, mediating artefacts appeared in various forms, all serving the common purpose of supporting and guiding student learning. Students reported that their learning experience was greatly enhanced by the availability of diverse resources. Some artefacts, such as recipes, audio recordings, videos, standard operating procedures, and magazines, were archived within the establishment, while others were prominently displayed as posters on walls and pinboards. Additionally, students considered the equipment and tools in the pastry kitchen as crucial mediating artefacts that contributed to their learning process.

According to this study, tools and equipment were utilised alongside standard operating procedures created by the hotel's training manager to support students' learning. Observations highlighted that these mediating artefacts were particularly valuable in the absence of mentors, who were often occupied with their primary roles as pastry chefs. Students reported that they were able to gain insights and guidance through these artefacts, which provided cues and models to aid their learning and understanding. Conole (2009) describes mediating artefacts as encompassing language, pedagogical approaches, tasks required to achieve learning outcomes, and associated tools and resources. While I acknowledge all the mediating artefacts outlined by Conole, time constraints limited my ability to address them comprehensively.

In this section, I illustrate how students used various artefacts for their learning, though the effectiveness and efficiency of their use remained somewhat unclear. I then detailed what students learned using these resources. Finally, I provided a thorough exploration of the participants' perspectives on the role of and utilisation of mediating artefacts in WBL.

6.4.1 How students learned through the use of mediating artefacts

In the context of WBL, this study found that a variety of mediating artefacts played a central role in shaping students' learning experiences. These artefacts which included recipes, videos, standard operating procedures, magazines, posters, and specialised kitchen tools were

strategically archived or displayed within the workplace to support student learning. Students reported that these resources offered valuable guidance, particularly in the absence of mentors who were often busy with production demands. The artefacts functioned as accessible points of reference that helped students make sense of tasks, reinforcing their practical learning and aiding skill acquisition.

In line with Conole's (2009) broad conceptualisation of mediating artefacts which includes tools, language, pedagogical approaches, and goal-oriented tasks this section focuses on the tangible resources students engaged with most frequently. Importantly, these artefacts not only served as instructional tools but also as forms of reification, as described by Wenger (1998). They represented crystallised expressions of expert knowledge, embedded in the workplace and made available for students to interpret and internalise. Yet, their value was fully realised only through participation through students' active engagement with tasks, tools, and social interactions in the workplace.

6.4.1.1 Learning didn't have to stop if mentors were unavailable[21]

The findings suggest that learning in the workplace was not entirely dependent on mentor availability. Instead, students often engaged with reified forms of knowledge when mentors were unavailable due to work production pressures. As Wenger (1998, p. 61) argues, reification refers to the process of giving form to experience by producing objects (such as tools, documents, symbols, stories, terms, and concepts) that congeal practice into tangible artefacts. These artefacts were made available through the company archives and included videos, audio recordings, recipe books, and magazines. Participant R3m described how students were encouraged to access these materials:

> what happens in such scenarios is that we let students get into the company archives where we keep documentation and other resources that contain information that they can use to navigate around tasks and activities that they are supposed to engage in… these are in the form of videos, audio recordings, recipe books, magazines and a lot more. From these, students can learn (July 2022).

In these instances, the learning process became centred around reified artefacts rather than direct interpersonal guidance. Mentors did not always use these materials as deliberate

[21] Participant 103, 25 May 2022, p. 190

pedagogical tools but referred students to them in the face of their unavailability. As Participant R1m remarked:

> such materials that could be used by students for learning in the workplace helped to prevent downtime because of the amount of work that we deal with… for instance, they could learn how yeast doughs are made by watching videos, which meant a reduction in contact time with the pastry chefs' ever busy schedules… to tell the truth, we never have time for students (June 2022).

Students, in turn, recognised the utility of these resources, confirming; 'learning didn't have to stop if our mentors aren't available… we make use of physical resources' (103, May 2022).

Through this, I observe a tension between participation and reification, as described by Wenger. While participation, meaning active engagement in the social practices of the community was limited by the mentors' absence, reification through artefacts sustained the learning trajectory. However, this substitution was not without cost. Students expressed a sense of disconnection and missed opportunities for real-time engagement, guidance, and feedback, which are essential components of participatory learning. The artefacts, while valuable, could not fully substitute the nuances of lived interaction within a community of practice.

Thus, the workplace became a site where reified knowledge mediated learning in the absence of participatory mentorship. This points to a hybrid model of workplace learning in which learning is distributed across people and artefacts, though the balance between reification and participation remained uneven — often dictated by production demands rather than pedagogical intent.

6.4.1.2 We didn't always have to observe live demonstrations to learn[22]

The study illustrates that students did not always require live demonstrations from mentors to learn effectively. Instead, video artefacts played a central role in facilitating WBL, particularly by enabling students to engage with content independently. Drawing on Wenger's (1998) concept of reification, these video recordings can be seen as crystallised representations of practice, tangible forms through which knowledge is packaged and made accessible outside of real-time social interaction. Students appreciated the autonomy afforded by these reified resources. As Participant 109 explained:

[22] Participant 109, 04 July 2022, p. 191

> learning on my own was a lot of fun, I managed to watch videos showing tasks being performed repeatedly because I could pause and replay them whenever needed… We didn't always have to observe live demonstrations to learn in face-to-face sessions with mentors (July 2022).

Through the process of engaging with these reified artefacts, students were able to simulate aspects of participation in practice, albeit asynchronously and without direct interaction. They emphasised the flexibility that videos provided, allowing for repeated viewing, individual pacing, and enhanced comprehension of complex procedures.

For many, the use of videos supported a sense of control over their learning and deepened their understanding, contributing to the development of occupational competence. Participant 110 noted; 'we understood better because visuals were supported by explanations, which we sometimes couldn't get from our mentors' (July 2022). This aligns with Wenger's assertion that reification and participation are interdependent in meaning-making. The video artefacts served as entry points into practice, allowing students to engage meaningfully with the content in ways that live mentorship alone might not have facilitated. Participant 105 illustrated this when saying; 'watching a video increased its memorability… for instance, I still recall how yeast dough is managed from the video I watched last week' (June 2022). Participant 104 added by emphasising the dual power of visual explanation and engagement:

> I enjoyed the fact that explanations were visually supported with the use of videos. My interest towards the content in the video rather increased due to that. In terms of information, what was presented was related to the visuals which left permanent traces of what I learned, although at times I had a build-up of unanswered questions (May 2022).

However, this form of reified learning had limitations. As Wenger (1998) highlights, over-reliance on reification without opportunities for interactive participation can hinder learning. Students expressed frustration about the inability to ask questions in real time, noting that their understanding was restricted to what the video content offered. As Participant 107 put it; 'the problem with videos was that [they] couldn't ask questions, so [their] learning was limited to the content of the video' (June 2022). This led students to return to mentors with a backlog of questions, showing that while reified artefacts enriched learning, they could not fully replace social learning through engaging with experts and within the community of practice.

This finding underlines that effective WBL requires a dynamic interplay between reification and participation, where artefacts scaffold learning, but opportunities for social interaction, questioning, and co-construction of knowledge remain essential for a better grasp of competence.

6.4.1.3 Recipes helped me understand how to follow laid-out procedures[23]

The findings show that students relied heavily on recipes archived by the institution and developed by the pastry chef community. These recipes functioned not only as instructional tools but as reified representations of the community's shared practices, procedures, and culinary standards. As explained in the previous section, reification refers to the process by which practice is rendered into tangible forms, such as documents, tools, or symbols that embody meaning and standardise knowledge (Wenger, 1998, p. 61). Recipes, as reified artefacts, encapsulated professional norms and procedural knowledge, offering structured guidance in the absence of mentors.

Students reported learning to follow procedures, interpret cookery terms, measure ingredients accurately, and understand operational methods through their interaction with these resources. Participant 110 noted; 'I'd make use of the hotel archive to access recipe books that I use for guidance when cooking in the absence of my mentor' (July 2022). Mentors confirmed the centrality of these artefacts in supporting students' learning. Participant R3m stated; 'we've got a compilation of recipes of our signature dishes that are kept in an archive. Students and our novice pastry chefs use these the most' (July 2022). In this context, recipes acted as stabilised forms of knowledge that extended the reach of mentorship beyond physical presence.

By engaging with reified content, students could approximate participation in the community's practices, following professional procedures and contributing to daily operations even in the mentor's absence. Participant 106 highlighted this by saying; 'the use of recipes helped me to understand how to follow laid-out procedures and measurements in making dishes' (June 2022). This shows how an interplay between reification and participation are always both at once (Wenger, 1998, p. 68) meaning that "participation always organises itself around reification…". While recipes offered a structured, reliable guide to practice, full understanding

[23] Participant 106, 04 June 2022, p. 192

often required active engagement, particularly for decoding complex terminology or contextual nuances. As Participant 105 explained:

> recipes guided and aided my understanding of procedures used to make particular dishes, more especially the complex pastry recipes in the absence of the mentor… but the mentor had to guide me on how to unpack the recipe first… without him some of the interpretations were difficult… I'd need the mentor always, but this was at times impossible due to the nature of his work (June 2022).

This reflects the incomplete nature of reification without participation, a tension Wenger (1998) identifies. While reified artefacts like recipes structure and communicate practice, their interpretation and application are enriched and sometimes only made possible through interaction, dialogue, and shared meaning-making by experts and/or within the community of practice.

Mentors acknowledged the strategic role of recipes in maintaining workflow and enabling students' learning, even during periods of high productivity. Participant R1m noted:

> we sometimes become very busy and are unable to mentor students, we therefore, refer them to the compilation of our recipes… they help prevent downtime… remember students need to be able to learn while we're involved in our main responsibilities as pastry chefs… business does not close because we have students on site (June 2022).

Students also saw these artefacts as confidence-boosting tools that fostered independence and creativity. Participant 108 remarked; 'the use of recipes came in handy as it helped us build confidence and enabled creativity because it allowed us to work with little help' (June 2022).

In many cases, students were able to integrate prior theoretical knowledge from college with the practical application of recipes, further bridging institutional learning with situated workplace practice. Participant 104 explained; 'to an extent, we were sometimes able to work with recipes with no help because we knew how to use them' (May 2022). However, students also identified gaps in understanding certain culinary terms, prompting peer participation as a resource for learning. Participant 103 observed; 'some terms weren't easy to understand, so I as a junior student always asked the senior students to help' (May 2022). This example, including the observed instance of a student asking the meaning of 'macerate' while preparing a fruit salad from a recipe, shows that while reified knowledge was valuable, participation, even among peers, remained essential for contextualising and applying that knowledge effectively.

In sum, this finding demonstrates how recipes, as reified artefacts, mediated access to professional practice, yet depended on an underlying network of participatory relations with mentors, peers, and classroom knowledge for their full pedagogical value. This balance of reification and participation supported the development of occupational competence, encouraging both procedural compliance and individual creativity within the real world of work.

6.4.1.4 Diagrams provided a means to explain concepts[24]

This study found that posters, particularly those presented as infographics, served as reified learning tools prominently displayed in the kitchen environment. These artefacts combined minimal text with clear visual diagrams to communicate key workplace practices such as hygiene, sanitation, and safe equipment handling. According to Wenger (1998), reification refers to the process of giving form to abstract concepts through physical or symbolic expressions here, the posters served as reified representations of workplace norms and procedures, transforming tacit knowledge into accessible, visual artefacts that could guide student behaviour in the workplace.

Observed during fieldwork, these posters were mounted on kitchen walls and pinboards and were especially effective in guiding students through tasks without requiring mentor intervention. Participant 103 reflected on their value:

> the pastry kitchen walls were furnished with posters that had images indicating sanitation and safety procedures… such as the correct procedures of washing hands and dealing with spillages… the pictures were quite easy to follow and understand… I learned to minimise accidents in the kitchen with minimal help from my mentor as the information was readily available on posters (May 2022).

Here, the reification of key safety and hygiene practices into visual posters enabled students to engage with the professional norms of the pastry kitchen, facilitating legitimate peripheral participation (Lave & Wenger, 1991), even in the absence of direct mentorship.

Students reported that the visual clarity and simplicity of the posters allowed them to interpret and internalise knowledge independently, suggesting that these artefacts helped bridge gaps

[24] Participant 101, 11 April 2022, p. 195

between theory and practice. As Participant 101 stated; ‘diagrams provided a means to explain what could’ve been difficult if written in words, as the interpretation of words could sometimes be misleading’ (April 2022). This reflects Wenger’s (1998) idea that reification can simplify complex or abstract knowledge and provide an entry point into a practice. Through reified artefacts like posters, students were able to participate meaningfully in WBL activities, acquiring behavioural norms and technical skills required for professional kitchen operation. Participant 102 also highlighted how these visual tools enabled learning in the absence of mentors:

> posters on walls like many other resources in the workplace helped us grasp the skills that related more to sanitation and safety in the workplace… the mentors weren’t always available to help so some of these learning resources took over (April 2022).

In this way, posters did not replace mentors, but they acted as supplementary mediators of knowledge, enabling students to engage with workplace practices when direct participation with experts was not possible. The artefacts served to stabilise knowledge within the community of practice and to support students’ gradual integration into it.

Additionally, students recognised the benefits of repeated exposure to the posters, which reinforced critical procedural knowledge. Participant 101 noted; ‘posters were handy in dispensing knowledge relating to hygiene, safety and sanitation… I learned to wash my hands through repeated use of the posters’ (April 2022). Through continuous visual engagement with reified content, students were able to internalise key practices. These posters functioned not only as reminders but also as interactive entry points into participatory learning, prompting students to align their actions with community expectations, a process Wenger (1998) describes as learning through becoming within social practice.

In summary, this finding illustrates that posters, as reified artefacts, played a critical pedagogical role in supporting independent learning and safe practice. They allowed students to participate in the work environment with a degree of autonomy while gradually acquiring the embodied knowledge that characterises full participation in the community of pastry practice.

6.4.1.5 Standard operating procedures simplified our use of machinery[25]

This study found that the use of Standard Operating Procedures (SOPs) in the pastry kitchen played a significant role in supporting students' engagement with complex production machinery. The site was well-equipped with modern technology, including dough sheeters, bun dividers, mixers, and provers, which presented both opportunities and challenges for novice users. While such equipment was considered costly and required careful handling, mentors made it accessible to students under supervision until they gained sufficient proficiency. Participant R2m stated; 'we consider the machines we use to be expensive, but we still allow students to use them too' (June 2022). Importantly, when mentors were unavailable due to production pressures, students relied on SOPs developed in-house to guide their learning.

These SOPs served as reified artefacts (Wenger, 1998), tangible representations of expert knowledge and best practices that allowed students to continue learning autonomously in the absence of direct guidance. Rather than simply reproducing manufacturer manuals, the training manager collaborated with experienced chefs to adapt and simplify the content, integrating diagrams and site-specific knowledge to ensure accessibility for novice learners. Participant R3m explained:

> to enhance the student's use of machinery in the workplace, the training manager read the product manuals for new equipment and created SOPs that could easily be used by students in our absence… he included modifications that were simplified and easy to follow (July 2022).

In Wenger's (1998) terms, these SOPs reified the collective experience and tacit expertise of the community of practice into a structured format that novices could engage with. Through interaction with these SOPs, students could engage in legitimate peripheral participation, progressively building the competence required to use the equipment independently. The SOPs also helped reduce disruptions in production, as noted by Participant 105; 'the SOPs helped us operate equipment with very little help; they simplified our navigation of tasks through the use of machinery' (June 2022). My observations confirmed that students initially relied heavily on SOPs while using machines but later demonstrated confident, independent use, clear evidence of learning through practice. The SOPs provided a bridge between abstract, theoretical understanding and practical, embodied engagement with tools and technologies during WBL.

[25] Participant 105, 03 June 2022, p. 196

Participants further highlighted the limitations of their college training environments, which lacked access to advanced machinery. This discrepancy between training and workplace expectations created an initial skills gap. As Participant 104 described; 'the college kitchens were so under-resourced and contained only the basic equipment… I think this is the reason why I could not operate these machines the first time I came to the workplace' (May 2022). However, the reified knowledge embedded in SOPs, combined with participatory experiences in the workplace, enabled students to overcome this gap. Participant 103 captured the theory-practice integration process succinctly; 'I learned about most of these machines and their uses theoretically, while the workplace enabled me to use them in real-time' (May 2022). This aligns with Wenger's (1998) assertion that learning occurs through the interplay between participation and reification, where tools like SOPs not only convey knowledge but also shape the student's evolving identity and competence within the community of practice. Participant 102 confirmed the contrast between institutional training and workplace realities; 'at college, we used old methods of work' (April 2022), while the workplace exposed them to modern systems and expectations.

In conclusion, this finding illustrates how SOPs, as purposefully reified and context-sensitive tools facilitated student participation in equipment use, enhanced safety, and promoted the development of occupational competence. These artefacts did not replace mentor instruction but served as mediating resources that enabled students to transition from peripheral to more central participation in the pastry production community.

6.4.2 What students learned through the use of mediating artefacts

This study found that students engaged with a variety of mediating artefacts such as recipes, machines, tools, magazines, videos, SOPs, and posters to complete their daily tasks, especially in contexts where mentors were intermittently unavailable due to production demands. These artefacts functioned as reified representations of knowledge tangible expressions of the community's practices, distilled into usable forms such as diagrams, pictures, videos, texts, and procedural documents. Through engagement with these artefacts, students encountered situated forms of tacit knowledge and began to internalise work practices. However, students also expressed that while artefacts provided useful guidance, their learning would have been deepened through more interactive forms of participation with experts.

Students desired opportunities to pose questions, receive feedback, and engage in the social negotiation of meaning with mentors and the expert other. This suggests that while reification made workplace knowledge accessible and enduring, its effectiveness was contingent on being complemented by socio-cultural participation with others. The findings demonstrate that students' learning was shaped by a dynamic duality between reification and participation. Artefacts offered structure and guidance, while moments of interaction allowed for clarification and an insightful grasp of knowledge.

6.4.2.1 I learned to measure ingredients accurately through the use of recipes[26]

As students learned to execute tasks using recipes, they began to internalise and apply the practical knowledge embedded in them. In Wengerian terms, recipes represent reified artefacts and codified representations of communal practice that embody shared understanding and standardised procedures within the community of practice. Participant 109 explained; 'I learned to measure ingredients accurately using the different scales through the use of recipes' (July 2022). Through their engagement with these artefacts, students developed their competence in interpreting, standardising, and applying recipes to meet workplace expectations. As Participant 109 further noted; 'recipes assisted us to understand how to control portions, a critical skill in food cost control and profitability' (July 2022). Despite the usefulness of recipes, students noted that interpreting them without mentors was sometimes difficult. This highlights the importance of participation, the social process through which students engage with more experienced practitioners.

Wenger (1998) argues that learning is not just about absorbing information (reification) but also about participating in the social world of practice. When mentors were unavailable, students engaged in more autonomous forms of participation, experimenting and problem-solving within the boundaries set by the reified artefacts. The necessity of working with recipes in the absence of mentors fostered independence, confidence, and innovation among students. Participant 110 reflected; 'using recipes on my own boosted my confidence; I just had to keep going… I also became innovative and creative in coming up with new dishes from the recipes I used' (July 2022). Similarly, Participant 109 stated that; 'through the independent use of different recipes, we could try various ways of creating dishes, which helped us build confidence and creativity' (July 2022). These accounts reflect how students moved from

[26] Participant 109, 04 July 2022, p. 198

peripheral to more active participation in the community of practice through the use of reified tools as scaffolding.

The process of interpreting and adapting recipes also served as a context for situated learning. Students learned through trial and error, developed problem-solving skills, and exercised critical thinking. Participant 107 reported: 'I learned how to tackle fault-related problems during baking and built my ability to think critically' (June 2022). This indicates that even in the absence of direct guidance, artefacts like recipes enabled students to participate meaningfully in the practice, contributing to their development of both technical competence and soft skills such as adaptability, creativity, and self-directed learning.

In sum, recipes as reified tools did not merely transmit knowledge, they structured students' participation in the workplace, providing a framework within which students could develop occupational competence. The interplay between participation and reification thus emerges as central to how learning unfolded through the use of recipes in this context.

