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Doctor of Education Thesis

Developing reflective practitioners: Exploring the perceptions of professional reflective processes among undergraduate nursing students

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Developing reflective practitioners: Exploring the perceptions of professional reflective processes among undergraduate nursing students.

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Declaration

This thesis contains no material that has been extracted in whole or in part from a thesis that I have submitted towards the award of any other degree or diploma in any other tertiary institution. No other person's work has been used without due acknowledgement in the main text of the thesis. All research procedures reported in the thesis received approval from the relevant Ethics/Safety Committees (where required).

Lynette Taylor

13th May 2024

Abstract

This thesis takes a phenomenographic approach to explore the perceptions of third-year undergraduate nursing students on the use of reflection in their nursing practice. Through ten in-depth interviews, the study explores what undergraduate nursing students perceive reflection to be, whether they find it valuable for their current and future nursing practice and which types of activities foster reflection. The purpose of this study is to inform the teaching and learning of reflection in undergraduate nursing programs. Six categories of description were developed following the process outlined by Dahlgren and Fallsberg (1991). Each category of description contains a critical variation in the way these students' experienced reflection. Importantly, the categories show a hierarchy in how the cohort perceived and valued reflection and the outcomes they associated with reflection. Categories varied from a simplistic understanding to a more complex comprehension and application of reflection. A number of reflective activities and experiences that foster and enhance reflective processes were identified including social interactions with other nurses and their peers, real life situations and case studies being incorporated into classroom teaching. This study provides opportunities to influence the teaching and learning in undergraduate nursing curricula through its identification of the nature and value of reflection. Suggestions include the inclusion of reflective activities in classroom teaching early in the curriculum, as well as the introduction of scaffolding across the curriculum to assist with the development of reflection and reflective abilities. These measures, along with learning through professional experience placements, will promote and foster reflection in a way that supports students in becoming reflective and therefore more effective practitioners as they move into the nursing profession. Further research into undergraduate nursing students' perceptions on reflection is required, particularly focusing on international students or students from non-English speaking backgrounds.

Statement of Appreciation and Dedication

I would like to acknowledge all of the people who have supported me along my journey to complete my Doctor of Education.

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Glossary of Terms

Term	Description
Ahpra	<p>Australian Health Practitioners Regulation Agency maintain public safety through managing the national registration of healthcare in partnership with the 15 National Boards.</p> <p>https://www.ahpra.gov.au/About-Ahpra/What-We-Do.aspx</p>
ANMAC	<p>Australian Nursing & Midwifery Accreditation Council are the external accreditation body of the Nursing and Midwifery Board of Australia (NMBA) which assesses nursing and midwifery education programs of study to ensure they meet the required accreditation standards.</p> <p>https://www.anmac.org.au/about-anmac/about-us</p>
Enrolled Nurse (EN)	<p>Completes a nursing education program in the Vocational Education and Training (VET) sector that has been accredited by ANMAC to deliver the education program. They provide nursing care under the direct supervision of a registered nurse.</p>
GPA	<p>Grade point average is calculated across all units of study completed in a course of study. It provides an average score.</p>
ICN	<p>International Council of Nurses represent nursing on a global basis that supports nurses to deliver health for all.</p> <p>https://www.icn.ch/who-we-are/mission-vision-constitution-and-strategic-plan</p>
NMBA	<p>Nursing and Midwifery Board of Australia is the national regulatory body for all nurses and midwives in Australia</p> <p>https://www.nursingmidwiferyboard.gov.au/</p>
Nurse educator	<p>Experienced registered nurse who provides guidance and support for undergraduate nursing students. May be either in the healthcare environment, or in the education sector.</p>
Professional experience placements	<p>Practical based work placements that allow student nurses to gain experience and link theory to practice while supervised by a registered nurse in the health care environment</p>
Reflection	<p>The processes used by the individual to critically examine an event or experience, apply learnings, both formal and informal and to identify or adopt new ways of thinking and doing</p>
Reflective practice	<p>The process of thinking critically and reflecting on nursing practice</p>

Registered Nurse	Completes a Bachelor of Nursing or Master of Nursing education program in the Higher Education Sector, most commonly at a university that has been accredited by ANMAC to deliver the education program.
Registered nurse standards for practice	The national standards provide a framework to define the core practice and behaviour for assessing registered nurses practice in Australia
Undergraduate nursing student	An undergraduate student enrolled in a program of study for nursing.

Chapter 1: Introduction

This introductory chapter to my thesis presents an overview of the study and its structure. Firstly, the problem statement and need for the study will be discussed. The rationale for undertaking this study follows. The aim of the study and the research questions developed are outlined. A brief overview of the research methodology introduces phenomenography as the methodology of choice. My role as the researcher and assumptions held are also discussed. This chapter concludes with the organisation of the theses including a synopsis of each of the chapters to follow.

1.1. Problem Statement: The Need for the Study

Reflection is important for nurses as they are required to critically examine the care they provide for their patients and clients. It is also important that nurses reflect on new knowledge and how this is integrated into clinical practice. A review of the current published literature on the perceptions of reflection in undergraduate nursing students has identified a gap (Chong, 2009; Fernández-Peña et al., 2016; Hong & Chew, 2008; Jayasree & John, 2013; Mahlanze & Sibiyi, 2017). While there are a number of studies exploring perceptions these have predominantly focused their role in professional experience placements, or the views of postgraduate students or registered nurses. The gap identified, that is the focus for this study, is on what undergraduate nursing students perceive reflection to be. This study will address this gap and add to the body of knowledge on what is known on reflection within the nursing profession. By understanding more on how reflection is understood by undergraduate nursing students, the curriculum can better focus on teaching and learning activities that promote reflection and how reflection is part of being a nursing professional.

1.2. Rationale and Significance of the Study: Justification of the Study

The ability to reflect is vital to develop knowledge and expand on new and existing ideas and concepts. It is also part of the requirements to become a registered nurse. While nurses are expected to be reflective and to use reflection on a daily basis, this can be very much a self-learnt or developed skill. When I was a newly appointed academic to the university, it became evident to me that very little in the way of direction or instruction was provided to students about reflection. It seemed there was no uniformity in the models or frameworks that were used across the curriculum or between units of study. I noted that reflection was included in the practice standards (NMBA, 2016) and as part of assessments that demonstrated meeting the requirements to become a registered nurse. Nothing was included in the curriculum at that time, on what reflection is, the importance

of being able to reflect and the need for nursing students to be a reflective practitioner. Taking all this on board, I then did some reflection myself and thought about what I wanted to know to inform the teaching and learning of reflection with undergraduate nursing students. Using this as a starting point it led me to the idea of exploring what reflection means to the individual student. Through understanding their perceptions of reflection, reflective activities could be embedded into classroom teaching rather than focusing on professional experience placements only. To understand this better, this study will focus on what reflection means to student nurses by exploring their perceptions of what it means to be reflective and what has helped them to be reflective.

1.3. Statement of the Purpose

The study's purpose is to contribute to the body of knowledge on how reflection as part of professional practice is perceived by undergraduate nursing students and to inform undergraduate nursing education, and in particular, the teaching and learning of nursing students. Educational research involves a systematic and scholarly approach to address an area of interest which has a direct relationship to that of teaching and learning within education (Coe et al., 2021; Cohen et al., 2018)

1.4. Research Questions

In order to identify and describe the various ways in which third year undergraduate nursing students perceive professional reflective processes, the study explored three research questions:

1. What do undergraduate student nurses perceive reflection to be?
2. How important or valuable do they see reflection and the ability to reflect on past, present and future professional practice to be?
3. Which types of learning activities or experiences encountered during their nursing program facilitate reflection?

1.5. Overview of the Research Design: Phenomenography

In order to understand the nursing students' views of reflection in a relevant and contextual way, this study uses phenomenography as the chosen research methodology. Phenomenography is an empirical research methodology relevant to teaching and learning particularly for higher education (Entwhistle, 1997; Marton & Booth, 1997) and undergraduate nursing students (Sjöström & Dahlgren, 2002). Through understanding the different ways in which a phenomenon of interest is perceived or understood by

individuals, teaching and learning can be informed (Marton, 1994). Chapter 5 discusses the research methodology in greater detail.