6.4.2.2 I've learned personal and kitchen hygiene and safety[27]

Access to posters on kitchen walls and pinboards significantly reinforced students' understanding of personal and kitchen hygiene and safety, elements essential to the daily functioning of any professional kitchen. These posters acted as reified artefacts, visually representing abstract rules, norms, and procedures related to hygiene, sanitation, and safety. As Wenger (1998) explains, reification involves giving form to experience and knowledge through tangible representations. In this context, posters illustrated the use of personal protective equipment (PPE), proper handwashing techniques, and the correct procedures for managing kitchen spillages, thereby embedding professional practice into everyday visual cues. Participant 106 reflected; 'I've learned personal and kitchen hygiene and safety through the availability of such information on posters' (June 2022). The clarity and accessibility of these artefacts enabled students to independently internalise important concepts with minimal verbal instruction from experts. Participant R5m further highlighted the posters' instructional value, explaining that; 'students learned such important aspects at a glance from posters' (July 2022). This underscores the pedagogical power of reification in conveying key operational norms within the workplace.

[27] Participant 106, 04 June 2022, p. 199

However, reification alone did not constitute the entirety of the learning process. The meaning embedded in these visual resources was often activated through students' active social participation. While students initially interpreted the posters independently, it was through practising the demonstrated techniques that they began to internalise the knowledge. This act of practising can be understood as a form of participation. As Wenger (1998, p. 69) notes, "participation is clearly a social process, but it is also a personal experience," highlighting that meaningful learning emerges at the intersection of individual engagement and collective activity. For example, understanding why PPE is required in specific scenarios or the rationale behind sanitation procedures often involved social interaction and situated explanation—core aspects of Wenger's (1998) participation construct.

In this way, learning personal and kitchen hygiene and safety was not just a matter of viewing static posters, but of integrating those visual cues into lived practice through shared experiences and interactions. The posters provided a consistent visual reference, while participation enabled the negotiation and contextualisation of that knowledge within the real-world pastry kitchen scenario. Over time, this dual process helped students move from peripheral observation toward more active, competent participation in the workplace's hygiene and safety culture.

6.4.2.3 I learned to operate machines and utilise tools[28]

Participant 108 asserted; 'while I learned to operate machines and utilise tools, I also acquired the technical know-how of completing tasks' (June 2022). This statement captures what students learned through practical engagement with workplace artefacts, particularly machines and tools. Their understanding of equipment use was scaffolded through SOPs, artefacts that exemplify reification. These SOPs were intentionally adapted from manufacturers' manuals by the training manager and supplemented with diagrams to suit the learning needs of novices. By codifying tacit expert knowledge into simplified, accessible instructions, these SOPs reified complex operations into usable guides for students working with minimal supervision.

The process of reification enabled students to engage with machinery in meaningful ways, even in the absence of direct mentorship. However, learning did not occur through reification alone. Students initially relied on participation through interactions with mentors and peers to make

[28] Participant 108, 10 June 2022, p. 200

sense of the machines' functions, safe use, and broader operational context. Over time, this participation supported their gradual movement from peripheral involvement to fuller engagement in the community of practice. As Wenger (1998) highlights, learning occurs in the interplay between reification and participation, where artefacts structure experience, and social interaction gives it meaning. Participant 107 captured the duality of reification and participation by noting that; 'as I learned to operate the various machines to complete different tasks in the kitchen, I also learned about safety' (June 2022). In mastering tool and equipment use, students were not merely learning isolated technical skills but, they were learning how to act competently and responsibly within a shared practice. This includes recognising the risks associated with professional pastry production, managing them appropriately, and adopting behaviours aligned with workplace standards.

Students' experiences also reflected a broader contextual gap between their college-based training and real-world industry practices. College kitchens were often under-resourced, and students lacked access to modern machines. Thus, the use of machines, equipment, tools and various technologies became critical in bridging this gap and cultivating the technical know-how and professional judgement required for occupational competence.

6.4.2.4 The use of videos exposed me to technical skills[29]

Students reported acquiring a range of technical skills in pastry-making through the use of instructional videos. These audiovisual resources demonstrated specific techniques such as kneading different types of dough, icing finished products, and decorating desserts. Participant 107 stated; 'the use of videos exposed me to the technical skills used in pastry… I learned to use different icing for decorating desserts' (June 2022). Participant 104 further explained the nuanced differences she learned between handling scones and bread dough. She noted that scone dough requires a light touch to prevent the development of excess gluten, as it relies on baking powder for leavening. In contrast, bread dough demands vigorous kneading to develop gluten, which helps retain the carbon dioxide gas produced during yeast fermentation. She concluded; 'I can now knead the two different doughs without any issues' (May 2022). Videos thus played a vital role in bridging the gap between tacit and explicit knowledge. By visually demonstrating practical tasks, they reified workplace practice, condensing and externalising expert knowledge into concrete instructional resources. This form of reification allowed

[29] Participant 107, 09 June 2022, p. 201

students to engage with complex processes in a structured way. Here, reification is visible in the videos themselves, artefacts that embody and condense expert pastry knowledge (kneading, icing, etc.) into structured, tangible form. Learning in this case is most effective when balanced with active participation, through which students make sense of reified knowledge within the social context of practice.

However, students noted a key limitation: the pre-recorded nature of the videos meant that interaction was not possible. Participant 105 remarked; 'sometimes we'd have questions but couldn't ask because videos were pre-recorded' (June 2022). This limitation often necessitated follow-up discussions with mentors when they were available. This finding underscores the continued importance of expert guidance in workplace learning, suggesting that while videos are valuable resources, they cannot fully replace the need for interpersonal support and responsive engagement in the occupational competence process.

6.4.3 Challenges Faced When Using Mediating Artefacts in Work-based Learning

Interviews with students highlighted a concerning issue: experts were not always available to assist them when needed. Despite the organisation's commitment to WBL, other job demands often interrupted the ability to fully support student learning. When mentors were unavailable due to production pressures, students turned to mediating artefacts like videos, posters, SOPs and recipes from the company's archive to continue their learning. Participant 109 noted, 'to ensure that time to learn didn't go to waste, we resorted to using videos, SOPs and recipes in the absence of mentors' (July 2022). While these resources were helpful, relying solely on them presented challenges to students' development of occupational competence.

The use of artefacts may have deprived students of essential human interaction, particularly with experienced workers who, according to this study, play a pivotal role in WBL. This research highlights that learning processes and concepts that are more tacit often require close engagement and interaction with experts to make these practices or concepts more explicit and accessible. Participant 110 stated, 'demonstrations and explanations went well together' (July 2022). Relying solely on mediating artefacts without the human touch may not have been as effective in building occupational competence. Some artefacts lacked explanations, leaving students with unanswered questions and potentially hindering their learning experience.

An over-dependence on some of these artefacts may have affected students' creativity and innovativeness negatively. For most of these artefacts to be used effectively, there was still a need for social interactions between experts and students. This provided explanations and answers to the questions students had to make explicit, knowledge that was tacit. In this way, mediating artefacts work alongside human interactions for students to benefit from WBL. This is echoed by Participant 105 who noted, 'I preferred working directly with experienced workers; at least they repeated an explanation if I wouldn't have understood' (June 2022). Social interaction, according to the data, gave superior clarity and aided learning, eliminating ambiguity or misinterpretation of communication contained in audio recordings, videos, or texts. Direct guidance in WBL takes precedence over indirect guidance because workplace knowledge and practice are difficult to learn without the close assistance of an expert. The study highlights the need for human contact through what Lave and Wenger (1991) refer to as social interaction to enhance the comprehension of information provided by artefacts.

Learning to operate machinery was also regarded as difficult without the close guidance of the mentor, despite resources such as SOPs. Participant 103 noted:

> most of the time the mentor was not available to show me how to operate some machines… I was left with no choice but to use SOPs which I sometimes couldn't understand because some aspects needed clarification (May 2022).

At times, the learning process was halted when students could not proceed with operations without the help of the mentor. In these moments, as noted by Participant 104, 'we washed dishes and scrubbed floors until the kitchens were less busy and mentors were made available' (May 2022). Although workplace mentoring was found to significantly enhance the attainment of occupational competence, much of the improvement hinged on the mentors' actions and efforts. The study highlighted that mentors often spent most of their time fulfilling their primary roles as pastry chefs rather than focusing on mentoring students in WBL. This imbalance, where mentoring responsibilities were secondary to their primary duties, seemed to negatively impact the effectiveness of WBL.

The findings indicate that in the absence of expert guidance, students turned to mediating artefacts such as videos, SOPs, posters, and recipes to support their WBL. While these artefacts were useful, their effectiveness was limited as they did not always address students" questions or provide comprehensive support. This highlights the critical need for direct guidance,

support, and social interaction between students and experts in WBL to ensure more effective and holistic learning experiences.

6.5 Conclusion

In this chapter, I presented the data acquired from workplace observations and face-to-face interviews, aligning them with the primary research question and its sub-questions. I examined what and how hospitality students learned about pastry in the pastry kitchen. The discussion highlights that during WBL students learn through social participation with experts and the community of practice. Here, students engage and interact with experts and the community in the actual practices of the workplace such as applying techniques, using tools, exchanging ideas, sharing knowledge and skills, and solving real-world challenges. Learning, in this case, is deeply connected to social interaction and collaborative engagement, making it a collective rather than an individual endeavour. This active involvement helps students internalise new knowledge and refine skills.

The study illuminates four guided learning strategies which are modelling, coaching, scaffolding and fading. Here, modalities such as observations, demonstrations, imitations, and explanations are used to help students develop occupational competence. These modalities demonstrate that learning in the workplace is both implicit and explicit. Implicit through observations, demonstrations and replication and explicit where verbal descriptions are used. Interactions and engagements make the expert other and the community of practice the most valuable learning resources for building students' occupational competence in the workplace.

However, the study shows significant concerns about the workplace environment as a space for learning. While experts are skilled in their trade, they lack the necessary pedagogical training and struggle to mentor students. They are overprotective of their jobs, creating barriers to effective learning. They seem more concerned with job security than with students' learning. Experts are often too busy with production targets to dedicate time to mentoring students, relegating them to menial tasks and activities rather than meaningful jobs that relate to the trade, further diminishing the value of WBL.

Students expressed that they gained valuable knowledge and skills by actively engaging in tasks and learning through doing the work itself, a process they described as learning by doing.

This approach emphasises that learning takes place through getting one's hands dirty, where individuals acquire knowledge and skills by participating in real-world activities rather than through theoretical instruction. Through hands-on engagement, students develop practical understanding and problem-solving abilities that are directly relevant to their field, making the learning experience more meaningful and aligned with real-life practices. In this scenario, learning becomes a continuous process woven into daily tasks and activities, reinforcing the idea that participation in tasks fosters deeper understanding.

However, students also highlight a tension between this ideal and the realities of the workplace. While learning by doing requires time for reflection and repetition to concretise skills and develop tacit knowledge, students note that the fast-paced nature of the workplace often leaves little room to revisit tasks, meaning they are forced to learn on the go. This creates a challenge, as students must quickly adapt and absorb knowledge in a high-pressure environment without the opportunity to practice extensively, which may limit the depth of their learning experience.

This study emphasises the crucial role of mediating artefacts in supporting students during times when experts are unavailable. According to the study, resources such as recipes and videos provide flexibility and enable self-directed learning, allowing students to progress in their occupational competence even without expert mentorship. These artefacts facilitate self-paced learning, optimising the educational experience by giving students the autonomy to manage their learning.

Nevertheless, the study also highlights a potential drawback: excessive reliance on these artefacts may reduce opportunities for social interaction and direct engagement with experts. Since learning from experts is essential for acquiring tacit knowledge, the absence of personal mentorship can limit the depth of learning. The findings suggest that while mediating artefacts offer valuable support, they cannot entirely replace the critical benefits of expert guidance and interaction, both of which are fundamental for a well-rounded WBL experience.

In the subsequent chapter, I analysed and discussed these findings, drawing upon the reviewed literature, the elucidated theoretical framework., my experiences with WBL and similar research.

CHAPTER 7: Discussion of Findings

7.1 Introduction

In this thesis, I examined the role of work-based learning in fostering occupational competence among hospitality students, specifically within the context of pastry. The central research question that guided this study was: **What is the contribution of work-based learning to the development of occupational competence in hospitality students?**

The primary finding of the study demonstrates that students primarily learned through the expert-novice relationship, described by Lave and Wenger (1991) as involving social engagements and interactions. In this context, students acquired skills by observing and imitating experts. However, the experts were often unavailable due to their demanding work schedules, limiting opportunities for direct guidance. Even when available, many experts struggled to effectively explain concepts, a limitation attributed to the type of training they had undergone and their lack of pedagogical training. Despite the emphasis that social learning theorists, such as Lave and Wenger, place on the critical role of experts during WBL, the study found that expert pastry chefs who served as mentors generally lacked the pedagogical qualifications needed to mentor students effectively. This challenge is compounded by employers' perception that pedagogical qualifications for pastry chefs are unnecessary. Employers often regard WBL as a drain on production time and profits, which undermines the potential for structured learning experiences in the workplace.

To enhance the effectiveness of WBL, employers should prioritise equipping experts with pedagogical skills and allowing more flexibility in their busy production schedules. Providing experts with pedagogical training would enable them to convey complex concepts more clearly and engage students more effectively. Additionally, allowing flexibility in production schedules would ensure that mentors are consistently available to provide direct guidance and support. This approach would lead to more meaningful learning experiences, enabling students to gain a better understanding of their tasks and develop the required occupational competence more efficiently. By fostering an environment where mentors can offer consistent and effective instruction, the overall quality and outcomes of WBL for hospitality students would be significantly improved.

In this chapter, I provide a comprehensive account of the research findings, linking them to my theoretical framework and the existing literature to highlight this study's contributions to the pastry chef trade and the broader hospitality industry. This thesis demonstrates that students acquire both technical and generic skills through WBL. However, the findings suggest that the potential for even greater learning outcomes exists, which could have been realised if experts had been consistently available to guide and mentor students. The implications of this research highlight the need for improved mentor availability and support to maximise the effectiveness of WBL in developing occupational competence.

In section 7.2, I emphasise the central claims regarding what and how students learn through social participation. Despite the challenges associated with learning from experts, the study highlights that students gained both technical and generic skills from their interactions and engagements with others. These engagements provided students with opportunities to observe, imitate, and participate in activities that enhanced their understanding and competence, underscoring the significance of socio-cultural learning in the workplace.

In Section 7.3, I argue that students develop occupational competence primarily through situated learning, where knowledge and skills are acquired in the context where they are applied through hands-on experience, aligning with John Dewey's concept of experiential learning. I discuss how students learn by repeatedly performing tasks in an authentic workplace environment. However, the study also found that students were sometimes relegated to menial tasks that did not require expert mediation mainly because the experts were frequently occupied with their duties and unable to engage with the students. Additionally, the process of learning by doing was often perceived as exhausting by the students due to the long hours required in actual production.

In Section 7.4, I analyse how theory was applied to practice to build occupational competence. Despite the TVET college curriculum not being fully aligned with workplace practices, the study found that students were still able to transfer scientific knowledge and basic manual techniques from the classroom to their workplace experiences to some extent.

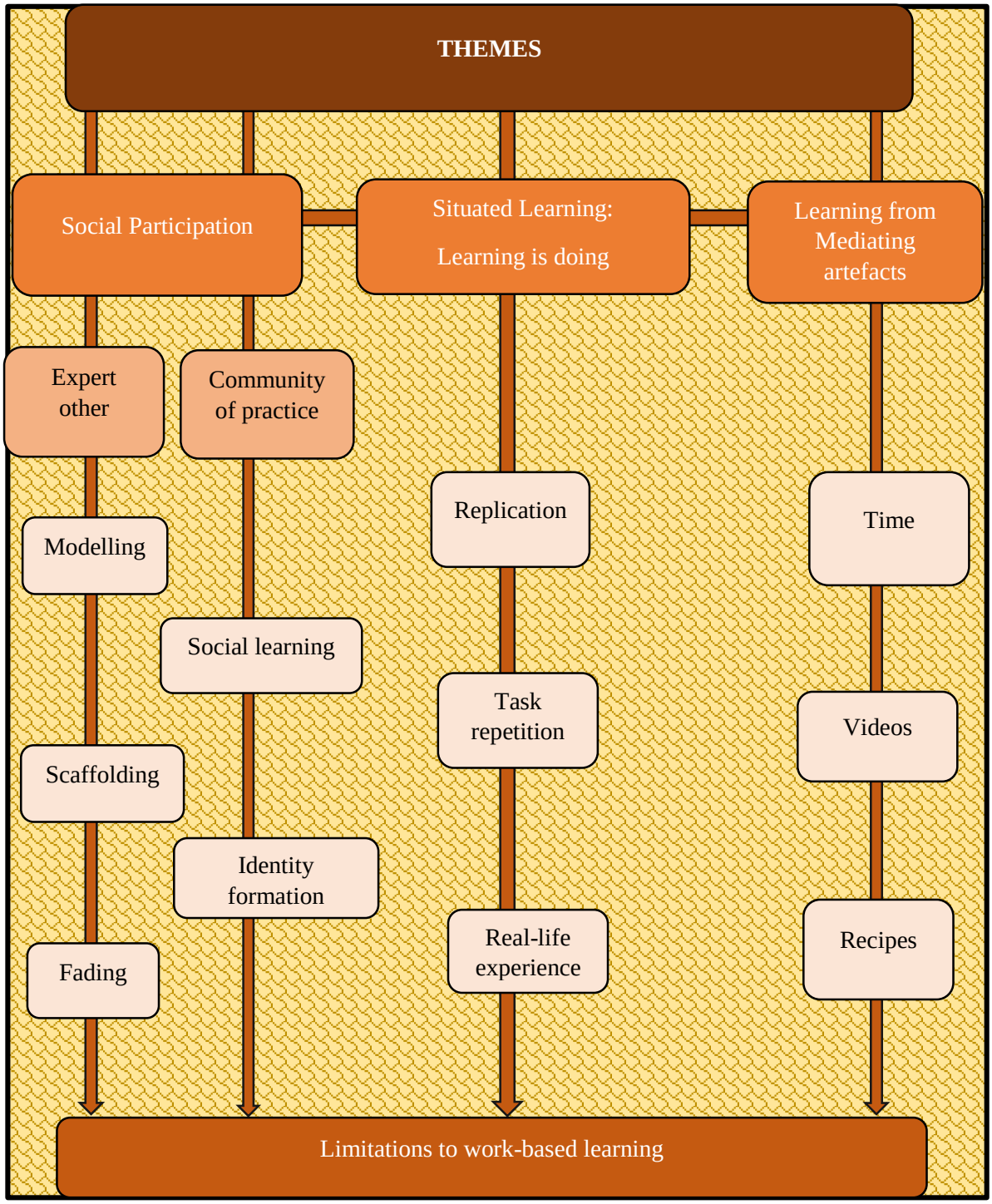
In Section 7.5, I argue that mediating artefacts played a crucial role in WBL, by enabling students to continue their learning when experts were not available. These resources ensured that the learning process remained uninterrupted. Among these artefacts, the use of videos

emerged as particularly significant in developing occupational competence as videos could repeatedly be paused and replayed to help students understand and refine skills. However, while these tools were beneficial in helping students master specific tasks, an over-reliance on these artefacts could negatively impact creativity and innovativeness. Therefore, while mediating artefacts are valuable, they should complement, not replace, social engagements and interactions to make WBL truly effective and meaningful.

In Section 7.6, I discuss the knowledge and skills that are most effectively acquired in a classroom setting. This includes scientific knowledge, theoretical understanding, and foundational manual skills. In Section 7.7, I focus on the knowledge and skills that can only be gained through direct interaction with experts. I argue that under the guidance of experienced mentors, students learn industry-specific practices and essential generic skills that are vital to the hospitality industry.

Finally, figure 4 overleaf presents the main and sub-themes derived from the analysis of the study's findings, offering a detailed and comprehensive view of how hospitality students develop occupational competence in pastry through WBL. These themes encapsulate the various dimensions of learning, encompassing both technical and generic skills, and provide insight into the processes and interactions that facilitate such development.

Figure 4: Themes and sub-themes after the analysis of data



Source: Author's creation

7.2 Social Participation: Learning through Others

Although students in the workplace had access to various learning methods, this research elucidates that the most effective WBL approach was learning through social participation and engagement with experts and the community of practice. These interactions include

relationships between newcomers and old-timers (Fuller & Unwin, 2005) and between novices and experts (Lave & Wenger, 1991). This finding aligns with Lave and Wenger's (1991) situated learning theory which states that novices acquire knowledge and skills through their interactions with more experienced individuals. According to Wenger (1998), learning is inherently woven into an individual's daily interactions and participation within their community of practice.

This study affirms two primary modes of learning through others. Firstly, learning occurred through direct engagement with expert pastry chefs, who provided support and guidance via modelling, coaching, scaffolding and fading. Experts shared their knowledge through demonstrations, question-and-answer sessions, and feedback which were crucial for developing students' occupational competence. Secondly, WBL enabled students to connect and engage with the broader community of pastry chefs. This community, using both formal and informal meetings, fostered knowledge and skill sharing, discussions, and collaborative learning, further enhancing the development of occupational competence.