1.6. Role of the Researcher: Reflexive Stance

As an experienced nurse and academic I find reflection has become part of my life. Reflection was not taught to me, rather it evolved through my interest and involvement in my self-education and wanting to provide the best care that I could for my patients. Now as an academic I see that reflection and the need for us to have reflective skills should be introduced and fostered in our undergraduate nursing students. Due to this belief and personal bias toward reflection, I was very aware of this while conducting my study. In particular, I needed to bracket these biases when exploring what reflection means to the person that I interviewed. Providing nursing students with the skills to reflect is not something that is currently a focus at the undergraduate level. We expect our students to reflect, but we do not instill the value of reflection nor provide support in their reflective journey. The lack of focus and support inspired me to undertake my study to explore the reflective processes in undergraduate nursing students and focus on what reflection means to them. By understanding reflection from their point of view and what reflection means to them, educators and academics are better placed to teach and support students in their reflective abilities and provide ways that will enhance their reflection through appropriate activities integrated throughout the nursing curriculum. Therefore, the findings from my study will assist with informing the teaching and learning of undergraduate nursing students.

1.7. Researchers Assumptions

My interest in reflection began during the late 1970's when I completed my initial training as an enrolled nurse in the hospital nursing school. I later continued my nursing education in the early 1990s when I studied a Bachelor of Nursing degree at university. Exposure to these two different types of nursing education has provided me with distinct experiences of the way that nurses have received their nursing education and qualifications.

Hospitals were more focused on training, rather than education (Francis & Humphreys, 1999; Hollingworth, 1982; Lusk et al., 2001). They were also more centred on how to undertake particular skills such as sterile dressing application, medication administration and performance tasks such as removing flowers from the bedside at night. There was a heavy reliance on procedures and the way in which they were undertaken, and in the way that nursing care was provided (Hollingworth, 1982; Menzies, 1960). Each

hospital had its own training school and their own specific way in which procedures were undertaken. There were however some commonalities across each hospital's training school. Student nurses were not taught to question, rather they were to focus on doing what they had to do in the prescribed way that they were told to do it. There was an ethos of obedience as well as routine and ritual within each school. Seniority also determined who conducted which of the skills required for the particular aspect of patient care. Basic nursing skills such as bed making or performing hygiene needs for the patient were seen as low level and therefore conducted by enrolled nurses or nursing students. The more technical skills relating to the medical diagnosis of the patient were carried out by the senior or qualified nurses (Hollingworth, 1982; Menzies, 1960). Nursing care was not provided holistically, instead it was very fragmented and reduced to tasks and procedures that were performed by many different nurses across the different year levels of their nursing training (Hollingworth, 1982).

It was during my initial hospital based enrolled nursing training where I became aware of reflection. I was always thinking about better ways of completing the various procedures I needed to perform or seeking reasons or rationales for why this was deemed the best way to undertake the tasks we did. I can remember being in trouble many times for questioning more experienced nurses or even doctors as to why we did a particular thing the way we did. Very few rationales were outlined. Many times, the response received was "because this is the hospital's way".

After working as an enrolled nurse for a number of years I decided to further my education and become a registered nurse. This was in the early 1990s at the time when nursing education was transitioning from hospital-based training and moving into the higher education arena (Adamson et al., 1995; Francis & Humphreys, 1999; Lusk et al., 2001). My experience of undergraduate university nursing education was very different to what I had encountered in my hospital training days. At university, we were taught about critical thinking, clinical reasoning and evidence-based care. These were not always accepted or understood by many students who often asked for one way to do things and were not able to comprehend that as long as principles were followed, then a task or procedure could be undertaken in different ways. This aspect of following principles in particular became very apparent as many of the educators new to university academia brought their own training school ways into the practical classes. It became very evident to me at this time that as long as we followed the principles we were being taught and sought to find the best way to do something and as long as it was supported by sound evidence or research, tasks and skills could be undertaken in different ways.

It was also during this time, there was an emergence of nurse-led and nursing-focused research. Much originated from the United States (Horton-Deutsch & Sherwood, 2023). The United States had moved away from the hospital-based training and into university nursing schools much sooner than either Australia or the United Kingdom. The focus moved away from a biomedical or medical model and into a nursing model (Adamson et al., 1995). A biomedical or medical model views health as being an absence of disease, with illness being seen in terms of disease conditions that are managed and cured by medical intervention (Birks et al., 2015; Birks et al., 2020; Reed & Watson, 1994; Yuill et al., 2010). Nursing care provided within the medical model was directed at implementing medical treatments and alleviating the symptoms of the disease the person presented with. Tasks and procedures were conducted based on the presenting condition of the patient, and not always focused on their specific or personal needs (Menzies, 1960). With the implementation of the 'nursing process' this focus changed. Less emphasis of nursing care was placed on treatments, with more focus on the identification, assessment and observation of what the individual requirements were for the person in terms of disfunction and disability (Hollingworth, 1982). The move into a nursing model which sanctioned nursing-led research and evidence-based practice for nurses, became more significant and was part of establishing nursing as a profession rather than a vocation (Adamson et al., 1995; Clarke, 1986; Francis & Humphreys, 1999; Glazer, 1974; Lusk et al., 2001; Nelson, 2012; ten Hoeve et al., 2014). Nurses were taught to question, analyse discriminate and critically examine what they were doing and why. By doing so they were able to identify alternatives within the nursing care they provided.

As I undertook further studies at a post graduate level, not only did I acquire more specialised nursing knowledge, I also developed a greater appreciation of reflection, aligning with Schön (1983, 1987) and Glazer's (1974) views on reflection in professions. The more specialised the knowledge and skills we gain, the more we have to draw on. A more advanced and knowledgeable practitioner will be able use reflection to develop a variety of options, weigh these up and select the best alternative to implement and rationalise why it was. Experienced practitioners will often have a fallback option if the first option selected does not work or if it has a less effective outcome than what they predicted. Reflective practitioners will also critically examine and reflect on what occurred that prevented their first option from working (Dewey, 1910/2011, 1933; Lueung & Kember, 2003). Experienced practitioners may also be able to modify their plan while they are in the midst of implementing it rather than later or after it did not work. This recognition of the range of ways reflection can occur is also consistent with the writings of Dewey

(1933), Schön (1983, 1987), Greenwood (1993, 1998), Asselin et al. (2013), Van Mannen (2014), Ghaye (2011) and Edwards (2017)

It was also while undertaking further studies in education that I was introduced to learning styles. While specific styles are not discussed as prominently in current literature, the Honey and Mumford learning styles (1982) and Kolb's leaning cycle (1984) impacted greatly on my understanding of my own reflective nature. I rate highly in the reflector-theorist quadrant. Not only do I want to know the rationales and theories behind what I do, I also am a strong reflector. I see reflection as part of everyday life not only as a nurse, but also as an academic. We all learn from what happens to us and around us. We also learn from what we are thinking about, everything we have been exposed to and how all of these aspects affect us or have an impact not only on ourselves as individuals, but also on our interactions with others. Our values and beliefs that have been instilled upon us through life, family and friends are all part of what makes us who we are. It is our own values and beliefs that we also develop in life that influence how we view and see the world and our ability reflect on what we find. They also have an impact on how we learn and adapt as well as how we move forward in life.

1.8. Statement on Reflection in This Study

Many prominent theorists and authors have focused on reflection. As discussed in more detail in chapter 3 and drawing from these multiple sources, for the purpose of this study the following statement on reflection has been developed.

Reflection is the processes used by the individual to critically examine an event or experience, apply learnings, both formal and informal and to identify or adopt new ways of thinking and doing.

For this to occur a helicopter view and overarching approach to reflection as well as how and when reflection takes place are adopted. Events and experiences can be critically examined in many ways. The processes used to reflect may involve either formal and/or informal learning. Formal and informal learning refers to the specialised knowledge developed by the individual from which they can draw. Knowledge is also informally formed through discussions or previous experience with a same or similar situation. These processes also include frameworks or theories such as that of Gibbs (1988), Johns (2022) or Driscoll (2007) that assist with providing structure for the individual to work from as they reflect. These frameworks aid the individual in developing their reflective processes and evaluating how they reflect in the past.

1.9. Organisation of the Thesis – Content of the Following Chapters

Chapter 2 includes details of the three searches of the literature undertaken as part of this thesis and the quality appraisal of the studies identified for inclusion for analysis..