This study indicates that students acquired a broad spectrum of valuable knowledge and skills from their interactions with others in the pastry kitchen. Key areas of learning included baking techniques, pastry decorations, menu planning, ingredients selection, time management, food safety, troubleshooting and many others. These experiences offered practical insights, tips, and real-life examples that significantly enriched their learning. Learning through others facilitates the transfer of tacit knowledge, which is often challenging to capture through traditional classroom-based education.

7.2.1 The Role of the Expert Other in Work-Based Learning

Despite the diverse array of learning methodologies available in the workplace, the research distinctly highlights that the most impactful learning was achieved through social participation with the 'expert other' (Lave & Wenger, 1991; Wenger, 1998). The concept of 'expert other' is associated with Lave and Wenger's (1991) situated learning theory which is rooted in Vygotsky's (1978) zone of proximal development. This theory emphasises that learning is inherently social and is facilitated through interactions with more knowledgeable individuals. By utilising mediating tools and engaging in goal-oriented activities, experts guide and support newcomers in their learning journey. In this context, students were not left to navigate their

learning independently; instead, they benefited from the presence and guidance of experienced professionals.

Students appreciated the experts' efforts, citing that their support was crucial for building confidence to undertake and complete their daily tasks. The experts' dedication to WBL was linked to a broader principle of industry revitalisation and a desire to share the opportunities they once received. Having experienced similar training, mentors were empathetic to the challenges faced by students and understood the importance of their guidance. The support and intentional guidance provided by these experts were central to students' learning process. Key pedagogic practices, such as structured support and sequenced access to workplace activities, were integral to students' development and learning.

The study examines how support and guidance were instrumental in helping students develop occupational competence, focusing on modelling, scaffolding and fading (Billett, 1994b, p. 11). These strategies were implemented in various ways to enhance learning through active participation and engagement in daily work activities. They provided both direct and indirect guidance and were key determinants in the quality of learning that emerged from students' interaction within a socio-cultural environment that was conducive to engagement. Billett (2001b, p. 209) argues that consistent support and guidance from experts are essential sources of learning for students in WBL settings.

7.2.1.1 Experts Failed to Explain Concepts During Demonstrations

According to the findings, experts used four guided learning strategies that include modelling, coaching, scaffolding, and fading (Billett, 1994b, p. 11). These strategies were used in various ways to enhance learning through participation and engagement in daily work activities. However, experts primarily offered indirect rather than direct guidance, which significantly influenced the quality of learning experienced by students.

Despite some limitations in their experiences of WBL, observing experts in action allowed students to grasp the nuances, subtleties, and real-world applications that textbooks or lecture rooms could not be able to provide. According to this study, demonstrations enabled students to observe how tasks were performed, how clients were managed, how machines were operated and how challenging situations were addressed. These real-time experiences offered opportunities to develop positive personal attitudes, problem-solving skills and familiarity with

workplace etiquette. Such direct exposure to practical scenarios and expert knowledge appeared to help students understand the context and intricacies of their field more deeply.

However, an intriguing aspect of the study was the contrasting preferences for WBL modalities between mentors and students. This divergence underscores significant differences in engagement and interaction. Experts tended to favour incidental or unplanned demonstrations, expecting students to learn by observing as they performed their daily tasks. This aligns with Billett's (1994b) concept of incidental learning, where demonstrations are unstructured and arise naturally during work. Lave & Wenger (1991) and Wenger (1998), suggest that, especially in the early stages, newcomers learn at the periphery where they observe and replicate the expert at work before becoming involved in the core processes of the practice – a process they term "legitimate peripheral participation". Similarly, Hasrati (2005) views this as a progression from "periphery" to "mastery". Billett (1994b, p. 11) also highlights that expert demonstrations allow learners to observe task completion and understand the expert's methods, which they can then imitate. Literature generally supports the view that demonstrations and observations are effective for students to develop competence during WBL.

This contrasts students' preference for a more structured WBL environment with clear guidelines, objectives, and milestones. They preferred that experts provide explicit and detailed explanations of the what, why, and how of their actions. This preference reflects their desire for a holistic understanding that not only clarifies the work methodologies but also the underlying concepts. This explicit instruction allows students to grasp the rationale behind specific techniques, fostering deeper comprehension and aiding the application of knowledge in different contexts. Students preferred learning modalities like those used in the classroom, which often involve multimodal learning. However, experts often avoided explaining concepts either due to time constraints or because they found it challenging to articulate their tacit knowledge.

The combined use of demonstrations and detailed explanations to provide a holistic understanding of concepts suggests a symbiotic relationship between tacit and explicit knowledge, facilitating the conversion of implicit understanding into accessible knowledge for students. This view is supported by scholars such as Le Clus (2011), Fuller et al., (2005), Eraut (2004) and Billett (2013) who argue that tacit knowledge is most effectively acquired when complemented by explicit knowledge. Similarly, Billett (1994b, p. 13) contends that the role

of the expert is to make their tacit knowledge accessible to novices, suggesting that verbal descriptions of processes can reveal expert performance, thereby facilitating learning for newcomers.

When executing tasks, experts often enter what Eraut (2000) refers to as 'the intuitive mode', which relies heavily on prior experience and the use of tacit knowledge. Tacit knowledge, as noted in preceding sections, is inherently difficult for the practitioner to describe explicitly (Polanyi, 1967). Eraut (2004, p. 252) further argues that this type of knowledge is challenging to articulate, codify, or transfer to others through explicit instructions or written documentation. Instead, tacit knowledge is generally acquired through personal involvement, practice, observation, and immersion in a specific context or domain (Eraut, 2000).

Expert chefs, for example, might knead bread dough to the correct consistency instinctively, without needing to follow a recipe, yet they may find it challenging to describe the precise method they used. Similarly, Billett (1992b) uses the example of riding a bicycle to illustrate the difficulty of articulating tacit knowledge. He argues that a rider is typically unable to explain the critical aspects of their rapid responses to maintain balance, while other relevant knowledge, such as the stabilising effect of the gyroscopic motion of the wheels, is rarely understood explicitly. Billett's (1992) example demonstrates the inherent difficulty in making tacit knowledge explicit, as this knowledge is mainly gained through experience and can be challenging to communicate with others.

The findings reveal that experts often failed to explain concepts clearly, frequently provided negative feedback, and at times resorted to yelling at students, which led to animosity and resentment between the experts and students. These behaviours were primarily attributed to the lack of pedagogical training among experts. In most countries, workplace mentors are not required to undergo training in teaching or instructional methods (Lucas et al., 2012), even though such skills are essential for effectively training students in the workplace. Employers often do not consider these qualifications necessary, viewing WBL as a drain on production time and a potential cause of profit loss due to perceived downtime. The dual worlds of vocational education, the educational institution and the workplace demand two distinct sets of expertise: lecturers with practical industry experience and industry experts who are capable of teaching.

The limited pedagogical preparedness and proficiency of experts hindered their ability to mentor students effectively. Without formal training in vocational teaching methods, expert chefs struggled to communicate complex concepts in an easily understandable manner. Their deep expertise in pastry did not automatically translate into effective instructional skills. This lack of pedagogical training often led to frustration, causing some experts to resort to negative feedback and shouting as a misguided attempt to assert authority and maintain control.

Ideally, as argued by Lucas et al. (2012, p. 25), mentors in WBL should fulfil dual roles: as experts in their field and as mentors. This dual role requires not only subject matter expertise but also pedagogical skills, which are typically gained through a vocational teaching qualification. Consequently, Lucas and Claxton (2013, p. 25) contend that workplace mentors should possess both a trades qualification and a vocational pedagogy qualification, along with current industry experience, to mentor students effectively during WBL.

This disconnect ultimately affected the overall quality of learning students received in the workplace. This finding resonates with Lave and Wenger's (1991, p. 71) example of construction apprentices who experienced mistreatment by seasoned workers. According to Lave and Wenger, such harsh treatment can obstruct the development of the occupational competence necessary for the trade.

7.2.1.2 Scaffolding: Guided Participation and Competence Development

Support and guidance from experts in the workplace also involved scaffolding (Berk & Winsler, 1995; Brown et al., 1989; Stone, 1998). Rogoff (1994, p. 11) refers to this process as guided participation. Vaughan et al., (2011, p. 6) define scaffolding as a structured form of guided learning at work, particularly associated with the learning of tacit knowledge such as the 'tricks of the trade', and facilitating the transition from the periphery to full participation. Billett (1994b) regards scaffolding as an interpersonal process where roles are managed collaboratively, helping to structure situations for observation and participation in cultural activities. Scaffolding included additional suggestions, tips, general reminders, and sometimes task demonstrations. At times, experts would perform parts of a task that the student could not yet manage, gradually allowing the student to complete the task independently.

At times tasks were broken down into manageable steps, allowing students to gradually develop their competence. According to the study findings, students began with smaller and

simpler tasks and progressively tackled more complex ones. This is what Lave and Wenger (1991) refer to as 'legitimate peripheral participation'. The concept of legitimate peripheral participation explains how novices start by participating/engaging in simple tasks on the periphery of the practice towards expertise. In this case, the novice is not yet at the core of the practice's activities but engages in tasks that are on the periphery or that are less central. These tasks are still meaningful, but they often involve lower levels of responsibility or complexity. In this case, students gradually built occupational competence without being overwhelmed. This allowed them to understand the practices, norms, and values of the trade. Boblett (2012, p. 2) asserts that scaffolding involves a teacher demonstrating a step in a task, which the learner then imitates appropriately.

Scaffolding emerged as a favoured instructional strategy in WBL, designed to minimise errors, wastage and risks inherent to the learning process. This support steered students away from mistakes, fostering the development of safe work practices and mitigating the often costly trial-and-error approach. Optimal learning occurred within the zone of proximal development (Vygotsky, 1978), where tasks were neither too simple nor beyond students' abilities. Within this zone, the expert provided temporary assistance in the form of scaffolding.

This model follows a gradual progression from observation to participation in increasingly complex tasks, mirroring key aspects of the scaffolding process. However, Billett (1994b) emphasises the need to accurately assess both students' competence levels and the complexity of tasks as critical prerequisites for effective scaffolding. Collaborative learning between students and experts underscores the inherently social nature of WBL. This interaction encourages the acquisition of tacit knowledge and fosters a supportive learning environment. Lave and Wenger (1991) advocate for a social perspective on WBL, highlighting the role of social structures and relationships in knowledge acquisition. Their view is closely aligned with the master-novice model, as described by Fuller et al. (2005), which emphasises the importance of learning through participation in a community.

The scaffolding learning strategy stands in stark contrast with the colloquially termed 'sit by Nellie' approach, which refers to a subpar method of WBL. In this approach, rather than receiving direct guidance from an experienced mentor, students are expected to passively acquire job knowledge by simply observing 'Nellie,' a seasoned worker. Barnett (2006) argues

that this phrase reflects the traditional apprenticeship model, where novices learn through passive observation of experts.

In contrast, this study shows that students actively sought out and relied on suggestions, tips, and guidance from experts. Regular interactions between students and experts were observed, with students receiving both direct and indirect support in the form of scaffolding. This active engagement highlights the effectiveness of scaffolding as a method for facilitating learning in the workplace, moving beyond passive observation to a more dynamic and supportive learning process.

7.2.1.3 Fading into Mastery: Nurturing Independence and Self-Directed Learning

As students gained competence and confidence in executing tasks, the scaffolding, provided through instructional support and guidance was gradually reduced or removed, a process Billett (1994b, p. 12) refers to as "fading". The term 'fading' conveys the idea expert support and guidance should slowly diminish over time, allowing students to develop greater self-reliance and independence in both their learning and performance. In practice, experts often employed fading to promote self-directed learning and enhance students' capacity to handle tasks autonomously. However, one observation in WBL is that students can become overly dependent on instructional support, which may hinder their ability to demonstrate their competence without assistance. By gradually reducing support, experts encouraged students to take on more responsibility for their learning, problem-solving, and decision-making. Brown et al., (1989) argue that more distant support through the fading process provides opportunities for students to engage in increasingly complex tasks, thus fostering their growth and independence.

In the fading process, experts empowered students to work independently as they became less available. This occurred when students' occupational competence was deemed sufficient to perform tasks largely on their own. At this stage, students could complete specific tasks or a portion of tasks with minimal assistance, only occasionally seeking feedback from mentors on their completed work. Fading also illustrated how students transitioned from the periphery of the practice to its core, a process described as legitimate peripheral participation (Lave & Wenger, 1991; Wenger, 1998) as mentioned in section 7.2.1.2. As students became more active and engaged with increasingly complex tasks, they began to assume roles resembling those of experts, while their mentors progressively withdrew. In other words, after an initial period of

learning with expert guidance on the periphery, students gradually became more competent and involved in the core processes and operations of the pastry kitchen.

Fading also encouraged the promotion of self-reflection and self-assessment among students. As the expert's guidance diminished, students were prompted to evaluate their performance, identify areas for improvement, and take the initiative to expand their competence. They often achieved this by using other mediating artefacts, such as recipe books and instructional videos. This process empowered students to become more self-directed, adapt to new challenges and continue developing their skills independently. By gradually reducing support and fostering independence, fading effectively bridged the gap between being a student and becoming an expert.

7.2.1.4 The Complexities of Learning through Experts

Learning from experts proved to be valuable and enriching, yet it also highlighted certain limitations. The study indicates that experts often face significant pressure to meet tight production targets in the fast-paced, demanding industry in which they must swiftly respond to the ever-changing demands of the customers. Additionally, they are burdened by a heavy administrative workload, which is crucial for maintaining the daily operations of the pastry kitchen. These responsibilities include managing a dynamic range of the latest software and applications designed to streamline operations and enhance productivity. These tight production targets and additional administrative duties have reduced experts' availability for WBL.

When experts were unavailable, students were often assigned to menial tasks due to their perceived inability to handle substantial responsibilities without close supervision. Experts, faced with demanding work schedules and production targets, had limited time to mentor students, which restricted students' access to personalised guidance. Peach et al. (2014, p. 245) support this observation, noting that the busy nature of workplaces, often constrains mentor-student engagement and interactions. This limited exposure to expert guidance in the workplace may have compromised the overall effectiveness of WBL.

Findings suggest that experts prioritise their core duties over mentoring responsibilities to contribute to the success of the business, maintain competitiveness in the industry, and ensure job security. Similarly, Papier and Vollenhoven (2017) contend that experts, constrained by

production schedules and profit-driven motives, often neglect their mentoring roles. This focus on production and profit hindered students' learning experiences. In profit-driven workplaces, productivity, operational efficiency, and tangible results are frequently prioritised over WBL, with time allocated to mentoring potentially diverting focus from tasks that impact experts' earnings.

In certain cases, as the study demonstrates, experts were hesitant to provide ongoing support and guidance to students, which potentially hindered the learning process. In such cases, students were assigned repetitive and menial jobs unrelated to their future roles. This reluctance to support students often stemmed from concerns such as fear of losing status or being replaced by the students they mentored. Such an attitude, viewing students merely as runners rather than integral participants, hindered effective learning and obstructed the reproduction of expertise within the profession. This presents a significant challenge to the effectiveness of WBL initiatives. Billett (1995) emphasises the importance of fostering a workplace culture where novices are guided by experts to develop competence. He argues that when experts feel secure and free from the fear of displacement, it positively impacts WBL environments. Billett (1995) illustrates this with the example of Japanese corporations, where WBL is common. In these corporations, experts confidently mentor novices, as promotions are based on seniority rather than competition. This structure allows experts to provide guided learning experiences without fear of being displaced by those they have mentored.

This study illuminates that not all WBL experiences were positive or aligned with best practices. Some experts failed to contribute effectively to students' development of occupational competence because they undervalued WBL, considering it a waste of time. In some cases, students acquired inappropriate and unhelpful work-related knowledge from these experts. They learned subpar practices, such as improper handling of ingredients, neglect of sanitation protocols, and inaccurate measurement techniques, resulting in inconsistent and compromised pastries and desserts. Additionally, students were taught dangerous shortcuts due to rushed baking processes, compromising both the quality of the products and the safety of themselves and others.

Similar findings by Billet (2001b) indicate that WBL can sometimes result in the acquisition of inappropriate or unhelpful work-related knowledge, including substandard practices or risky shortcuts that undermine students' learning outcomes. The learning of sub-standard practices

causes unintended and inappropriate outcomes, an effect often referred to as the hidden curriculum (Billett, 1993, 1994a, 1998; Moore, 1986). The likelihood of a student developing into a broad expert depends on whether workplaces assign trained experts to mentor students and have a well-designed WBL programme that provides comprehensive learning. For a WBL programme to be successful, Abeysekera (2006, p. 18) argues that it should adhere to the principles of best practice, such as assigning mentors who have the appropriate qualifications to mentor students.

Despite their extensive experience and expertise, many experts may lack the necessary mentoring skills to effectively guide students (Jackson, 2015). Effective WBL relies heavily on social and cultural practices (Lave & Wenger, 1991, p. 22), and experts must demonstrate diligence in their interactions. Their commitment can significantly enhance a supportive and respectful learning environment, which is essential for fostering effective occupational competence among students.

7.2.2 Cultivating Expertise: Learning through the Community of Practice

This study describes the pastry kitchen as a dynamic environment where individuals interact and share knowledge through a community of practice. This community includes senior employees with extensive experience, junior members with less number experience, and students participating in WBL. The group comprises roles such as the head chef, supervisors, expert pastry chefs, mentors, novice pastry chefs, and students. Their shared interest in pastry, stemming from their work in the pastry kitchen unites them within this community of practice, a concept introduced by Lave & Wenger (1991) and Wenger (1998).

Fundamentally, learning occurred within the social context of the community, evolving naturally as members exchanged knowledge and competence. According to the study, knowledge was shared through various methods, including brainstorming solutions to problems, discussion meetings and practical knowledge-sharing meetings. The meetings were held both formally in boardrooms or kitchens or informally during tea and lunch breaks.

7.2.2.1 Harnessing Tacit Knowledge: Social Learning in a Community of Practice

One key aspect that distinguished this group from traditional learning settings was its focus on the social nature of learning. In this environment, students engaged actively through participation, observation, and interaction with the group. Learning in this context is seen as a

social practice, rooted in social, historical, and cultural factors (Lave & Wenger, 1991). The social context provided rich learning opportunities, allowing students to absorb tacit knowledge, refine techniques, and develop a deeper understanding of pastry-making.

Initially, students learned from the periphery of the practice by observing and listening. Over time, they moved towards the core of the practice, approaching what Guile and Unwin (2019) describe as expertise. The concept of learning from the periphery towards the core of the practice is regarded as 'legitimate peripheral participation'(Lave & Wenger, 1991; Wenger, 1998). Learning was facilitated through participation in brainstorming sessions, discussions, demonstrations, and imitation.

The study shows that the group of pastry chefs engaged in collaborative problem-solving sessions, creating a platform for sharing work-related challenges and finding solutions together. Through these interactions, members leveraged each other's diverse experiences and insights from various job situations. They identified and addressed common issues related to the texture, taste, appearance, and consistency of pastry products.

The inclusive nature of these discussions encouraged contributions from all members, fostering students' ongoing participation and engagement. This approach not only facilitated the acquisition of new knowledge and competence but also nurtured problem-solving abilities among all participants, including students. By actively participating in this communal memory, members could navigate their work more effectively, drawing from a collective repository of expertise and solutions rather than relying solely on individual memory. This collaborative problem-solving approach aligns with Wenger's (1998, p. 3) concept of communities of practice, which emphasises tackling recurring challenges collectively within organisational settings.

In addition to problem-solving sessions, the community of practice observed in the study provided a structured platform for members to exchange insights, experiences, and diverse approaches to their work. During tea and lunch breaks, members shared stories, experiences, and innovative ideas, fostering a culture of continuous learning. This collaborative environment not only enhanced occupational competence but also promoted innovation within the group. This finding aligns with research by Lave (1990) and Lave & Wenger (1991), which highlights the importance of learning through interaction and participation within communities of

practice. Moreover, the findings support Collin and Valleala's (2005) argument that communities of practice are increasingly valued in businesses for their role in facilitating knowledge sharing, collaboration, and ongoing learning among members.