In Chapter 3 the analysis of the literature on reflection includes seminal works of Dewey (1910/2011, 1933), Schön (1983, 1987) and Brookfield (1998, 2009, 2011, 2014, 2016, 2017) on reflection provides a background on what has been published on reflection and what it means to be a professional. This chapter also focuses on reflection as part of being a professional. Reflection and how it applies to nursing and nursing education is also explored.

Chapter 4 focuses on the gap identified from the review and analysis of the literature on undergraduate nursing students' perceptions of reflection. It is this gap that forms the basis for the study presented in this thesis. The research purpose and aim of this study are also outlined in this chapter.

In Chapter 5, the research methodology chosen for this study, phenomenography, is explained in detail. Phenomenography is a research methodology relevant to teaching and learning (Entwistle, 1997; Marton & Booth, 1997; Sjöström & Dahlgren, 2002). Within this chapter, categories of description and how these are developed as well as student recruitment and data collection and analysis are discussed. The process to ensure rigour and trustworthiness within the study are also described.

Chapter 6 comprises the findings from this study. The categories of description developed for this study are explained in detail. The critical aspects of variation between the categories of description show how each category differs from the rest. The discussion is supported by representative quotations taken from the interview transcripts. Research question three, is discussed separately in this chapter.

Chapter 7 contains discussion of the findings of this study and how they are situated within the wider context of the literature. The limitations of the study are also explained in this chapter.

In Chapter 8 the conclusions arising from this study are discussed along with the recommendations drawn from the study that inform teaching and learning. Recommendations for further studies have also been made.

Chapter 2: Literature Review

This study investigates what undergraduate nursing students perceive reflection to be and whether they find it valuable for their current and future nursing practice. The study will also explore the experiences of nursing students about what facilitated their reflection. This chapter explains the processes taken for the three searches of the literature, the search terms used, data bases accessed, and the quality appraisal of the literature located which identifies the current gap that this study will focus on.

2.1. Search of the Literature

Three comprehensive searches of the literature have been undertaken since the commencement of candidature. In this section details of how each search was conducted along with the search strategies adopted will be discussed.

2.1.1. Search One

As part of the course work requirements for my professional doctorate an initial search of the literature was undertaken in April of 2017. The purpose of this search was to identify current literature on what reflection is, what it means to be reflective and how best to develop reflective processes in learners.

2.1.1.1. Search Strategy. The search was conducted using the Cumulative Index of Nursing and Allied Health Literature (CINAHL) to search for literature relating to health and education related professions. These included teaching, nursing, physiotherapy, occupational therapy, midwifery, medicine and pharmacy. A further search was then conducted using Ebscohost which included the education data bases of Emerald Insight and the Educational Resources Information Centre (ERIC) to include education related literature on reflection. Search terms included reflection, reflective, reflective practice, reflection-in-action, reflection-on-action, reflection-for-action, reflection and nursing, reflection and nursing education, reflection in education, reflection in higher education, models used for reflection and frameworks used for reflection. Over two hundred items were located which included journal articles and books.

The search was further limited to include only full text and articles in English. It included works by educational theorists, educational theories of reflection, how individuals reflect, how the process of reflection is developed, how reflection is used in nursing education, how reflection is used in higher education including other professions, how teaching or learning is practiced through reflection, models or frameworks that are used or suitable for reflection, and what tools or models are used to assess reflection. Date limits were excluded at this stage of the search process to allow for the inclusion of early

seminal works to be considered. Peer review was also excluded from this initial search as many published seminal works in book format were not peer reviewed. Those considered as relevant to the study's focus were then analysed and critiqued. As part of the analysis and exclusion process at this point, journal articles not published in a peer reviewed journal were discarded.

2.1.1.2. Analysis of the Literature. The reference lists of the peer reviewed articles were reviewed to identify any additional sources to be considered for inclusion in the review. Secondary sources cited within the literature were also examined for their relevance. Original sources were then located, critiqued, analysed and either discarded or included as a primary source to be included in the discussion. Those not relevant to theories on reflection, nursing education or higher education were discarded. Literature relating to reflection within teacher education was also discarded as the context of pre-service teaching was different to that of nursing education. The practical placements for student teacher or the context of the classroom environment did not sufficiently relate to the clinical environment of nursing professional experience placements. The literature which included seminal works by educational theorists was then classified into seven different themes. These themes included education theories on reflection, how individuals reflect and how the process of reflection is developed, how reflection is used in nursing education and higher education including other professions, how do we teach or learn through reflection, models or frameworks that are used or suitable for reflection, and which tools or models are used to assess reflection. The final number of sources included as part of the course work requirements was sixty one.

2.1.2. Search Two

In August 2018 an additional search was undertaken due to a refinement of the study's focus to also explore the perceptions of reflection.

2.1.2.1. Search Strategy. The same data bases were accessed using the following terms: perceptions of reflection, nursing students' perceptions and perceptions of reflection in nursing.

2.1.2.2. Analysis of the Literature. Four articles were identified from this search that were related to the research topic of undergraduate nursing students' perceptions of reflection. A search of the reference list in each article did not locate any additional articles relevant for inclusion.

2.1.3. Search Three

In late October 2023 a final search of the literature was conducted to identify any additional relevant literature published since the search two was conducted.

2.1.3.1. Search Strategy. The databases accessed via Ebscohost included Academic Search Complete search complete, CINAHL Complete, ERIC, Health Source – Nursing/Academic Edition and MEDLINE Complete. Emerald Insight and the Educational Resources Information Centre (ERIC) were not included in this final search. Emerald Insight was no longer able to be accessed via the University’s library. As the focus for this final search was on undergraduate nursing students, ERIC was no longer deemed a relevant database for the context of this study.

Search terms included nursing, nursing education, reflection, reflective, reflective practice, reflection-in-action, reflection-on action, reflection for action, reflection and models, reflection and frameworks, reflections within professions, perceptions of reflection, reflection in nursing education, and nursing students. The Boolean Operator AND was used to provide a more focused search and to reduce the number of records to review.

Several additional database resources that were not available at the time of the first and second searches were also searched for relevant articles. These included SAGE, Taylor & Francis, ProQuest and ScienceDirect. An initial publication date limiter was placed on all search terms of 2017 to 2023. The date limiter was further expanded to include the years 1990 to 2023 as the original four articles located in August 2018 were not able to be located. Despite the change in limiters, the original four articles located in 2018 were not found in the search. An additional search was then undertaken using Scopus and Semantic Scholar using the title of each of the four articles. These were located by Semantic Scholar. The reason for them not being included in the search of the Ebscohost databases, was due to the journals no longer being associated with Ebscohost. As they were not published by Taylor & Francis, ProQuest, SAGE or ScienceDirect they were not identified when searching each of these databases.

2.1.3.2. Analysis of the Literature. This final search of the literature identified one additional published article that was relevant to undergraduate nursing students' perceptions of reflection, making the final number included now five. (See Figure 2.1). The below table (Table 2.1) provides information regarding each of the articles included in the review of relevant literature related to students' perceptions of reflection. Included is the country in which the selected studies were located, purpose of these study, the number and type of undergraduate nursing students these authors included in their study, the methodology they selected as well as the key findings from these studies.

2.1.4. Quality Appraisal of Studies Included in the Review

As part of the evaluation of the available literature for review in my study, a quality appraisal of each article was conducted in line with the recommendations discussed by Green and Thorogood (2018), Bloomberg and Volpe (2019), Creswell and Guetterman (2021) and Mertens (2024).

While two of the included studies (Hong & Chew, 2008; Jayasree & John, 2013) were not considered quality articles they were not excluded from the review. These two articles were relevant to my study and were also included due to the limited number of studies located within the body of literature.

2.2. Summary

In this chapter the processes undertaken for the three searches of the literature were outlined with the selected database and search terms identified. The search located five studies applicable to the focus of this thesis.

The following chapter (Chapter 3) will discuss literature on the seminal works of Dewey (1910/2011, 1933), Schön (1983, 1987) and Brookfield (1998, 2009, 2011, 2014, 2016, 2017) along with how reflection is applicable to nursing as a profession. The reflective models of Kolb (1984), Gibbs (1988), Johns (1996, 2013, 2022) and Driscoll (2007) will also be discussed along with some of the techniques and activities that are utilised to assist with reflection.