In the context of WBL, a noticeable distinction emerged where a more formalised approach to learning and explicit knowledge was prominent. In these settings, discussions among members focused on structured and articulated information. Members engaged in systematic approaches, including deliberate conversations, training sessions, or workshops to address various issues. Here, the group of pastry chefs gathered to address pressing concerns and improve their practice. These gatherings involved verbal discussions where members tackled issues such as proper sanitation, handling and storage of ingredients (especially perishables), and maintaining clean working environments to prevent cross-contamination. The community also discussed various pastry-related techniques and strategies for improvement, contributing to the overall development of their practice. This emphasis on formality highlights the value placed on explicit knowledge, as members were encouraged to share, analyse, and refine their understanding of critical information to optimise performance. Thus, in this context, WBL was characterised by a formal approach where explicit knowledge played a central role in the discussions and learning processes within the community.

The community of practice functioned as a self-organising system (Wenger, 1998), continuously adapting to the evolving needs of the industry. Proactively, they developed and refined their occupational competence to maintain a competitive edge in the market. They collectively managed and shared their expertise in preparing various dishes, both traditional and innovative. Collaboratively, they created new pastry dishes and desserts for fresh menus, meeting regularly for practical sessions to introduce and master new techniques. This process of developing new menu items involved collective practical learning, demonstrating how the group united by sharing knowledge and skills, learned together. Here, knowledge-sharing took the form of hands-on demonstrations, where expert members showcased their skills while other members emulated and practised these techniques.

This engagement highlights the group's commitment to equipping each member with the competence required to meet pastry production objectives and maintain high standards in their practice. Through the creation of new pastry items, they facilitated knowledge exchange on ingredient selection, recipe development, flavour harmonisation, and presentation techniques.

Specialised knowledge was collaboratively shared, refined, and enhanced within the community of practitioners, who shared a common lexicon and understanding of the craft.

Sharing practical know-how through demonstrations facilitated the transfer of tacit knowledge among members, a critical resource for the organisation's future competitiveness. For the organisation to thrive, this knowledge needed to be disseminated effectively, making the group a vital mechanism for sharing and transferring expertise. Through participation in these knowledge-sharing sessions, peripheral members such as students were able to develop occupational competence. The research illustrates how learning within the community of practice enabled students to gain technical skills in creating trending pastries, including cakes, pies, tarts, cookies, and different breads. According to Wenger (1998), communities of practice emerge precisely because they foster a shared practice among members through collaborative learning processes.

7.2.2.2 Identity Formation through Learning within a Community of Practice

In his seminal work 'Communities of Practice: Learning, Meaning, and Identity,' Wenger (1998) delves into the intricate relationship between identity and learning within the context of communities of practice. Wenger's (1998) insights have profoundly shaped the understanding of how individuals, particularly students, construct and negotiate their identities through participation in social groups. He argues that identity is not a static or fixed entity, but a dynamic, evolving construct closely linked with social engagement and the communities to which individuals belong. Wenger (1998) asserts that as individuals engage in shared practices within their workplace, they not only gain knowledge and skills but also shape their identities. The study highlights how students, through their interactions and involvement with the community of pastry chefs, negotiated their roles, values, and sense of belonging. This engagement influenced their self-concept and their perception of themselves with others. The discussion in this section examines how the students developed their identities by actively participating in and contributing to the community of pastry chefs.

According to this research, the group of pastry chefs offered a supportive environment where students could develop and solidify their identities as aspiring pastry chefs. Through active participation, interaction, and relationships within the group, students transformed into the professionals they aimed to become. This aligns with Lave and Wenger's (1991) perspective, which views learner identity as emerging from the context of 'co-participation' in learning. For

students, identifying with the members of the community was a significant aspect of their learning experience, underscoring the importance of belonging and engagement within this social context.

The study suggests that to uphold their practice, each member of the community was expected to exhibit a high level of pastry expertise, marked by creativity and artistic flair. This included the ability to design visually appealing and innovative pastry creations and experiment with flavours, textures, colours, and presentations to produce unique and enticing desserts. To safeguard their craft, the group was anticipated to excel in essential culinary techniques, precise ingredient measurement, temperature control, timing, and strict adherence to safety and hygiene protocols.

Thus, the group was committed to ensuring that each member possessed the necessary competence to fully engage with the trade, gathering to explore and master its intricacies. This collective learning approach distinguished them from chefs outside the pastry trade, aligning with Wenger's (1998) concept of a 'shared repertoire.' As members, including students, became more proficient in using this shared repertoire, their identities within the community were strengthened. This observation aligns with Wenger's (1998, p. 181) assertion that communities of practice foster the development of distinct identities and expertise among their members. Wenger (1998, p. 181) states:

> a shared sense of identity, whereby learning is not just acquiring skills and information; but is becoming a certain person, who is a knower in a context where what it means to know is negotiated concerning the regime of competence of a particular community.

In other words, knowledgeability is closely linked to identity formation, meaning that learning transforms individuals into the people they aspire to become through their participation in the community of practice. Wenger (1998) argues that developing competence involves maturing into someone for whom that competence becomes a significant aspect of life. This perspective highlights how learning can alter an individual's identity and contribute to their personal development within the context of their community.

Additionally, identity is not something that individuals possess in isolation; rather, it is co-constructed and negotiated through interactions with others in social contexts (Wenger, 1998) Similarly, Wenger and Trayner-Wenger (2015) describe this as the shared domain of interest where being a member infers a commitment to the domain and a shared skill that distinguishes

the members from other groups or communities. This exploration of identity within communities of practice sheds light on the transformative power of social learning and provides valuable insights into how students' identities were shaped, contested, and developed through participation.

This study illustrates that students developed a sense of belonging and becoming through learning in the group. This contributed to their construction of new identities. Like Wenger (1998), I suggest that through learning together with other members, students developed a sense of belonging and identity forged within the group of pastry chefs, as they shared experiences, engaged in joint activities, and developed a shared sense of purpose (Wenger, 1998). This strengthened their affiliation and self-perception within their practice. Similarly, Fuller et al., (2005, p. 51), affirm that participation in social practice fosters a sense of belonging in a particular community. In this context, students acquired not only the technical skills necessary to become pastry chefs but also learned about the broader aspects of the job, including how members conducted themselves and interacted with one another as they developed their identities.

According to Wenger (1998, pp. 150–151):

> becoming a claims processor is both taking on the label 'claims processor' and giving this label specific meanings through engagement in practice. It is doing what claims processors do.

As students engaged with the identity of pastry chefs in this study, they began to see themselves as integral members of that community. This emerging identity, as highlighted by the study, reflected their evolving role and sense of belonging within the pastry kitchen.

The identities of this group, as established by the study, were reflected in their use of specific jargon and their adherence to a dress code in the pastry kitchen. Members wore their PPE with pride, ensuring they were clean and properly always maintained. While the PPE provided practical benefits, such as protection from heat, spills, and other hazards, it also symbolised professionalism and commitment to the craft of pastry making. The PPE fostered a sense of unity and cohesion within the community, establishing a consistent and recognisable image for both the community and the establishment they represented. By dressing according to these standards, students, like all members, visibly aligned themselves with the community of pastry chefs.

7.2.2.3 The Limitations of Knowledge-Sharing within a Community of Practice

Engagement and participation are crucial for the success of communities of practice in organisations, as they focus on transferring and sharing knowledge among members. However, the study shows several challenges in this process. Active involvement was often difficult because membership in the group was voluntary. Chefs were not obligated to participate, which limited WBL opportunities. The study notes that some chefs with valuable expertise chose not to join the community for various reasons, thereby impeding the knowledge-sharing process.

As previously indicated, some chefs were hesitant to join the community due to a lack of confidence in their ability to contribute to discussions and trust issues. The reluctance to join the community was often influenced by factors such as perceptions of initial training, expertise, cultural diversity, language, and power dynamics. Power issues included unequal recognition of expertise, fear of losing individual autonomy, and concerns about status. Some experts avoided participating to maintain their independence, while others preferred smaller groups with established credibility and a history of collaboration. The larger size of the group in the study may have contributed to this preference. Additionally, some experts lacked motivation to participate, perceiving no immediate relevance or benefits due to the absence of clear goals and objectives for the community of practice, which further exacerbated the issue. Resultantly, students missed out on valuable competence and unique insights, adversely affecting their WBL experience.

The study highlights that work-related deadlines often take precedence, resulting in limited time for the community of practice activities. To ensure the effectiveness of these communities, members must manage their time efficiently, allowing for regular interactions, engagements, and meetings despite demanding production schedules. Allocating specific time for these activities can facilitate knowledge sharing and ensure that students have consistent access to the expertise within the community.

The aforementioned challenges impeded students' learning opportunities, as the reluctance of experienced chefs to share their skills and knowledge deprived students of valuable insights. To address these issues, establishments should consider structuring knowledge networks that promote seamless knowledge-sharing among all members. By doing so, they can overcome the challenges identified in the study and enhance the overall learning process for students.

7.3 Situated Learning: Knowledge is Acquired in the Context where it is Applied

This study highlights how the workplace offered students valuable opportunities to acquire practical knowledge through direct engagement in tasks. This hands-on approach proved to be a key method for developing occupational competence, as it allowed students to actively participate in real-world scenarios and problem-solving. The concept of situated learning finds its origins in Lave and Wenger's (1991) theory. Within this concept, learning happens in the environment where the knowledge will be used. In this case, students in this study learned new techniques and knowledge by working in a pastry kitchen, applying skills directly to their craft. The learning is directly connected to the tasks they perform, making it more meaningful and applicable. Situated learning underscores the essential connection between knowing and doing, emphasising that practical experience is fundamental to acquiring and applying knowledge effectively.

Situated learning is equated to pragmatism which emphasises the integration of psychomotor skills; coordinating the mind and hands. Dewey describes pragmatism as a 'hands-on experience' which aligns with a constructivist and, to some extent, phenomenological approach, where students are seen as active participants who make sense of their roles and contexts through direct engagement (Lester & Costley, 2010). This concept resonates with Schön's (2001) idea of constructionism, where knowing and doing are intertwined in a dynamic process. Wenger (1998, pp. 50–51) refers to this interplay as practice (learning as doing) and meaning (learning as experience). The study's findings demonstrate that learning by doing was not only a common method in the workplace but also the students' preferred approach. It allowed them to practice, make mistakes, and learn from those experiences, thereby reinforcing their occupational competence.

7.3.1 Observations and Imitations Helped Students Learn Basic Skills

The study highlighted that students initially focused on mastering fundamental workplace practices before progressing to more complex tasks. They spent time observing and imitating experts, which enabled them to absorb essential tips and techniques. By starting with simpler tasks, such as measuring ingredients and preparing basic dough or batter, students built a solid foundation in pastry preparation. This gradual approach allowed them to become familiar with

the basics, develop essential skills, and gain the confidence needed to tackle more intricate and demanding activities as they advanced.

As their skills and confidence grew, students progressed to more complex pastry techniques, including creating tarts, pies, and éclairs, which involved different techniques and handling a variety of ingredients. They also learned to decorate cakes and cupcakes, including icing them, a crucial skill for any pastry chef. Additionally, they practised arranging pastries aesthetically on platters or plates, highlighting the importance of presentation in the field. The study indicates that students developed technical competence by actively engaging in these tasks after observing and imitating experts.

Billett (1994b) suggests that competence building arises from continuous observation and experience, while Eraut (2004) posits that learning often occurs through active engagement in workplace activities. The study underscores that exposure to real work contexts is essential for developing occupational competence, which academic programmes alone may not fully provide.

7.3.2 The Crucial Role of Repetition, and Trial and Error

As articulated by the study, students' learning largely derived from the repetitive execution of tasks and trial and error, both of which were crucial to WBL and the development of occupational competence. Billett (2013) supports this view, highlighting that expertise develops through an iterative process involving association, imitation, and practice. This emphasis on task repetition underscores the active nature of learning, where engagement and hands-on experience play critical roles in competence development. Learning by doing, through repetitive practice, allows students to master skills that textbooks or classroom settings alone cannot provide. For example, discerning a cake's readiness is a skill refined through repeated practice and is indicative of the tacit knowledge that expert pastry chefs develop over time.

The authentic work environment provided students with opportunities to perform tasks, make mistakes, and repeat activities, which solidified their skills and built their confidence. This hands-on practice, coupled with trial and error, allowed students to capture valuable tacit knowledge and learn from their mistakes. Billett (2014) draws a parallel to an experienced biker teaching a novice to ride a bike, where repetition and the process of falling and getting

back up are integral to learning. Similarly, this iterative approach in WBL enabled students to internalise essential occupational competence and insights, thereby deepening their understanding and expertise in their tasks.

7.3.3 The Authenticity of Real-Life Experience

The enjoyment derived from situated learning was a significant benefit highlighted by the study. Students reported a strong sense of accomplishment and satisfaction from creating pastry dishes and desserts that were served to real clients, contrasting sharply with the simulated experiences in college workshops. The genuine, hands-on experiences in the workplace not only provided practical application but also fostered a sense of authenticity and relevance, as students tackled real problems and contributed to real outcomes.

The data underscore that students valued the active engagement in their work, which they felt led to a more profound understanding of their tasks. This aligns with the adage, "I hear and I forget. I see and I remember. I do and I understand," emphasising that while passive learning methods like listening might not lead to strong retention, seeing and actively participating in tasks significantly enhance learning and understanding. This approach not only improved their technical skills but also helped students gain a contextual understanding of their work, demonstrating that active participation in real-world settings is more effective for deep learning than passive observation or simulated practice.

The research aligns with the perspectives of Vaughan et al. (2011), asserting that theoretical knowledge alone lacks depth and that true understanding is cultivated through direct involvement and active participation. Vaughan et al. (2011) argue that being an integral part of the work process, by actually doing the tasks, is the most effective approach to WBL. This view is echoed by Jackson (2013) and Ruhanen (2006), who advocate for real-world learning experiences as key to effective education. Billett (2001b, 2013) further supports this, suggesting that real-world experiences not only foster competence development but also enhance students' self-confidence and readiness for professional challenges.

John Dewey (1966) underscores the importance of extensive practice in authentic, challenging situations for skill development. He argues that individuals must actively engage in tasks that require them to apply their skills to truly develop occupational competence. Similarly, Brown et al. (1989) and Lave and Wenger (1991) highlight the significance of contextualised learning

and practice, emphasising that knowledge is not abstract but emerges from the social and cultural contexts in which it is used. Lave and Wenger (1991) contend that understanding is shaped by real-world events and interactions. Billett (2013) reinforces that this approach to learning is not outdated but remains a highly effective method for skill development.

The study confirms that the foundation of both initial learning and competence enhancement lies in active engagement in practical experiences. This underscores that "situated learning" is essential for developing competence, affirming its continued relevance despite its historical roots.

7.3.4 Limitations of Situated Learning

As the study postulates, learning by doing was a valuable workplace affordance that helped students solidify their acquired occupational competence. However, it also highlights the stress and fatigue associated with this approach. The workplace's primary focus on productivity and profit-making left little room for error. Students had a minimal margin for mistakes, and any errors they made had direct consequences on the institution's bottom line, leading to potential losses in profit and a decline in business in the highly competitive industry. The study further shows that students were often placed on production schedules before they felt adequately prepared. They needed more time to familiarise themselves with various tasks, which added to their pressure.

Nevertheless, the workplace allowed limited time for practice, and students were expected to perform at the same level as their expert chef counterparts, despite feeling unprepared. This premature placement resulted in significant anxiety as they faced intense pressure to complete tasks flawlessly. Their work was being served to real clients who expected high-quality products, which further intensified the students' stress. This pressure created a conflict for the students: while they recognised the value of hands-on experience, many preferred to observe the experts at work rather than being thrust directly into the production line.

According to the study, students had limited time to repeatedly practice tasks due to heavy workloads and strict time constraints. Repetitive practice plays a crucial role in skill development, however, students were not provided with sufficient opportunities to refine their techniques. Based on the findings, students did not receive ample practice opportunities, potentially impeding the development of their occupational competence. Their practice was

intertwined with their regular duties, rather than being treated as a separate, dedicated learning process. This suggests that the workplace prioritised production demands over student learning. Osborne et al. (2020, p. 6) support this finding, emphasising that WBL programmes should be aligned with practical necessities and significant time investments to foster more effective learning.

Moreover, the study noted that experts were often preoccupied with various responsibilities, limiting their availability to supervise and guide new students closely. Consequently, students were often relegated to peripheral, basic tasks that did not require expert mediation, such as washing dishes, cleaning equipment, scrubbing floors, and organising stock in storerooms. These were tasks that students could typically have learned from prior experiences at home or in college workshops. More advanced techniques, such as tempering chocolate, creating intricate decorations, making pastry crusts, and troubleshooting recipe issues, were reserved for more experienced individuals and required expert mediation. Students were generally not allowed to engage in these complex tasks, which also required the nuances of balancing texture and flavour, efficient workflow, and time management, areas that often necessitated expert guidance for mastery. This limitation in exposure to advanced tasks could potentially hinder the development of deeper occupational competence, restricting students' growth in more sophisticated areas of pastry-making.

Wheelahan (2007, p. 3) describes basic tasks like dishwashing as mundane, suggesting that they offer limited learning opportunities directly related to the responsibilities of a pastry chef. In contrast, Billett (1995, p. 11) stresses the importance of gradually moving students from these peripheral tasks to more complex activities as part of their WBL. He advocates for the use of learning strategies that allow students to engage with both the processes and outcomes of their tasks, helping them gain a deeper understanding of their craft.

Similarly, Lave (1990, p. 262) emphasises the need for a structured WBL curriculum that provides a clear, progressive pathway for students. This approach would help guide students through increasingly challenging tasks, fostering the development of meaningful competence throughout their WBL experience. These perspectives suggest that while peripheral tasks are part of the learning journey, they must be balanced with opportunities to engage in more complex responsibilities to ensure well-rounded occupational competence development.

The study highlighted that students found the workload and extended hours of WBL demanding and exhausting, often leading to difficulties in maintaining focus, which hindered their learning progress. They were required to be punctual, manage their time efficiently, and balance productivity with their learning objectives. These challenges seemed to stem from a negative perception of students by industrial experts, indicating a lack of understanding of WBL dynamics. Moreover, there appeared to be a dismissive attitude toward TVET students, who were often seen as lacking industrial expertise. This perception may have further contributed to the limited support and opportunities for meaningful learning experiences. The study suggests that more could be done to ensure students gain the full benefits of WBL by fostering a better understanding between industry professionals and educational institutions.

7.4 Integration of Theory and Practice

The research findings suggest that WBL sought to bridge the gap between the theoretical knowledge students gained in college and its practical application in the workplace. The study emphasised that situated learning allowed students to apply classroom knowledge in real-world contexts. For instance, foundational knowledge of health and safety, as well as the use of equipment and tools acquired in the college workshop, enabled students to learn more quickly and grasp workplace practices more effectively. This indicates that college learning complemented WBL, and both were deemed necessary for building occupational competence. The study further demonstrates how WBL allowed students to better understand and apply the theoretical concepts they had encountered in college. The following section examines how students transferred theory into practice to cultivate occupational competence. Although the TVET college curriculum was not fully aligned with industry practices, students were still able to integrate scientific knowledge and basic manual techniques from the classroom into their workplace experiences, illustrating the value of a combined approach to learning.

7.4.1 Bringing the Classroom to the Workplace

According to the study, students engaged in problem-solving by integrating institutionally acquired knowledge with practical experience in the workplace. The theoretical knowledge gained in the classroom proved valuable when students carried out tasks, allowing them to refer to foundational concepts to guide their actions. This suggests that WBL inherently involves activating and applying classroom knowledge to real-world scenarios.

The study highlights that theoretical knowledge helped students master tasks and activities by providing a deeper understanding of what they were doing, although to a lesser extent, how it was done. Students perceived that their classroom learning gave them a framework for making sense of workplace practices. The study also observed that students were able to connect theory to practice during their daily tasks, often with expert guidance. Experts prompted students to recall classroom lessons relevant to the tasks at hand, using this pedagogical strategy to bridge the gap between theoretical learning and its practical application in the workplace.

International literature also emphasises the need to combine theory and practice for the development of occupational competence. Several researchers have underscored the importance of linking conceptual and procedural knowledge to enable effective action (Gamble, 2006, 2009; Ruhanen, 2006; Wheelahan, 2007, 2015; Young & Muller, 2013). Gamble (2009, p. 38) argues that both theoretical and practical knowledge must be integrated into the curriculum to ensure that students derive maximum benefit from vocational training. Her assertion highlights that achieving effective action relies on the fusion of theoretical understanding with hands-on practice.

Additionally, Gamble (2009, p. 4) connects this need for integrating theory and practice with the nineteenth-century concept of "industrial intelligence". Grubb and Lazerson (2005, p. 7) define industrial intelligence as the mental capacity to understand not just the immediate task but also the broader process, including the preceding and subsequent operations. It involves knowledge of materials, business sense, and ethical awareness. This notion underscores the idea that theory enhances practice by enabling individuals to view their work holistically and make informed decisions about the tasks they perform. Essentially, theory brings practical work to life by contextualising actions within a larger framework of understanding.