Figure 2.1

Identification and Selection of Articles October 2023

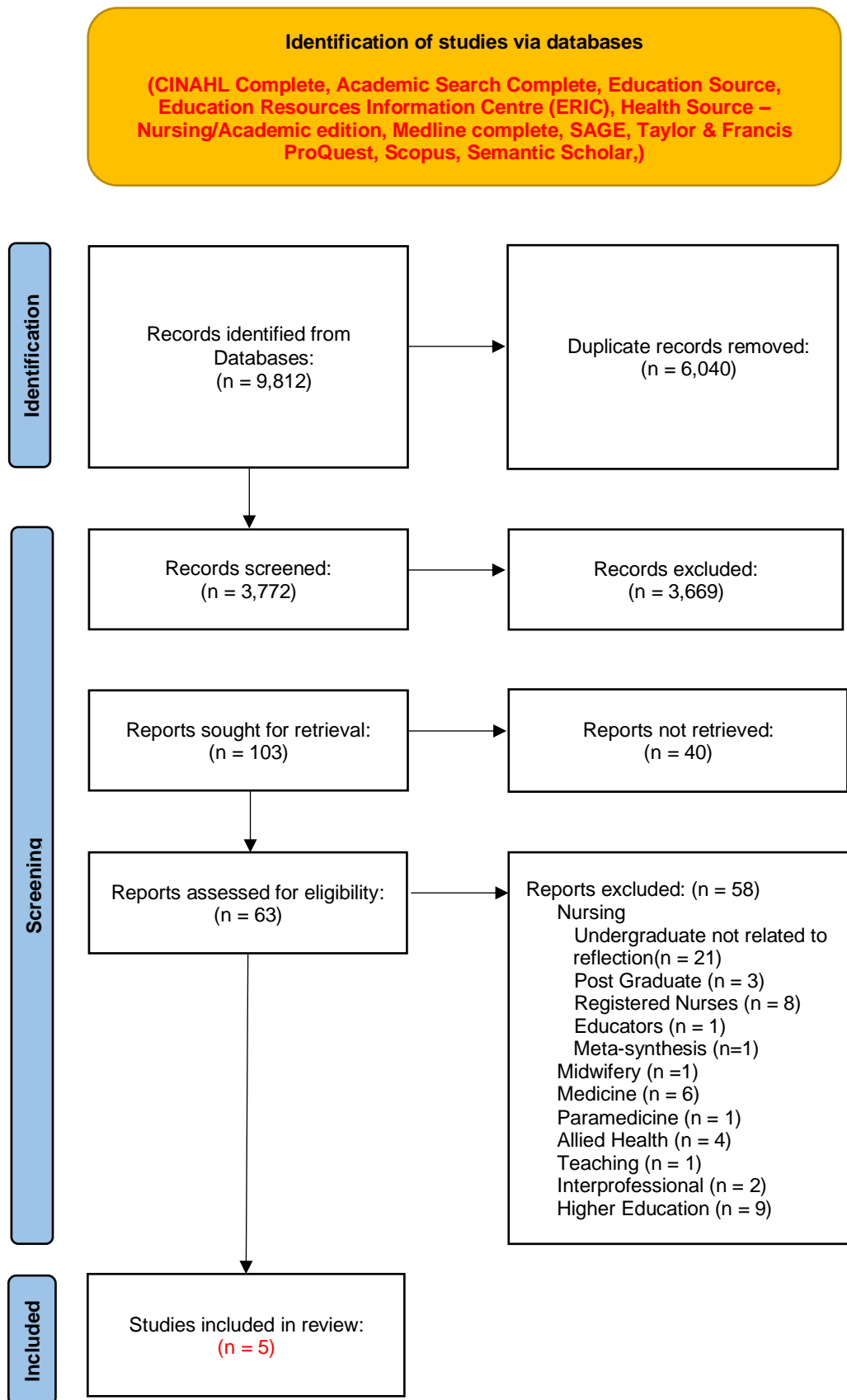


Table 2.1*Studies Selected for Review*

Authors	Origin	Purpose	Sample group	Methodology	Key findings
Hong and Chew (2008)	Malaysia	To explore students' views of reflective practice. Identify factors that motivate reflection and reflective writing, what impedes these and what motivates reflective practice	31 students (8 included in focus group)	Mixed methods. Survey and focus group	Reflective learning in the form of written journals assisted their learning. Barriers included time and not being sure what to write or write about and English as a second language. Negative feelings with associated feedback or being reprimanded for what they wrote.
Chong (2009)	Malaysia	To examine the perception of student nurses towards reflective practice in the clinical environment	98 final year students	Mixed methods. Descriptive survey	Reflection was a useful activity. Some students were sceptical about reflection. The validity of reflection as a tool to assess students in the clinical setting was not conclusive.
Jayasree and John (2013)	Oman	To assess the perception and attitude of reflection and reflective practice	38 third year students	Qualitative descriptive survey	Students have a positive attitude towards reflective practice. Repeated guidance and supervision are key to reflection.
Fernández-Peña et al. (2016)	Spain	To assess nursing students' perceptions of the usefulness and challenges of reflective learning	107 third year students (3 included in focus group)	Mixed Methods questionnaire and focus group	Reflective learning was a positive initiative in the curriculum. Levels of reflection were identified from descriptive to advanced critical thinking. There is a need for clear evaluation criteria for written reflection.
Mahlanze et al. (2017)	South Africa	To determine student nurses' perspectives of written journal writing as a means for personal, professional development and clinical learning development	40 second year students	Mixed methods Quantitative and descriptive survey	Written reflections were seen as a valuable tool to assist with improved decision making and increased involvement with learning. Students felt empowered to explore their attitudes and perspectives on situations.

Chapter 3: Background to the Literature

This chapter will review seminal research on reflection the nature of reflection and in relation to a range of professions, including nursing. As part of this, some of the pertinent theories relating to reflection will also be examined. Specifically, in this chapter I consider what reflection is, when and by what means it occurs, and how reflection is used in the education of undergraduate nursing students in the higher education sector

3.1. Seminal Research on Reflection