Research across diverse fields such as tourism, medicine, education, and engineering reinforces the significance of integrating theoretical understanding with practical implementation. This blend of knowledge enables individuals to not only perform tasks proficiently but also comprehend the principles behind them, which leads to greater adaptability, innovation, and problem-solving (Ruhanen, 2006; Wheelahan, 2007, 2015; Young & Muller, 2013). When theory and practice are intertwined, they enhance the overall quality of actions and help individuals develop a deeper mastery of skills, fostering well-rounded expertise (Clarke & Winch, 2004; Wheelahan, 2008b, 2010; Winch, 2010).

DHET (2013, p. 36) underscores that successful vocational learning emerges from the integration of theoretical learning, workshop-based practical learning, and learning in the workplace. This integration is essential in today's industries, where both practical and theoretical knowledge are required to enhance proficiency and precision. This aligns with John Dewey's (1986) concept of "practical intelligence", which highlights the connection between the brain and the hands. Dewey advocated for experiential learning, emphasising that genuine understanding is cultivated through actively engaging in real-world tasks, not merely through abstract thinking.

Billett (1994a) affirms that learning in an authentic workplace environment is crucial for integrating theory and practice. His view aligns with Piaget's (1966) concept of equilibrium, which posits that students develop understanding by merging new information with their existing knowledge base. This process of balancing and assimilating new concepts helps students refine their understanding and competence.

Similarly, Field (2004) emphasises the importance of theoretical knowledge, asserting that without it, students are deprived of key information required for meaningful learning in workplace settings. According to Field, neglecting theoretical learning creates a "cycle of deprivation", where students are ill-equipped for practical experiences and cannot fully benefit from their work-based learning. Together, Piaget, Billett, and Field underscore the essential role that theoretical knowledge plays in complementing practical experience. Without the foundation provided by theory, students face challenges in contextualising their workplace tasks, which can hinder their overall learning and professional development. This reinforces the idea that a balanced integration of classroom-based theory and real-world practice is vital to fostering occupational competence.

7.4.2 The Challenges that Students Faced in Bringing Together Theory and Practice

The research findings highlight a significant gap between the methods of work taught in the college classroom and those encountered in the workplace. Although students expressed enthusiasm about linking theory to practice, they found the process challenging due to misalignment between the syllabus content and current industry practices. This study illuminates that the Report 191 hospitality curriculum focuses on traditional, manual methods

of work, which contrasts sharply with the computerised software for managing stock records in storage areas and the programmed electronic equipment in the pastry kitchen.

This observation aligns with Mazhinye's (2018, pp. 77–78) findings, which emphasise the lack of software systems such as Opera and Sales Force in the TVET hospitality curriculum, despite their widespread use in modern hotel environments. For instance, while students in college are still required to manually enter data into bin cards and ledgers in the stock-taking module, the hospitality industry has largely moved away from these traditional methods. The use of bin cards for stock control in hotels has significantly declined due to the adoption of contemporary inventory management systems (Baum & Odgers, 2001).

Bin cards, once a staple for accurate inventory tracking and preventing stockouts or overstocking, have become obsolete with the adoption of digital inventory management systems. These modern solutions provide real-time data tracking, automated updates, and improved accuracy, significantly reducing human error while enhancing operational efficiency. Similarly, the kitchen equipment in TVET colleges remains largely outdated, often resembling home kitchen appliances such as traditional stoves and ovens. Tasks like dough kneading are still performed manually, which contrasts with the automated equipment found in modern workplaces. The shift from manual classroom methods to automated processes in the industry poses a significant challenge for students.

Situated learning theorists such as Lave and Wenger (1991) have significantly reshaped our understanding of learning by emphasising that it is fundamentally an active engagement within social contexts. Their theory posits that knowledge is deeply intertwined with the environment in which it is acquired, rather than being solely a product of individual mental processes. This approach highlights the importance of social participation and contextual learning, suggesting that learning occurs through participation in a community of practice where individuals engage in meaningful activities. However, while Lave and Wenger's theory provides valuable insights into social learning dynamics, it tends to underemphasise the role of theoretical knowledge in shaping learning outcomes. Their focus on situated learning often overlooks how theoretical concepts integrate with practical applications.

7.5 The Duality of Participation and Reification

Findings from this study highlight the critical role of providing students with access to a diverse array of mediating artefacts in the workplace. The research highlights a clear correlation between exposure to various instructional materials and enhanced learning experiences. Students benefitted from having access to a range of tools that included time, visuals such as pictures and videos, textual resources like posters and recipes, and modern machinery and tools. These artefacts served not just as instructional aids but as tangible representations of practice in what Wenger (1998) terms reifications, through which the community of practice conveys knowledge, norms, and expectations.

Reification, in this context, involved the packaging of complex practices into accessible forms such as SOPs, recipes, and visual instructions. These artefacts made aspects of practice visible and transferable, particularly when expert participation was limited. At the same time, however, the effectiveness of these artefacts relied on how students engaged with them. As Wenger (1998, p. 66) argues, reification without participation risks becoming disconnected from meaningful learning. This study shows that students' participation was essential to bringing the artefacts to life, making them more than static references. Students did not passively consume information; they interpreted, questioned, adapted, and sometimes struggled with the artefacts, especially in the absence of expert guidance. Thus, it was through the interplay between participation and reification that learning occurred.

In this discussion, I argue that time, as a mediating artefact, is particularly crucial in WBL. It allows for repetition, reflection, and the development of practical know-how, thereby facilitating better participation in the community of practice. Similarly, videos and recipes reified procedural knowledge and allowed students to internalise complex tasks, offering a form of distal guidance (Billett, 1994b) when direct interaction with mentors was unavailable. This type of guidance, though indirect, enabled continuity in learning and production by fostering self-directed engagement with the artefacts, which in turn required interpretive participation and encouraged autonomy.

However, as this section will also show, mediating artefacts come with challenges. Without sufficient opportunities for guided participation or space for dialogue, artefacts may fall short of supporting the development of occupational competence. This echoes Wenger's (1998, p.

68) caution that learning becomes constrained when reification dominates without enough participatory interaction to provide context, meaning, and clarification.

While this section focuses on three specific tangible resources, it is also important to acknowledge Conole's (2009) broader understanding of mediating artefacts, which includes language, pedagogical techniques, and task structures. These intangible resources, along with physical tools, contribute to how learning is shaped and experienced. Together, they form the socio-material context through which WBL occurs, where learning is not simply the absorption of content, but the result of negotiating meaning through both engagement (participation) and artefactual supports (reification).

7.5.1 Time: An Important Resource in Work-Based Learning

The study foregrounds the significance of time as a critical mediating artefact in WBL. Time was not merely a background condition, but a vital enabler of students' participation in the social practices of the workplace. It allowed them to become more fully engaged with the routines of the pastry kitchen, supporting the development of tacit knowledge in what Billett (2000) refers to as 'the tricks of the trade'. Tacit knowledge, often embedded in subtle gestures, sensory judgments, and the unspoken aspects of skilled performance, cannot be captured fully through written instructions or visual guides. It emerges gradually, through repeated participation in situated practice over time.

The provision of time in WBL enabled students to observe, imitate, and internalise the practices of experts, thereby accumulating experience. Time facilitated some forms of learning by providing room for mistakes, repetition, and reflection, all essential for transforming experience into competence. Students were not only learning tasks but were becoming legitimate participants in the community of practice. Their learning was socially situated, supported by a culture that allowed them to experiment and recover from errors, mirroring Wenger's (1998) perception that learning is a trajectory of increasing participation in a socially defined practice.

By contrast, the classroom environment, bound by syllabi and time constraints, offered limited scope for such exploratory engagement. There, reification often dominated knowledge and was presented in rigid, decontextualised formats with little space for interpretation or lived experience. In WBL, however, time supported a balanced interplay between reification (in the

form of procedures, recipes, and guidelines) and participation (through trial-and-error, conversations, and shared tasks). The balanced interplay between reification and participation allowed students to negotiate meaning from their experiences and to gradually move from the periphery of the practice to full participation in the community (Lave & Wenger, 1991).

Thus, time in WBL is not simply a neutral resource; but a crucial artefact that shapes the quality of learning. When available in sufficient quantity, it enhances the effectiveness of other mediating artefacts and makes room for the kind of experiential, participatory learning that underpins occupational competence.

7.5.2 Videos Took Over from Experts

Videos played a crucial role in substituting for experts when they were unavailable due to production pressures. According to the study, videos acted as patient, ever-present mentors, offering students the flexibility to pause, replay, and revisit content at their own pace. This flexibility enabled students to gain control over their learning and build occupational competence independently, aligning with modern trends in self-directed learning. The ability to review and repeat complex techniques supported different learning speeds and preferences, allowing students to make sense of the content in a way that best suited their individual cognitive and experiential needs.

From Wenger's (1998) perspective, videos are a form of reification, they formalise knowledge into a tangible format (visual and auditory) that can be accessed, manipulated, and interpreted by the student. Reification in this context is not passive; it invites participation. As students engaged with the videos watching, interpreting, and applying what they saw, they were actively constructing meaning through interaction with the artefact. The videos represented reified expressions of expert knowledge, but their real educational value emerged when students participated in making sense of them through imitation, questioning, and trial-and-error application in practice.

This dynamic interplay between reified instructional content and student participation created a powerful learning environment. Videos helped make tacit knowledge explicit, particularly for techniques that were hard to grasp from limited expert demonstrations. Students were able to observe subtle physical gestures, spatial movements, and finishing details, insights that often go unspoken in live demonstrations. This visual form of reification was crucial for uncovering

what Engeström (2001) describes as embedded but hidden knowledge, which otherwise remains inaccessible in artefacts without intentional engagement.

Furthermore, students' engagement with videos fostered higher-order cognitive processing, they not only mimicked what they saw but also analysed, abstracted, and mentally rehearsed techniques. In doing so, they moved from simply watching to internalising and owning the skill. This supports Billett's (Billett, 2000, pp. 1–2) view that artefacts provide "clues, cues and models" that stimulate both thinking and action. Through this cognitive engagement, students participated in the social practice of pastry-making, even in the absence of experts, demonstrating how learning can be mediated through artefacts when participation is active and reflective as supported by Billett (2000, p. 8).

However, as useful as videos were, their effectiveness still hinged on the student's ability to participate meaningfully with the reified content. Videos offered explanations, but without immediate dialogue or interaction, they sometimes left questions unanswered. This limitation reiterates Wenger's (1998, p. 67) argument that reification alone is insufficient; it must be balanced with participation to ensure better learning. Videos succeeded when students could interpret and act on what they saw and heard, linking the content to lived practice but they were most powerful when complemented by expert guidance or peer discussion.

In summary, videos were not just passive tools but interactive mediating artefacts that extended learning beyond the physical presence of experts. They provided reified knowledge in a visual format that invited active participation and reflection, making them instrumental in enhancing occupational competence in the WBL context.

7.5.3 The Use of Recipes Helped Students Engage in Hands-on Experience

The study highlights that students developed competence in pastry-making through the consistent use of pastry-related recipes. These recipes, which functioned as standard operating procedures, included essential details such as ingredient lists, oven temperatures, cooking times, and sometimes accompanying images to indicate the desired final product. Through structured instructions, recipes offered a step-by-step framework that guided students in producing pastry goods to meet workplace standards.

From Wenger's (1998) perspective, recipes are a clear example of reification, they capture and condense expert knowledge, professional norms, and procedural expectations into a fixed artefact. These reified forms make knowledge transportable and shareable across contexts, allowing students to access professional standards without constant expert intervention. However, Wenger (1998) reminds us that reification alone is not sufficient for meaningful learning. He states; 'it takes our participation to produce, learn, interpret and use reification…' (1998, p. 62). It is in the participation and the active, hands-on engagement with these recipes that students begin to make sense of and internalise what is presented. The students in this study were not passive recipients of information; they interpreted, applied, and experimented with the recipes, using them as tools to mediate and deepen their understanding of the pastry trade.

Initially, students required support to understand and apply recipe content, learn to interpret terminology, handle ingredients correctly, and appreciate the importance of accuracy in measurements and timing. This guidance marked the beginning of their legitimate peripheral participation in the community of practice. Over time, as students participated more fully and repeatedly used the recipes in real production settings, they developed autonomy and began moving toward full participation. Recipes helped scaffold their learning by offering both structure and a platform for experimentation within the boundaries of quality and efficiency set by the workplace.

Students gradually transformed explicit knowledge such as written instructions and visual cues into tacit knowledge. As Polanyi (1967) and later Kothari et al. (2012) argue, this process of internalisation is essential for developing intuitive, embodied understanding. In the context of this study, students came to "know" how certain doughs should feel or how mixtures should look and smell, not because it was written in a recipe, but because they had participated in the practice over time, guided by reified instructions.

Moreover, the recipes also served as tools for creative exploration. Students were encouraged to innovate by adjusting flavours, textures, or presentation, while still adhering to the quality and efficiency standards of the workplace. This blend of structure (reification) and flexibility (participation) reflects the kind of dynamic learning process Wenger (1998) advocates for: one where artefacts guide practice, but meaning and competence emerge through lived negotiated experience.

Nevertheless, while recipes were powerful mediating artefacts that supported self-directed and autonomous learning, they could not entirely replace the role of direct participation with expert mentors. Billett (2000, pp. 2–3) underscores that while mediating artefacts can facilitate access to knowledge and support the development of understanding and procedures, they cannot entirely replace the need for oversight and mentorship. Direct guidance ensures that students adhere to safety standards and avoid inappropriate or dangerous practices during their work activities. Therefore, while autonomous learning through mediating artefacts is valuable, the presence of experienced mentors is crucial to maintaining the integrity and effectiveness of WBL.

In sum, recipes in this study served as reified expressions of workplace knowledge that enabled students to engage in meaningful participation. Through repeated use, experimentation, and reflection, students moved from rule-bound novices to competent practitioners. The interaction between these artefacts and students' practical engagement highlights the synergistic relationship between reification and participation that underpins effective WBL.

7.5.4 Learning Constraints Through the Dialectic of Participation and Reification

While mediating artefacts such as videos and recipes played a valuable role in supporting student learning, this study also demonstrates significant constraints associated with their overuse. One of the central limitations identified was that an exclusive reliance on these artefacts curtailed students' opportunities to engage in creative, critical, and autonomous learning. Instead of fostering innovation, heavy dependence on predefined solutions led students to replicate procedures mechanically, limiting their capacity to explore alternative methods or adapt to novel challenges. This diminished their ability to problem-solve independently, an essential aspect of occupational competence.

From Wenger's (1998) perspective, this overreliance reflects a skewed balance between reification and participation. Artefacts like videos and recipes are reifications of practice, they distil expert knowledge into fixed, tangible forms. While they offer structured guidance and reduce ambiguity, Wenger warns that if learning is dominated by reified content with insufficient opportunities for participatory engagement, students may not develop a full, embodied understanding of practice (1998, p. 67). In this study, students who engaged minimally with experts were less able to negotiate meaning, test alternatives, or engage in

shared problem-solving. Their participation in the community of practice remained superficial, and they were less likely to transition from legitimate peripheral participation to more central roles.

The lack of direct interaction with experts also hampered the development of generic or soft skills such as communication, teamwork, and interpersonal skills; skills that are best cultivated through co-participation in authentic practice. Mediating artefacts, no matter how rich, cannot fully simulate the social complexity of the workplace. Lave and Wenger (1991) stress that learning is inherently situated and occurs through active participation in the social practices of a community. In this study, diminished interaction with experts meant students missed crucial opportunities to observe body language, ask spontaneous questions, receive immediate feedback, and engage in the collaborative meaning-making that is central to situated learning.

Furthermore, artefacts often offer decontextualised representations of knowledge. As Billett (1994a, 2000) argues, artefacts may present procedural knowledge in a disembodied form, separated from the nuanced, variable conditions of real-world application. This abstraction makes it difficult for students to grasp the subtleties of practice or adapt the knowledge appropriately when confronted with difficult or non-standard situations. Without participatory support to interpret and contextualise these artefacts, students may misapply procedures or develop only surface-level competence.

Indeed, Billett (2000, p. 8) cautions that artefacts are well suited for transmitting low-level propositional or procedural knowledge, but are often insufficient for developing the tacit, strategic, and interpersonal skills necessary for complex work. This study supports that view. Students could follow steps, replicate techniques, and meet basic production standards, but often struggled when flexibility, judgment, or innovation were required; capabilities more effectively learned through interaction and shared practice.

Thus, while reified tools such as videos and recipes provided helpful scaffolding, they could not substitute for the richness of participatory engagement with the expert other. Wenger's (1998) framework reminds us that effective learning arises from the interplay between reification and participation. In this study, when that balance tipped too far towards artefact use without sufficient social engagement, students' occupational competence development was

constrained. Mediating artefacts are powerful, but their value lies in how they are taken up and negotiated in the context of social practice, not in their content alone.

In summary, this section has shown that the thoughtful integration of reified resources within participatory contexts creates the most powerful conditions for WBL. Mediating artefacts are indispensable for scaffolding knowledge and facilitating self-directed learning, but they must be complemented with opportunities for students to co-construct understanding, receive guidance, and become meaningfully engaged in the social practices of the workplace. It is in this space; between structured guidance and active participation that true occupational competence takes root.

7.6 Knowledge and Skills Learned in the Classroom

According to the study, classroom learning provided students with essential foundational knowledge and initial skill development crucial for understanding the practical aspects of pastry making. The study highlights that students acquired an understanding of the science of baking, including the properties and reactions of yeast mixtures and other ingredients. Classroom instruction also covered important aspects such as safety and hygiene standards, food safety regulations, and equipment identification, all of which are fundamental for any chef. This foundational knowledge, as noted by Muller (2009, p. 217) and Wheelahan (2019, p. 103), helps students grasp the theoretical underpinnings of their practice.

Although some aspects of the training were conducted manually rather than through modern software and applications, students still learned basic principles of cost control and inventory management, such as stock-taking, through classroom instruction. Additionally, the study found that the classroom environment allowed students to master basic manual pastry techniques like mixing and kneading dough. However, this contrasts with the advanced machinery and tools used in the workplace. This observation aligns with Mazhinye's (2018) research, which critiques the reliance on outdated manual methods of work in TVET colleges that do not align with current industry practices.

While some critics, such as Mazhinye (2018), argue that the TVET curriculum is outdated due to its emphasis on manual methods of work, she contends that learning these techniques in college workshops holds significant value. Mastery of manual methods provides students with

a solid foundation in fundamental principles, which is crucial for their development and application in the workplace. This foundational knowledge supports creativity and problem-solving in real-world settings. Furthermore, the controlled classroom environment allows students to practice these techniques on a manageable scale, preparing them for more complex tasks and technologies used in high-production environments. Foundational learning makes it easier for students to adapt to advanced industry practices, including the use of software, electronically programmed machinery and advanced tools of the trade.

Mazhinye (2018) further argues that starting with a strong foundation in manual skills is advantageous for students. Learning fundamental pastry techniques in the classroom equips students with essential skills and knowledge, which they can then build upon when transitioning to advanced machinery in the workplace. This foundational training allows students to effectively leverage the advantages of modern equipment while maintaining a connection to their core skills. Additionally, students who begin with manual techniques often develop a deeper appreciation for their craft and become more adaptable and versatile in their professional roles as pastry chefs. Conversely, students trained primarily with advanced machinery may lack the foundational understanding of pastry craft that hands-on manual experience provides.

7.7 Knowledge and Skills Learned in the Workplace

In contrast to classroom learning, the workplace offers students the opportunity to apply basic techniques learned in a simulated environment to real-life scenarios. In the workplace, students advance their skills through practical application and repetition under the guidance of experienced professionals. The dynamic nature of the pastry kitchen provided opportunities to work with modern machinery, tools, and software, all under expert support and guidance, experiences that were not available in the classroom. Experts also demonstrate the preparation of a variety of modern complex dishes that meet the client's expectations using high-quality ingredients and resources, which helped students acquire and refine technical skills more effectively than in a more abstract classroom setting.

The fast-paced environment of a professional kitchen exposed students to the industry's workflow, pressure, and pace elements that classroom learning could not replicate. Social interactions with experts provided valuable mentorship, practical insights, and networking

opportunities that extended beyond textbook knowledge. Professionals shared practical tips and tricks acquired through years of hands-on experience, such as the nuances of perfecting a dish, which textbooks might only touch upon. Experts also offered personal anecdotes and career lessons, giving students a realistic perspective on the culinary world's challenges and rewards, an opportunity not afforded by classroom learning.

Working as part of a kitchen team significantly enhanced students' collaboration, communication, and problem-solving skills. Direct interactions with real clients improved their customer service abilities. In the workplace, students confronted real-time challenges that demanded quick thinking and immediate problem-solving, experiences difficult to replicate in a classroom setting. According to the findings, many of the generic skills were acquired through direct interactions with experts, skills that theoretical classroom instruction alone could not provide. Balcar (2016) supports this view, emphasising that the development of generic skills requires practical experience over time in real-world settings with others.

Mazhinye (2018, pp. 87–91) examined the NCV hospitality curriculum and found that it focused predominantly on teaching and assessing basic technical competence while neglecting the development of generic skills. This curriculum clearly outlined the development and assessment of technical skills but fell short in addressing generic skills. This oversight has significant implications, as the exclusion of generic skills from the curriculum can affect students' overall preparedness and their success in the workplace. Generic skills are widely recognised as essential for professional success, and their absence in training could have broader consequences for both students and the industry. However, workplace social participation and interactions with experts helped students develop generic skills that are important to the industry. For example, skills such as communication skills, personal attributes, time management, problem-solving, customer service and teamwork were cultivated in students.

7.8 Conclusion

This study underscores the crucial role of experts in enhancing WBL. It highlights that active engagement, participation, and social interactions with experts are the primary mechanisms through which students bridge the gap between theoretical knowledge and practical application. These interactions not only foster the development of technical competence but

also help students cultivate essential personal traits such as communication skills, teamwork, time management, and problem-solving abilities. However, challenges arose from experts' overreliance on tacit knowledge, their dual roles, and time constraints. The study advocates for better support for mentors and a re-evaluation of mentor qualifications that must include vocational teaching qualifications to improve the quality of WBL.

Additionally, the research highlights the dynamic nature of a pastry kitchen as a vibrant community of practice. Following the principles of situated learning, it emphasises the importance of shared concerns, mutual engagement, and a common repertoire of resources in the learning process. Students progressed from the periphery to the core of the practice, engaging in continuous meaning-making and problem-solving. In this context, the community of practice acted as a central hub for students' learning and the development of occupational competence.

Students actively engaged in hands-on work, embracing Lave and Wenger's (1991) concept of situated learning, where learning occurs through active engagement in real-world tasks and activities, rather than through passive observations. The study prioritised technical competence gained through experiential learning. Emphasis was placed on procedural correctness, task repetition, and error reduction. While students developed attributes like problem-solving, time management, and teamwork through practical work, challenges emerged from limited practice opportunities due to time constraints and mentor unavailability. The study recommends a more structured learning approach that allows additional time for practice.

The research also underscores the importance of integrating theory with practice to develop occupational competence. However, a mismatch between classroom concepts and workplace methods made it challenging for students to quickly learn pastry-making techniques. This finding calls for a balanced approach that combines theoretical learning with practical experiences to improve vocational education quality.

Mediating artefacts, such as time, videos and pastry-related recipes, were found to significantly enhance WBL. Despite time limitations, students managed to execute tasks and contribute to the production line. Videos served as valuable tools for self-guided learning, offering visual and auditory guidance and bridging the theory-practice gap. Recipes provided clear instructions, linking theoretical knowledge to practical execution and reinforcing standards.

While these artefacts facilitated the development of occupational competence, they also had their limitations.

CHAPTER 8: Conclusions and Recommendations

8.1 Introduction

In this study, I investigated the specific contributions of WBL to building occupational competence among hospitality students. This research was prompted by the concerning trend of graduates struggling to secure relevant employment, with some being forced to accept positions unrelated to their field of study. This issue is closely linked to a significant gap in the NCV curriculum, where a mandatory WBL component is notably absent, as elucidated in previous research (Gewer, 2010; Mazhinye, 2018; Wedekind & Mutereko, 2016a). This omission has resulted in graduates lacking the essential occupational competence required by the industry. Employers have voiced concerns about NCV graduates often lacking critical workplace competence due to insufficient WBL exposure.

The apparent misalignment between the TVET curriculum and the labour market underscores a pressing need for reform. This research is dedicated to elucidating the specific ways in which WBL contributes to developing occupational competence in hospitality students. Despite ongoing debates, this study emphasises the crucial role of experts and practical experiences in equipping students with the skills needed beyond the classroom and college workshops.

It is my sincere hope that these findings will drive transformative change within TVET institutions, curriculum designers, and policymakers. The integration of WBL into the curriculum could significantly improve the quality of TVET education, ensuring that students are well-prepared for their chosen fields and that their qualifications align with the evolving needs of the industry.

This chapter synthesises the findings in response to the following sub-questions:

1. What do hospitality students learn about pastry in the workplace that contributes to building occupational competence?
2. How is the theory learned in the classroom integrated into practice during work-based learning?
3. What are hospitality students' perceptions about the learning experiences, modalities and practices provided by work-based learning?

4. What shortcomings are pointed out by hospitality students and mentors regarding the learning experiences, modalities and practices provided by work-based learning?

To address my research questions, I conducted semi-structured interviews with ten students engaged in WBL, as well as with five of their mentors. These interviews were designed to gather in-depth insights into the students' and mentors' experiences and perceptions. Concurrently, I performed workplace observations to validate and enrich the interview data. Thematic analysis of the data highlights the complex nature of WBL, particularly the role of students' relationships with experts in developing their occupational competence.

8.2. Conclusion of the Discussion

Despite identifying potential limitations associated with WBL, the study emphasises the critical role of workplaces as essential learning environments. These settings provide students with diverse learning experiences, modalities, and practices, facilitating the development of technical competence and personal attributes crucial for building occupational competence. Global empirical evidence generally supports the view that students' experiences with WBL are positive, with significant learning outcomes (Avis, 2004; Baum, 2002; Billett, 1995; Cornford & Gunn, 1998; Jackson, 2015; Lester & Costley, 2010; Marneros et al., 2020; Spowart, 2011). However, both policy frameworks and prevailing anecdotal assumptions about WBL have yet to fully address the specific contributions of WBL to occupational competence. Additionally, these sources have not sufficiently explored the methodologies employed by WBL in students' learning processes or the affordances within workplaces that facilitate effective learning.

Based on the findings of this exploration, I can affirm the policy premise and evidence from existing studies that workplaces are vital learning environments. This study demonstrates that students engaged in WBL encountered a range of learning interventions and opportunities, utilising diverse strategies such as observations, demonstrations, feedback, questioning, and explanations. Crucially, these learning modalities were deeply linked to the presence of experts, the community of practice, hands-on experience, and the use of mediating artefacts. The following sub-sections detail the main conclusions of the study.

8.2.1 Expert Mutual Support and Guidance: The Culture of Work-Based Learning

According to the study, students were exposed to various learning methodologies that catered for different learning styles in the workplace. They performed a variety of tasks and engaged in numerous problem-solving activities, developing solutions to various situations as they arose. However, they were not left to learn independently. Instead, they were supported and guided by experts, who, through social and cultural engagements, provided both direct and indirect guidance (Billett, 1994b). This notion of social and cultural interactions is rooted in Lave and Wenger's (1991) socio-cultural theory, which itself draws from Vygotsky's (1978) Zone of Proximal Development. Billett (1994b) emphasises that experts' mutual support and guidance to students form the core of WBL culture.

As highlighted by the research findings, experts prominently employed guided learning strategies such as modelling, coaching, scaffolding, and fading to facilitate students' development of occupational competence, aligning with Billett's (1994b, p. 11) framework. In the modelling phase, experts executed tasks for students to observe, allowing them to build a conceptual model of the processes required to complete the tasks successfully. Experts also demonstrated their tacit knowledge, which they sometimes verbalised to make it more explicit for students. This stage of observation also known as the 'way in' (1991) was crucial for helping students understand how experts approached tasks.

Following the modelling phase, students were given opportunities to replicate these tasks in what is called scaffolding. Scaffolding involves experts providing help, and offering opportunities for students to develop competence within their current abilities. In these instances, experts closely monitored students and provided additional guidance, which often came in the form of physical support, reminders, or probing questions designed to prompt deeper thinking, here, both implicit and explicit feedback in what Billett (1994b) refers to as coaching. Occasionally, experts would repeat demonstrations and perform parts of tasks that students were not yet capable of managing on their own, but the students were encouraged to take on as much responsibility as they could. Billett (1994b) notes that coaching plays a vital role in securing and reinforcing previously acquired knowledge and skills through repetition. As students became more competent, the scaffolding was gradually reduced in a process that Billett (1994b, p. 13) calls fading.

Fading, as described by Billett (1994b), systematically reduces external support as students progressively develop competence. This gradual withdrawal of guidance helped students become more self-reliant and confident in their abilities, ultimately leading to task mastery in the workplace. As external support diminished, students were encouraged to independently apply their knowledge and skills in authentic work contexts, promoting both self-reliance and proficiency. This more distant form of support also fosters confidence, allowing students to take on a wider range of complex tasks, further solidifying their occupational competence.

The study claims that these guided learning strategies significantly bolstered the development of occupational competence and adaptability within real-world workplace environments. By employing these strategies, experts effectively imparted their expertise, enabling students to cultivate essential skills and knowledge. This guidance not only facilitated students' occupational competence but also helped them navigate and overcome workplace challenges, ensuring they were better prepared to meet the demands of their professional roles.

In addition to fostering technical competence such as baking, decorating and plating desserts, the findings highlight the significant role that expert interaction plays in developing students' generic skills. Effective communication emerged as a particularly valued competency, with students agreeing that communication, interpersonal skills, and teamwork were more effectively cultivated in the workplace than in traditional classroom settings. Through engagement in a socio-cultural environment, students reported experiencing personal growth and gaining a deeper appreciation for collaboration and the dynamics of working with others.

The research unequivocally shows that the knowledge and skills students acquired were largely the result of their interactions with experts. However, the expert-student relationship was not without its challenges. One major limitation identified was the competing demands on experts' time. Experts had to balance their roles as mentors with their responsibilities as pastry chefs, often struggling to meet production targets while simultaneously guiding students. The research demonstrates that experts were frequently tied to profit-driven production schedules, using time as a commodity to sell hours and ensure profitability. As a result, mentoring often took a backseat to production priorities, mirroring the findings of Papier and Vollenhoven (2017, p. 295), who note that production pressures in the workplace can detract from the WBL experience. This dynamic led to limited opportunities for students to engage with experts,

creating a tension between the need for mentoring and the demands of the workplace, ultimately impacting the quality of WBL.

Consequently, students faced challenges in accessing experts and receiving the personalised support, guidance, and feedback crucial for their development. This perceived lack of exposure to experts likely hindered their learning experiences. Citing Peach et al., (2014), the study emphasises that workplace busyness often limits the amount of expert-student contact. In such high-pressure environments, experts tend to resort to quick instructions and demonstrations, providing only a superficial understanding of tasks. High-pressure environments restrict access to expert guidance, compromise the depth of students' learning and undermine the provision of essential professional mentorship, which is a critical component of WBL. To address these challenges, the study suggests that strategies need to be developed to free up mentors from the constraints of production schedules. By doing so, mentors would be better positioned to offer more thoughtful and thorough guidance, ensuring that students receive the full benefit of WBL.

Secondly, WBL facilitated by experts did not always align with positive industry standards or best practices. In some cases, students were exposed to unsafe shortcuts, which they occasionally adopted, leading to practices that were not conducive to maintaining a safe or positive work environment. Sometimes they failed to explain concepts to students. Furthermore, they often exhibited rude and disrespectful behaviour, including yelling at students and relegating them to repetitive and menial tasks rather than meaningful learning experiences. These issues were compounded by the fact that some mentors lacked formal training in teaching or mentoring, which hindered their ability to effectively communicate concepts to students.

Researchers like Cornford and Gunn (1998) highlight cases where experts, due to a lack of appreciation for WBL, fail to effectively enhance students' knowledge and skills. Similarly, Billett (2001b) identifies instances where students gain inappropriate work-related knowledge through workplace experiences, including exposure to sub-standard practices and risky shortcuts that hinder the development of occupational competence. While experts possess extensive workplace experience and valuable tacit knowledge, they may not always have the necessary mentoring proficiency to guide students effectively. To address these gaps, Lucas et al. (2012) argue that mentors, much like vocational teachers, should undergo specialised

pedagogical training. Such training would equip them with the mentoring skills needed to support students during WBL.

On the contrary, many employers do not prioritise pedagogical training for their employees, despite its potential benefits for WBL. Tse (2010) asserts that hospitality employers offering training opportunities for students often lacked commitment to WBL and did not require mentors to obtain teaching qualifications. Resultantly, mentors typically possess trade qualifications and workplace experience but lack formal pedagogical training. This gap is significant because the professional and pedagogical competence of mentors is crucial to the success of WBL.

8.2.2 The Community of Practice: A Way to Provide for Collaborative Learning.

The study highlights the pastry kitchen as a dynamic community of practice where various individuals interact and share knowledge. This community, defined by Lave and Wenger (1991) and Wenger (1998), included a shared portfolio of skills and ways of addressing challenges specific to the pastry kitchen environment.

WBL facilitated students' connection with this community, allowing them to engage with experienced pastry chefs who shared both explicit and tacit knowledge. Knowledge sharing within this community occurred through various mechanisms, including brainstorming solutions, discussion meetings, and practical knowledge-sharing sessions. These interactions, whether formal or informal, often took place during tea and lunch breaks, emphasising the importance of social engagement in the learning process.

Learning occurred through active participation and interaction within this social context, where students absorbed tacit knowledge, refined their techniques, and gained a deeper understanding of the craft. This collaborative environment played a significant role in enhancing students' practical skills and their overall competence in the field.

The study emphasises that students engaged in WBL within the pastry kitchen experienced a rich environment of social learning, as conceptualised by Lave and Wenger (1991). Initially, students participated on the periphery of the practice, gradually moving towards greater involvement and expertise, as described by Guile and Unwin (2019). This transition from

peripheral to core participation highlighted the process of legitimate peripheral participation, where students progressively became integral members of the community of practice.

The community provided a social context that was instrumental for students to absorb tacit knowledge through direct participation. Demonstrations, observations, and interactions within this group allowed students to gain experiential wisdom and skills that are crucial for their occupational competence. The group acted as a repository of tacit knowledge, transferring valuable, unspoken insights and expertise essential for developing students' skills in pastry making.

Wenger (1998) highlights that communities of practice excel in preserving tacit knowledge, which is often challenging to articulate explicitly. In the context of the study, the pastry kitchen served as a community of practice where students gained expertise in both technical and generic skills through their interactions with this community. Competences acquired by students included: baking techniques, pastry decorations, menu planning, ingredients selection, time management, teamwork, and problem-solving.

The study also underscores the fluid nature of student's identity formation within the community of practice. Identity is portrayed not as a static attribute but as something continually shaped and evolved through interactions, shared objectives, and the utilisation of communal resources (Wenger, 1998). Active involvement in the group's knowledge-sharing activities facilitated significant identity transformation for students. Participation in these collective gatherings not only motivated and shaped students but also instilled a profound sense of purpose and belonging. This dynamic engagement played a crucial role in their identity development. However, the study also notes that some expert chefs struggled to fully integrate into the community, which, in turn, hindered students' learning experiences.

8.2.3 Situated Learning: A Way to Enhance Occupational Competence Acquisition

The study emphasises the critical role of 'situated learning' in developing occupational competence among students in the workplace. Rooted in the socio-cultural theory, this concept enables students to engage actively in tasks, projects, and real-world problem-solving scenarios, which are integral to their occupational competence development. The study acknowledges the historical underpinnings of this concept, notably influenced by Lave and

Wenger's (1991) theory. Students consistently expressed a preference for a hands-on approach, citing its effectiveness in building technical skills, confidence, and personal attributes such as communication, time management, and problem-solving.

In practice, 'situated learning' involved students replicating tasks and activities they had observed experts perform, leveraging imitation as a key pedagogical strategy. This method proved to be a practical and effective means for imparting occupational competence. The study highlights that students derived significant satisfaction, a sense of achievement, and authenticity from active participation in real-world tasks, including the preparation of food served to actual clients. When time allowed, students were encouraged to repeat tasks and learn from their errors, further reinforcing their skills and understanding of the trade.

However, the study also uncovers several limitations associated with the 'situated learning' approach. The profit-driven nature of many workplaces often prioritises tangible outcomes over educational processes, leading students to undertake menial tasks with minimal supervision or guidance. This frequent exposure to less meaningful work compromised the effectiveness of WBL, ultimately impacting the quality of learning experiences available to students.

Despite these challenges, I assert that 'situated learning' significantly enriches the learning process and is crucial for developing occupational competence. To address the identified limitations, I recommend a thoughtful integration of WBL with dedicated reflective practices. It is essential to align workplace objectives with educational goals to ensure that WBL effectively contributes to students' development while maintaining high learning standards.

8.2.4 Theory and Practical Integration: Key to Developing Occupational Competence

The study demonstrates that WBL effectively bridges the gap between theoretical knowledge gained in the college setting and its practical application in the workplace. Students demonstrated a strong ability to integrate their classroom learning with real-world experiences, identifying and applying theoretical concepts within their workplace tasks. The findings show a significant correlation between classroom instruction and workplace practice, indicating that theoretical knowledge substantially supports and enhances practical activities in the workplace.

The study illustrates that WBL provided students with opportunities to understand not only "what" they were doing but also "why" they were doing it in the workplace. Despite the occasional use of shortcuts to complete tasks, students were required to adhere to proper procedures and justify their actions. This adherence to trade-specific rules and procedures was a key aspect of workplace practice. For instance, the requirement to ferment yeast before incorporating it into flour to achieve fluffier products was a practical application of their theoretical understanding of yeast fermentation. Additionally, the study highlights that practical application significantly benefited students' comprehension of topics such as health and safety, equipment usage, and the differentiation of flour types. The ability to connect theoretical knowledge with practical tasks was perceived as having enhanced their overall learning experience.

The study demonstrates how students actively engage in problem-solving within the workplace by applying theoretical knowledge gained in the classroom. Mentors played a crucial role by encouraging students to reflect on theoretical concepts while performing practical tasks, thereby fostering a strong connection between theory and practice. This approach not only refined students' problem-solving skills but also encouraged them to think beyond textbook examples, leading to a better understanding of the subject matter. These findings on the integration of theory and practice align with the literature (Gamble, 2006; Ruhanen, 2006; Wheelahan, 2007, 2015), which underscores the significance of combining conceptual and procedural knowledge to achieve occupational competence.

The study highlights a crucial aspect concerning the curriculum: a notable disparity between traditional methods of work in the college setting and the technological advancements in the industry. While recognising the value of foundational manual techniques, the study emphasises the need for curriculum updates to align with the latest industry practices. Revising the curriculum to include contemporary technological advancements would better prepare students for the demands of the hospitality industry and bridge the gap between college workshops and workplace practices.

Despite reservations expressed by scholars such as Schön (2001) and Ryle (2009), who argue against the integration of theory and practice by prioritising practical skills over theoretical knowledge, this study affirms the importance of combining both for developing occupational competence. Schön and Ryle's perspectives often overlook the vital role that theory plays in

skill development, failing to adequately address how theoretical knowledge contributes to practical competence. The findings indicate that students' occupational competence was significantly augmented through the combination of theoretical understanding and hands-on experience. Therefore, the integration of theory and practice is crucial for an effective WBL and the development of occupational competence.

8.2.5 Use of Reified Artefacts Fosters Self-Directed Learning in the Workplace

This study affirms the powerful role that reified artefacts play in enabling self-directed learning within WBL environments, offering empirical support to Billett's (2000) concept of distal guidance. Artefacts such as time, recipes, and instructional videos provided indirect yet meaningful instructional support that allowed students to engage independently with learning tasks and develop problem-solving capabilities; an essential aspect of occupational competence.

The findings show that these artefacts do more than transmit information; they structure learning, mediate access to practice, and invite students into deeper engagement with the socio-material landscape of the workplace. Drawing on Conole's (2009) broader conceptualisation of mediating artefacts that include language, pedagogical strategies, and tasks, the study demonstrates how these tools scaffold student agency and embed learning within authentic practice contexts.

Of particular significance was the role of time as a mediating artefact. Rather than being a neutral backdrop, time emerged as a dynamic enabler of learning, allowing for repetition, trial and error, and the internalisation of tacit knowledge. In the pastry kitchen, time permitted students to refine techniques, engage with the 'tricks of the trade' (Billett, 1994b), and develop the embodied skills essential to mastery. Here, time was not only a resource but a pedagogical condition.

Instructional videos also proved pivotal, acting as "patient mentors" when expert guidance was unavailable. Their replayable nature supported self-paced learning, made tacit processes visible, and enabled students to build procedural and conceptual understanding concurrently. Videos thus bridged gaps between theory and practice, facilitating cognitive processing,

thereby reinforcing students' higher-order thinking skills and enhancing their understanding of complex tasks.

Similarly, recipes functioned as structured guides that enabled students to translate explicit instructions into skilled action. Beyond their utilitarian function, recipes facilitated cognitive rehearsal and supported the gradual internalisation of procedural knowledge. By operationalising knowledge in context, they fostered autonomy and helped students build confidence in handling complex tasks. However, while these artefacts promote independence, the study underscores the irreplaceable role of expert oversight. Reified artefacts are not neutral, they require interpretation, contextualisation, and critical feedback. Without ongoing expert monitoring, there is a risk that misinterpretations or unsafe practices could take root. The study thus stresses that artefacts must be embedded within a relational learning environment where guidance, feedback, and correction are continually negotiated.

In conclusion, this study provides robust evidence that mediating artefacts, when thoughtfully integrated and supported by expert practitioners, significantly enhance self-directed learning in the workplace. By enabling access to practice, making tacit knowledge visible, and supporting student autonomy, artefacts such as time, videos, and recipes are not merely tools but active agents in the development of occupational competence. Their effective use reflects a nuanced interplay between participation and reification, underscoring the transformative potential of artefacts in enhancing the overall learning experience.

8.3 Recommendations

Drawing from the findings of this study, the following recommendations are proposed to enhance the effectiveness of WBL in developing occupational competence among students. These are organised around five central challenges identified during the research.

8.3.1 Enhancing Organisational Support for Mentorship

The study underscores the critical role of mentorship in facilitating occupational competence. However, limited time and production demands often constrain meaningful engagement between students and mentors. It is therefore recommended that employers adopt structured approaches to mentorship by allocating dedicated time for expert-student interaction within the workflow. Strategies such as flexible scheduling, workload redistribution, or cross-training

may help balance productivity with educational commitments. Furthermore, formal recognition of mentorship through incentives or professional acknowledgement should be integrated into organisational culture. Such initiatives may benefit from collaborative funding models involving industry stakeholders, training providers, and policymakers.

8.3.2 Strengthening Communities of Practice

Effective participation in communities of practice was hindered by issues of trust, time constraints, and limited inclusivity. To address these challenges, organisations should promote a culture of open communication and mutual respect, encouraging equal participation across different levels of experience and background. The adoption of digital platforms can facilitate asynchronous engagement, thus alleviating time pressures and enabling ongoing knowledge exchange. Diversity and inclusion training, alongside clearly articulated community guidelines, can further strengthen these professional learning environments.

8.3.3 Pedagogical Preparation of Workplace Mentors

The findings highlight a notable gap in pedagogical knowledge among workplace mentors. While technical expertise is critical, mentors also require foundational pedagogical skills to support student learning effectively. It is recommended that training stakeholders including employers, educational institutions, and government bodies share responsibility for providing structured pedagogical development for mentors. Integrating such training into professional development frameworks will enhance the quality and consistency of WBL experiences. Over time, consideration should be given to the formal professionalisation of the mentor role through recognised teaching qualifications or certifications.

8.3.4 Facilitating Purposeful Practice Within the Workplace

Students reported limited opportunities for skill practice due to the dominance of production pressures. To address this, employers should introduce dedicated periods for structured practice, ideally scheduled during less intensive production times to prioritise learning without compromising operational efficiency. These sessions should focus on clearly defined learning objectives and be guided by experienced mentors. Continuous feedback from both students and mentors can support iterative improvements to this approach, enhancing the overall effectiveness of WBL in building occupational competence.

8.3.5 Curriculum Alignment with Industry Requirements

The study identifies a disconnect between institutional curricula and current industry practices, particularly about the use of modern technologies. This misalignment creates a skills gap that undermines students' preparedness for the workplace. Training providers should regularly engage with industry representatives to review and update curricula, ensuring alignment with technological advancements and evolving workplace expectations. Ongoing collaboration and sectoral research are essential for maintaining curricular relevance and ensuring that students are equipped with the competences required in contemporary work environments.

8.4 Implications for Future Research

A notable limitation of this research is its exclusive focus on the pastry section of the kitchen, influenced by my passion for pastry. This specialisation provides an in-depth understanding of this specific culinary domain but introduces potential bias, which may limit the generalisability of findings to other kitchen sections and broader departments within the hospitality industry. Different culinary sections and departments might use diverse learning experiences, modalities, and practices. Therefore, while the findings in the pastry section are valuable, they may not be universally applicable. Future research could benefit from a more comprehensive exploration across various kitchen segments and hotel departments to offer a holistic view of learning experiences, modalities and practices within the hospitality industry.

While this cross-sectional research provides valuable insights, its design limits the ability to assess the long-term impact of WBL on occupational competence development. To address this limitation, I recommend adopting a longitudinal research design for future studies. A longitudinal approach would allow for tracking participants over an extended period, offering detailed insights into the sustained effects of WBL on occupational competence. This method would enable the observation of changes and developments over time, providing a more comprehensive and accurate assessment of the enduring influence of WBL programmes on individuals' professional trajectories. Such a study would enhance the temporal depth of the research, offering a thorough understanding of the long-term implications of the specific contributions of WBL to occupational competence.

At the outset of this research, my focus was on understanding the specific contributions of WBL to the development of occupational competence. I investigated what and how students

learned in the workplace to build such competence, using workplace observations and semi-structured interviews and analysed the data through thematic analysis. This qualitative approach, while rich in detail, can be subjective and prone to bias. To enhance the robustness of future research, I recommend integrating qualitative findings with quantitative validation. While qualitative insights from interviews, observations and thematic analysis provide valuable depth into participants' experiences with WBL, supplementing these findings with quantitative data could strengthen the study's rigour. This mixed-method approach would offer a more comprehensive and balanced understanding of WBL's impact on occupational competence.

This integration should involve applying statistical methods to analyse larger datasets, enabling the identification of patterns, correlations, and statistical significance related to students' learning experiences during WBL and their development of occupational competence. By combining qualitative depth and quantitative breadth, future research can achieve a more robust and nuanced understanding of the multifaceted learning experiences, modalities and practices in WBL. This approach will enhance the overall reliability and validity of study conclusions. However, it is important to note that proponents of qualitative research argue that the sole use of qualitative methods does not necessarily compromise credibility and trustworthiness. Instead, they emphasise the value of deep, contextual insights derived from purposive sampling rather than broad generalisations of findings.

8.5 Contribution of this Thesis to Knowledge

This thesis contributes to the understanding of the specific contribution of WBL towards the development of occupational competence in hospitality students, by examining both what students learn and how learning occurs in real work settings. Its contributions are both theoretical and practical, grounded in empirical data from the South African TVET context.

At a theoretical level, the study makes two key contributions. First, it extends the concept of occupational competence beyond a fixed set of technical or cognitive skills. It demonstrates that the development of occupational competence is socially situated, relational, and materially mediated. In this context, students learn through participation in daily routines, interaction with experts, and adaptation to workplace norms to acquire not only technical expertise but also professional identities. Their learning is also shaped by engagement with tools, equipment, and

recipes, all of which influence both process and outcome. This reconceptualisation shows that occupational competence is not an individual possession, but a process of becoming, and emerging through interaction, observation, and gradual integration into communities of practice.

Second, the thesis refines situated learning theory, particularly the concepts of legitimate peripheral participation and identity formation (Lave & Wenger, 1991), as well as participation and reification (Wenger, 1998). It shows that participation in WBL is often constrained by institutional conditions such as inconsistent access to expert knowledge due to production pressures and untrained mentors. At the same time, reification processes through mediating artefacts like digital resources and instructional materials play a central role in bridging gaps in mentorship, enabling and supporting self-directed learning and continuity of practice in the absence of direct expert guidance. However, the study also cautions that overreliance on such reified artefacts can reduce opportunities for social learning and impede advanced integration into workplace communities. Such material should be seen as complementary to, not replacements for expert interaction. The preservation and sharing of tacit knowledge remains crucial, and this requires stronger communities of practice where knowledge is embedded and passed on.

This dual analysis of participation and reification offers a more context-sensitive application of situated learning theory. It shows how occupational competence is constructed not only through engagement with the expert other but also through the material and structural conditions that shape access to learning in the workplace. Thus, the thesis advances a refined understanding of how learning occurs in resource-constrained, production-driven WBL environments typical of many Global South contexts.

From a practical perspective, this thesis highlights that while WBL offers rich opportunities for students to develop occupational competence, its success depends on the presence of trained mentors, structured learning opportunities, and inclusive communities of practice. When expert chefs are unavailable or untrained, students are often relegated to menial tasks with limited learning value. This underscores the need to integrate pedagogical training for workplace mentors and promote more deliberate participation in WBL cultures.

In summary, this thesis offers a nuanced theoretical and empirical contribution to the literature on WBL, occupational competence, and situated learning. It offers insights that are especially pertinent to TVET systems in developing contexts, where enterprises or organisations providing WBL frequently operate with limited resources, including inadequate staffing, inconsistent student supervision, and systemic structural constraints. By showing how occupational competence can be fostered and how learning theories must adapt, this study provides a foundation for both scholarly engagement and policy reform.

8.6 Concluding Remarks

In conclusion, this thesis contributes to theory in two significant ways. First, it reconceptualises occupational competence as a process that is socially negotiated, materially mediated, and contextually situated. By demonstrating how students develop occupational competence through workplace participation by interacting with experts, the community of practice, and tools the study challenges reductive, checklist-style interpretations of competence and instead frames it as a dynamic and situated practice.

Second, the study refines and contextualises Lave and Wenger's (1991) situated learning theory by showing how legitimate peripheral participation is mediated by structural and institutional realities in the South African WBL context. Inconsistent mentorship led by expert production-driven pressures, untrained mentors and exclusion from communities of practice complicates the clean pathways suggested by the theory. By bringing these complexities to light, the research advances a more contextually grounded and policy-aware application of situated learning in TVET systems. This theoretical insight broadens comprehension of how learning occurs in the workplace and provides a foundation for rethinking both pedagogical strategies and policy design within the context of technical and vocational education and training.

While recognising the workplace's positive learning potential, this study underscores the necessity to address several limitations to strengthen its effectiveness. To enhance the WBL experience, it is crucial to:

1. Empower experts with teaching qualifications to improve their mentoring skills, thereby enhancing their ability to support and guide students effectively. Collaborations fostered among the workplace, training providers, relevant industry authorities, organised labour, and the appropriate policymakers could help fund this initiative.

2. Alleviate mentors' daily workloads allowing them to dedicate specific time to student mentoring.
3. Create designated practice spaces to help mitigate time constraints, offering students structured opportunities to develop their skills without the pressure of immediate production demands.
4. Foster communities of practice to encourage a culture of collaboration by creating platforms for shared learning, recognising and rewarding knowledge-sharing behaviours, and incorporating communities of practice principles into organisational structures to improve learning and knowledge dissemination.

Integrating these principles into organisational structures will promote effective learning and knowledge dissemination during WBL. By addressing these areas, organisations can optimise the WBL experience and support the sustained development of students' occupational competence.

Finally, despite the challenges inherent in WBL, it is clear that students are acquiring more knowledge and skills than initially anticipated, significantly enhancing their occupational competence. As training providers, industrialists, curriculum developers, policymakers, government organisations, and other stakeholders, it is our collective responsibility to recognise and value these experts. By supporting and preserving their expertise, we can lay a solid foundation for the next generation of pastry chefs in the hospitality industry, ensuring their continued growth and success.

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Appendix A: Application Letter to the College Director

UNIVERSITY OF THE
WITWATERSRAND
JOHANNESBURG

12 April 2021

REF: Application for permission to conduct research titled: The effectiveness of work-integrated learning towards the building of occupational competences

Dear Sir,

My name is Rudo Mazhinye, a PhD student at the University of the Witwatersrand, Johannesburg. As part of my studies, I have to undertake a research project, and my research topic is: **The effectiveness of work-integrated learning towards the building of occupational competences**. I am working under the supervision of Doctor Presha Ramsarup and Professor Volker Wedekind. The aim of this research project is to understand how and what hospitality students learn about pastry; the methods, experiences and practices available to them in workplace learning. This study intends to contribute significantly to an understanding of the role played by work-integrated learning in the development of occupational competences in students.

As part of this project, I wish to get your permission to collect data from of the hospitality students who have completed Report 191 N6 and are currently on WBL. Data will be collected through the use of interviews and workplace observations. I will store all the captured data on a computer and secured with a password. Information obtained will be confidential as I will not display any identifying information of both your college and the participants; I will use a code to represent participation in my final thesis.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you. With your permission the data collected from this research project may be used by other researchers. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical.researchoffice@wits.ac.za.

Yours sincerely,



Rudo Mazhinye (Researcher)
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Cell number: +27 72 592 0211

Supervisor:
Presha Ramsarup
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Appendix B: Employer Application Letter

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

12 April 2021

REF: Application for permission to conduct research titled: Work-based learning for occupational competences: Success or failure?

Dear Sir,

My name is Rudo Mazhinye, a PhD student at the University of the Witwatersrand, Johannesburg. As part of my studies, I have to undertake a research project, and my research topic is: **Work-based learning for occupational competences**. I am working under the supervision of Doctor Presha Ramsarup and Professor Volker Wedekind. The aim of this research project is to understand how and what hospitality students learn about pastry; the methods, experiences and opportunities available to them in workplace learning. This study intends to contribute significantly to the efficacy of workplace learning and its role in enhancing the development of occupational competences in hospitality students.

As part of this project, I wish to get your permission to collect data from of the hospitality Technical and Vocational Education and Training (TVET) and learnership students that are on attachment at your establishment together with their mentors within the academic year 2022 - 2024. The data collection process will be in two phases. Phase one involves interviews which will take around 25 - 30 minutes per interviewee. With permission, these will be recorded using a digital device. Phase two will involve observations on the tasks and activities that the participants are involved in, in the workplace. With permission, photographs and videos will be captured of critical work activities the participants are engaged in. The observations might take about 4-5 hours per session, which could disrupt the participants' allocated tasks for the day. All captured data will be stored on a computer and secured with a password. Information obtained will be confidential as I will not display any identifying information of both your institution and the participants; a code to represent participation in my final research report will be used.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you. With your permission the data collected from this research project may be used by other researchers. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical.researchoffice@wits.ac.za.

Yours sincerely,



Rudo Mazhinye (Researcher)
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Telephone number: +27 11 717 1000

Appendix C: Information Sheet – Students



28 April 2021

The effectiveness of work-integrated learning towards the building of occupational competences

Dear R191 Hospitality Student

My name is Rudo Mazhinye, and I am a PhD student in the School of Education at the University of the Witwatersrand, Johannesburg. As part of my studies, I have to undertake a research project, and I am investigating the effectiveness of work-integrated learning towards the building of occupational competences under the supervision of Dr Presha Ramsarup and Prof Volker Wedekind. The aim of this research project is to understand the learning experiences and opportunities available to students in workplace learning.

As part of this project, I would like to invite you to take part in a face-to-face interview and observations, which will be conducted in two phases. Phase 1 involves the interview which will take around 50 - 55 minutes of your time. With your permission, I would also like to record the interview using a digital device. Phase 2 will involve observation on the activities that you are involved in, in the workplace. With your permission, I would like to capture some photographs of your work spaces, materials and equipment that you use and video recording of critical work activities that you are engaged in. The observations might take about 4-5 hours per session, which is quite a long time and could disrupt your allocated tasks for the day. The two phases are going to be two months apart, phase 1 will precede phase 2, meaning that I will have to complete all the interviews before I begin the observations.

There will be no personal costs to you if you participate in this project, you will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any questions if you do not want to. Both the observation and the interview will be completely confidential as I will not be asking for your name or any identifying information. All captured data will be stored on my personal computer, secured with a password and will not be disclosed to anyone else. I will be using a code to represent your participation in my final research report. If you experience any distress or discomfort at any point in these two processes, we will stop or resume another time.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you. The data collected from this research project will be stored in a password protected computer. With your permission the data collected from this research project may be used by other researchers. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,

Rudo Mazhinye (Researcher)
Email: 1510574@students.wits.ac.za
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Appendix D: Information Sheet – Mentors



28 April 2021

The effectiveness of work-integrated learning towards the building of occupational competences

Dear Mentor

My name is Rudo Mazhinye, and I am a PhD student in the School of Education at the University of the Witwatersrand, Johannesburg. As part of my studies, I have to undertake a research project, and I am investigating the effectiveness of work-integrated learning towards the building of occupational competences, under the supervision of Dr Presha Ramsarup and Prof Volker Wedekind. The aim of this research project is to understand the learning experiences and opportunities available to students in workplace learning.

As part of this project, I would like to invite you to take part in a face-to-face interview and observations that will be conducted in two phases. Phase 1 involves the interview which will take around 50 - 55 minutes of your time. With your permission, I would also like to record the interview using a digital device. Phase 2 will involve observations on the activities you are involved in in the workplace. With your permission, I would like to take photographs of your work spaces, materials and equipment that you use and video recording of critical work activities that you are engaged in. The observations might take about 4-5 hours per session, which is quite a long time and could disrupt your duties for the day. The two phases are going to be two months apart, phase 1 will precede phase 2, meaning that I will have to complete all the interviews before I begin the observations.

The mentoring roles that are expected from you for the purpose of this research include among others:

- Demonstrations of tasks to students
- Experience working with students
- Ability to comfortably teach the students through the use of observations and imitations
- Ability to explain the theory behind any practical concept
- Give guidance to students whenever needed
- Supervise students as they perform their day-to-day duties
- Engaging with students throughout their daily duties
- Promote teamwork
- Assist students with problem-solving activities.

Having mentioned your roles as the mentor above, please take note that there will be no personal costs to you if you participate in this project, you will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any questions if you do not want to. Both the observation and the interview will be completely confidential as I will not be asking for your name or any identifying information. All captured data will be stored on my personal computer, secured with a password and will not be disclosed to anyone else. I will be using a code to represent your participation in my final research report. If you experience any distress or discomfort at any point in these two processes, we will stop or resume another time.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you. The data collected from this research project will be stored in a password protected computer. With your permission the data collected from this research project may be used by other researchers. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email humanethics@wits.ac.za.

Yours sincerely,

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Telephone number: +27 11 717 1000

Appendix E: Consent Form – Students



Consent Form - Student

Project Title: The Effectiveness of Work Integrated Learning Towards the Building of Occupational Competences

Name of researcher: Rudo Mazhinye

I, ..., agree to participate in this research project. The research has been explained to me and I understand what my participation will involve. I agree to the following:

(Please circle the relevant options below).

I agree that my participation will remain anonymous	YES	NO
I agree that the researcher may use anonymous quotes in his / her research report	YES	NO
I agree that the interview may be audio recorded And that the observation may be video recorded and photographs captured	YES	NO
I agree that the information I provide may be used anonymously after this project has ended, for academic purposes by other researchers, subject to their own ethics clearance being obtained.	YES	NO

..... (signature)
..... (name of participant)
..... (date)

..... (signature)
..... (name of person seeking consent)
..... (date)

Appendix F: Consent Form – Mentor



Consent Form – Mentor

Project Title: The Effectiveness of Work Integrated Learning Towards the Building of Occupational Competences

Name of researcher: Rudo Mazhinye

I, ..., agree to participate in this research project. The research has been explained to me and I understand what my participation will involve. I agree to the following:

(Please circle the relevant options below).

I agree that my participation will remain anonymous	YES	NO
I agree that the researcher may use anonymous quotes in his / her research report	YES	NO
I agree that the interview may be audio recorded And that the observation may be video recorded and photographs captured	YES	NO
I agree that the information I provide may be used anonymously after this project has ended, for academic purposes by other researchers, subject to their own ethics clearance being obtained.	YES	NO

..... (signature)
..... (name of participant)
..... (date)

..... (signature)
..... (name of person seeking consent)
..... (date)

Appendix G: Interview Guide #1: Students

Semi-structured interview schedule for students

SCHOOL/COLLEGE: ……..……...….
NAME OF RESPONDENT (CODE): …….……
INTERVIEW DATE: ……..
TIME: ……..

How is learning taking place in the workplace?

1. On inception, were you provided with a schedule of what was expected of you? What you would be doing or learning for the day, week or month? Did you follow a structured programme?
2. What is it that the workplace expected from you on inception?
3. Is there any specific task or activity that you had to do independently on inception?
4. Have you so far attained any new attitudes, skills and knowledge? If so, which ones?
5. Can you explain how you have acquired new knowledge, skills and attitudes from the workplace?
6. Is there anybody who normally assists you in executing your day-to-day duties? If so, who and in what way?
7. Do you engage with any other persons or experts besides your mentor?
8. Can you describe how you learned from these persons or experts? Was it by; observing them, listening to them; talking to them; imitating and engaging in everyday activities with them?
9. Do you sometimes work in group activities; did you have any specific responsibility within the group activity?
10. Have you ever been involved in any problem-solving activities? Elaborate.
11. Have you ever received any guidance from your mentor or other experts regarding problem-solving?
12. What form of communication is normally used when you execute tasks by your mentors? Do they use language or demonstrations?
13. Are there any particular events or occasions that have helped you master/understand the tasks that you do in the workplace?
14. In your own perspective, what is the best way to learn in the workplace?

What learning opportunities are afforded to the students towards building occupational competence?

1. Are you given any specific time to work independently to perfect the learned skills? If so, when?
2. Does the workplace you are working from have enough resources to help you navigate through your day-to-day activities with ease?
3. Are you expected to follow certain standard criteria when you execute your duties? Give examples.
4. Is there any assessment that is done regarding the skills you have practised so far? If so, how is it done?
5. Do you ever get a chance to practice the skills that you would have learnt in the workplace?
6. Whenever you practice, are you always in the company of someone else? If so, who?
7. Is their presence helpful or not? Explain.

To what extent do students apply knowledge acquired at college in developing occupational competence?

1. Do you get to apply the knowledge and skills that you attained in the classroom to workplace activities? Clarify.
2. While you were working on tasks, did your mentor ask you to explain why you operated the way you did?
3. Please explain some of the procedures you learned in the classroom that you could apply in executing particular tasks in the workplace.
4. Do the experts or mentors use any theoretical concepts to explain practical operations?

Appendix H: Interview Guide #2: Mentors

Semi-structured interview schedule for mentors

INSTITUTION: ……..
NAME OF RESPONDENT (CODE): …….
INTERVIEW DATE: …….
TIME: …….

How does learning take place in the workplace?

1. Can you please tell me what work-based learning means to you?
    - How many times have you been a mentor to students who come for work-based learning?
    - What skills do the students bring to the workplace from the classroom if any?
    - What skills do you wish they would have learned in the classroom before the onset of work-based learning if any? Why?

2. Please take me through what you do with the students on inception.
    - Do you provide the students with a schedule of what is expected of them?
    - What they would be doing or learning for the day, week or month?
    - Do they get to follow a particular structured programme?

3. Explain if there are any specific tasks or activities that students are allocated to do independently and those that they must do with help. Give examples of such tasks.

4. Can you please explain what the students' greatest strengths and weaknesses will be after the completion of work-based learning?
    - What new attitudes, skills and knowledge have they attained so far, if any?
    - How have they acquired new knowledge, skills and attitudes from the workplace?

5. Describe in detail the persons who are expected to assist the students in executing their day-to-day duties. If so, who and in what way?
    - Do the students always engage with any other persons or experts besides their mentors?
    - Can you describe how the students have learned from these persons or experts? Was it by; observing them, listening to them; talking to them; imitating them, asking them questions and engaging in everyday activities with them?

6. Detail how the students are involved in group activities.
    - Describe the specific responsibilities that they have within the group activities.

7. Have the students ever been involved in any problem-solving activities? Elaborate.
    - Explain if there are any unexpected situations that they have had to deal with, it could be technicalities with customers or from the execution of your everyday technical duties, i.e. in the kitchens.
    - How were the problems resolved?
    - If they failed to solve the problems, what could have hindered them?
    - What form of guidance do the students receive from their mentor or other experts regarding problem-solving?

8. What form of communication is normally used by mentors/experts during the execution of tasks/duties by the students? Do they use language or demonstrations?

9. Explain if there have been any particular events or occasions that have helped the students master/understand the tasks that they do in the workplace.

10. In your own perspective, what are the best methods and practices to learn in the workplace?

11. Describe how learning is taking place in the workplace.

12. What in your opinion is helping the students develop their occupational competence?
    - What in your opinion is beneficial to them regarding work-based experience?
    - What do you feel is necessary to succeed in work-based learning?
    - What exactly do you think makes them master the tasks that are assigned to them?

What learning opportunities are afforded to hospitality students towards building occupational competence in the workplace?

1. Are the students allocated time to work independently to perfect the learned skills? If so, when and how? If not, why was this opportunity not granted?

2. Explain the type of resources that the workplace has to help the students navigate through their day-to-day activities/tasks with ease. Please elaborate with these in mind:
    - Equipment
    - Machinery
    - Workspace
    - Time
    - Ingredients
    - Expert others
    - Community of Practice

3. Elaborate on the standard criteria that must be followed when the students execute their duties. Give examples.

4. When the students practice, are they always in the company of someone else? if so, who and why?
    - What are the advantages of this method?
    - What are the disadvantages of this method?

5. Describe the opportunities that are available in the workplace that you feel have helped the students build their occupational competence.

6. How are the students assessed regarding the skills, attitudes and knowledge attained in the workplace so far? If so, who assesses the students? if not, why?

How is theory learned in the classroom applied to workplace activities towards the building of occupational competence in hospitality students?

1. In the hospitality sense, what is it that is referred to as theory and what is practice?
    - Which of the two do you feel is more crucial within the hospitality curriculum; theory or practice or perhaps a combination of both? Explain why?
    - What are some of the particular rules or procedures that must be applied when executing some tasks in the workplace? Please elaborate.

2. Clarify how the students always strive to apply the knowledge and skills that they attained in the classroom to workplace activities.

3. What theoretical concepts do you use as a mentor in explaining any practical operations when working through tasks with students if any?

4. Elaborate on the activities that students are engaged in within the workplace that support what they have covered in the classroom.

5. Have you ever asked the students to explain the theoretical aspects that underpin the way they conduct some activities while in the workplace? explain.

Appendix I: Observation Schedule

RESPONDENT (CODE): ……
LOCATION: …….
DATE OF OBSERVATION: ……
TIME: ……..
SECTION OBSERVED FROM: …….....

DOMAIN	SUBSTANTIATING EVIDENCE
Facilities • Description of workplace facilities and equipment (e.g. kitchen space, sinks, offices etc.)	…… …… …… …… ……
Equipment • List of equipment and materials available for use by students (tables, telephones, ovens, mixers, stoves, cutlery, computers etc.)	....
Learning affordances • Use of experts • Use of other workers • Use of communities of practice • Demonstrations • Observations • Listening • Explanations/language • Group work • Independent work/prescribed tasks • Guidance/assistance	....
Skills domain • Techniques • Approaches • Soft skills • Working procedures/processes • Use of equipment • Problem-solving • End product	....
Theoretical knowledge application • Subject matter • Subject interpretation • Linking theory to practice in executing tasks	....

Active participation • Involved in set tasks • Students ask questions • Students answer asked questions • Student observe attentively • Students imitate skills independently • Explain work procedures to experts/mentors/workers • Problem-solving activity • Involvement in discussions	....

Elaborations:

Appendix J: Interview Details – Students

Date of interview	Code name	Age	Highest qualification	Time in WBL
11-04-22	101	26	N6 Certificate	3 months
12-04-22	102	22	N6 Certificate	5 months
25-05-22	103	25	N6 Certificate	8 months
26-05-22	104	29	N6 Certificate	11 months
03-06-22	105	30	N6 Certificate	12 months
04-06-22	106	30	N6 Certificate	12 months
09-06-22	107	29	N6 Certificate	15 months
10-06-22	108	33	N6 Certificate	15 months
04-07-22	109	31	N6 Certificate	18 months
21-07-22	110	33	N6 Certificate	18 months

Appendix K: Interview Details - Mentors

Date of interview	Code name	Age	Highest qualification	Work experience	Designation
08-06-22	R1m	51	Work experience	24 years	Pastry chef
11-06-22	R2m	49	Work experience	17 years	Pastry chef
04-07-22	R3m	49	Level 2 craft bakery	16 years	Pastry chef
05-07-22	R4m	42	Work experience	14 years	Pastry chef
21-07-22	R5m	35	Diploma in Hospitality	11 years	Pastry chef

Appendix L: Observation Details

Date of observation	Time	Participant observed	Site of observation
13-06-22	8:00 -14:00	108 102 101 R5m	○ Pastry kitchen ○ Storage areas
14-06-22	06:00-14:00	106 104 110 R1m	○ Pastry kitchen
15-06-22	03:00-09:00	107 108 103 109 R4m	○ Pastry Kitchen ○ Restaurant (breakfast service)
27-06-22	06:00-11:00	102 106 110 R3m	○ Pastry kitchen
28-06-22	03:00-10:00	101 105 107 110 R1m	○ Pastry kitchen ○ Restaurant (breakfast service)
29-06-22	8:00 -15:00	R2m 103 104 106	○ Pastry kitchen ○ Storage areas
15-07-22	8:00 -15:00	R5m 108 104 110 R1m	○ Pastry kitchen
04-08-22	04:00-10:00	101 107 105 R4m R3m	○ Pastry kitchen ○ Restaurant (breakfast service)
06-09-22	08:00-13:00	108 102 101 107 R1m	○ Pastry kitchen ○ Storage areas
07-09-22	08:00-13:00	107 108 103 109 R4m	○ Pastry kitchen

Appendix M: College Permission Letter



Kempton Park
51 Maxwell Road
Tel : 011 975 2771
Fax: 086 6585011
Cell: 084 674 0385

P.O. Box 4971
Kempton Park
Call Centre:086 100 0060
SMS No: 33903
WhatsApp:084 674 0385

31st May 2021

Dear Mrs R Mazhinye

APPROVAL TO CONDUCT RESEARCH AT TAALNET COLLEGE

This letter serves to acknowledge that our college has received and reviewed your request to conduct research entitled: **The effectiveness of work-integrated learning towards the building of occupational competences**. We are glad to inform you that we approve of this research to be conducted at our institution. We grant you permission to access information for the students that are on work placement from the college's placement office. We also give you permission to interview and observe these students provided permission is granted by their employer/s.

Thank you for showing interest in our College, we are glad to be a part of this study.

Yours in Higher Education and Training

Mr B. Dondo
(Campus Manager)

Appendix N: Workplace Permission Letter

Sondela Academy Proprietary Limited
P O Box 22 I Bela-Bela I 0480
Tel: 014 736 8860
Fax: 014 736 8828
E-mail: info@sondelaacademy.net
Website: www.sondela.com

REG NO: 2012/130859/07

4th August 2021

Rudo Mazhinye (Researcher)
Email: 1510574@students.wits.ac.za
Cell number: +27 72 592 0211

*Re; Research on **The Effectiveness of Work-Integrated Learning Towards the Building of Occupational Competences** - Report 191 hospitality Technical and Vocational Education and Training (TVET)*

It is with please that we here at Sondela Academy hereby give you Rudo Mazhinye, permission to conduct the necessary research on **The Effectiveness of Work-Integrated Learning Towards the Building of Occupational Competences** as required for your project.

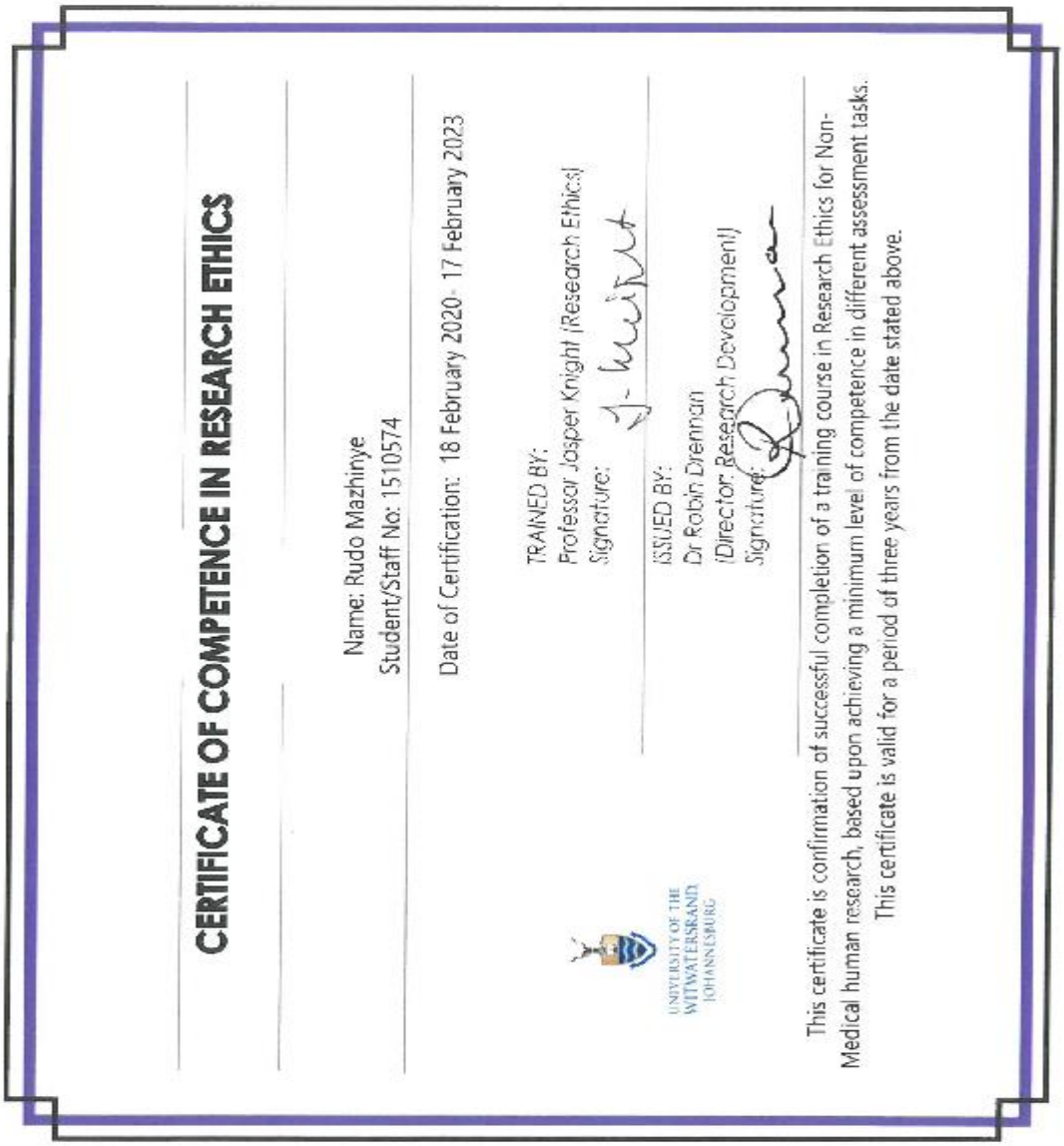
We would like to request a copy of the research once completed.

Kind Regards

Sothelekiwe John Mahlangu
Director Sondela Academy

Directors: Dr A Morabito I I Jansen van Rensburg I E Grobler

Appendix O: Ethical Clearance Certificate



CERTIFICATE OF COMPETENCE IN RESEARCH ETHICS

Name: Rudo Mazhinye
Student/Staff No: 1510574

Date of Certification: 18 February 2020 - 17 February 2023

TRAINED BY:
Professor Jasper Knight (Research Ethics)
Signature:

ISSUED BY:
Dr Robin Drennan
(Director: Research Development)
Signature:

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

This certificate is confirmation of successful completion of a training course in Research Ethics for Non-Medical human research, based upon achieving a minimum level of competence in different assessment tasks.
This certificate is valid for a period of three years from the date stated above.

Appendix P: Analytical Framework

Analytical framework

Theme	Code of the theme	Research questions the theme speaks to	Key concepts	Examples of quotes from the data	Number of mentions	Keywords in the quote	Category of participants
Learning through others	EO	Sub-question 1	Participation	during high production periods, we were **made to work in teams together with other pastry chefs**… the supervisor normally **divided us into groups** according to what pastry dishes we were making on the day	8	Made to work in teams Divided us into groups	SP (student)
Learning through others	EO	Sub-question 1 and Sub-question 2	Socio-cultural learning	With **exposure to and engagements with experts**, I have become a **better social being.** …I can now **communicate efficiently** with clients and co-workers… my social life is improved too.	9	Exposure to and engagement Become a better social being Communicate efficiently	SP
Learning through others	CoPs	Sub-question 1	Community of practice	I've come to embrace how the **community** of pastry chefs has **helped me learn** in this place	7	Community of pastry chefs Help me learn	SP
Community of practice	CoPs	Sub-question 2 Sub-question 3	Practice	each one of the chefs I worked with **handled knives differently,** they each had a way of working with their hands. If you didn't observe closely you'd always miss out on something… **the way they knead yeast dough** if mixing	6	Handled knives Knead yeast dough Learned the skills	SP

1

				manually was exceptional, **we've learned these skills** at every opportunity we got…			
Expert other	EO	Sub-question 1	Tacit knowledge Explicit knowledge	we always try our best to **answer the students' questions**… sometimes we **explain to them** but some chefs prefer to answer by **demonstrating** and showing different processes and products to students	3	Answer questions Explain to them Demonstrating	MP (mentor)
Expert other	EO	Sub-question 2	Transversal abilities	I used to be bad when it came to **communicating** with clients…I am better now	8	Communicating with clients	SP
Learning by doing	TE	Sub-question 1 and 2	Practice	in learning through doing, I was allowed to **make mistakes and then correct myself…** it made learning to be a lot more fun and easier… we were **allowed to make mistakes and learn from them**	6	Make mistakes and correct myself Allowed to make mistakes and learn from them	SP
Learning by doing	IE	Sub-question 2 and 4	Practice	practising has **helped me to identify** these pieces of equipment, tools, and machinery used in pastry	9	Identification of equipment and tools	SP
Learning from artefacts	VID	Sub-question 1 and 2	Tacit and explicit knowledge	for instance, they **could learn how yeast doughs** are made by watching videos	3	Learn how to	MP
Integration of theory to practice	REC	Sub-question 4	Practice	to an extent, we were sometimes able to work with recipes with no help because we **knew how to use** them	4	Knew how to	SP

2

Community of practice Expert other	LPP	Sub-question 1	Legitimate Peripheral participation	we even went to an extent of using them **with close supervision and monitoring** from the group… but were later **let to use them independently**… now I know how to use a dough mixer	6	With close supervision Let to use them independently	SP
Participant perceptions	PP	Sub-question 3	Practice	**Experts are not always available** when we need them	9	Experts are not always available	SP
Participant perceptions	PP	Sub-question 3	Practice	It is however very sad to say that on such days we as **students get to do menial jobs** that don't need close watching because the **mentors don't have the time to attend to us**	8	Students do menial jobs Mentors don't have the time to attend to us	SP
Participant perception	PP	Sub-question 3	Community of practice	sometimes these meetings don't get to happen as scheduled because **members that form part of the community are busy with production**	4	Community members are busy with production	SP
Learning by doing	IPT	Sub-question 4	Integration of theory to practice	for me it was so fascinating to be able to **bring the theory to workplace practice**, now I have had the chance to do things practically, and the **theory we covered at college has made it easy for me to understand the practice**	5	Bring theory to workplace practice Theory… made it easy for me to understand the practice	SP

Learning by doing	NS	Sub-question 1 Sub-question 2	Practice	through **exposure to practice**, I noticed I wanted to pursue making desserts rather than the bakery side…this **allowed me to learn and practice** new skills that may be helpful in my intended role	3	Exposure to practice Allowed me to learn and practice	SP
Community of practice	CoPs	Sub-question 2	Technical knowledge	to **learn new techniques**, we sometimes also met to **help each other with old techniques** that were most of the time demonstrated by expert pastry chefs, for example, they've in one meeting demonstrated the creaming method in cake making… after the demo **we were made to imitate the skill**	4	Learn new techniques Help each other with old techniques Made to imitate the skill	SP

Appendix Q: Plagiarism Report



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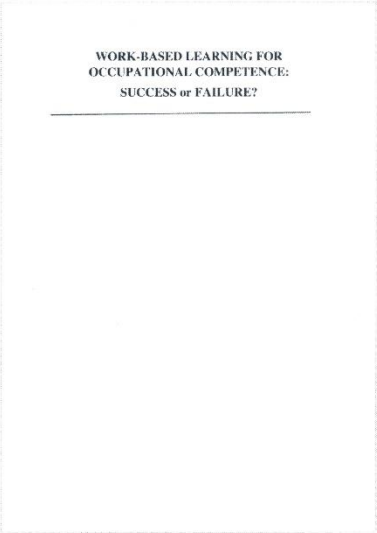
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