One of the prominent educational theorists in the 20th Century was John Dewey. His 1910 work "How We Think" highlighted and discussed reflection, reflective thought and reflective activity. He described reflection as being a consequence of thinking. He also ascertained that reflective thought involves a doubt, hesitation or perplexity followed by a determining of alternatives, to resolve the issue or dilemma present. Dewey (1910/2011, 1933) also identified that reflection could occur in either a pre reflective or post reflective mode. Pre reflection involves setting a problem or question to be solved by reflection. Post reflection is where direct experience has occurred, and through the experience of the problem itself, mastery, or satisfaction results. Dewey (1910/2011, 1933) determined that the function of reflection was to transform a situation where there is some conflict or doubt present into one that is clear and coherent in nature.

3.2. Reflection in the Professions

Following on from Dewey's (1910/2011, 1933) view that reflection on critical issues where multiple views of a situation was useful, Schön (1983) focused on how this process might work in the professions such as medicine and engineering. Schon's term Technical Rationality (1983), also used by Shils (1978) has its roots in a positivist philosophy and has been described as the epistemology of practice for the professional schools who procured their place in the universities of the early twentieth century (Schön, 1983, 1987). "Technical Rationality holds that practitioners are instrumental problem solvers who select technical means best suited to particular purposes" (Schön, 1987 p. 3). Fernández-Peña et al. (2016) also discussed that Technical Rationality is where practitioners learn about the required theory for their profession and how they apply it to their professional practice.

Schön (1983, 1987) also drew on the work of Nathan Glazer (1974) and his view of professions. Glazer (1974) and later Schon considered that there are two types of professions, major and minor. The major professions according to Glazer (1974) are those which use theory and research such as in medicine and law, while the minor professionals (all of the rest) focus on skills and practical experiences. Minor professions such as nursing, Glazer claimed, do not hold the same level of status, privilege or authority as those of

medicine and law and are viewed as the 'helping' professions. Nor do they have the same level of knowledge and technical complexity that major professions have. Therefore to be reflective practitioner, the application of specific theory, research and skills relevant to the profession is required (Glazer, 1974). This notion was also confirmed by Schon (1983, 1987). The major professions according to Glazer (1974) and Schon (1983, 1987) were formed out of a positivist viewpoint (a reality where phenomena exist whether we understand it or not (Green & Thorogood, 2018), with the dominant view being that specific knowledge associated with a profession requires the application of scientific knowledge and techniques.

3.2.1. Theories of Professional Reflection

Schön (1983, 1987) argued that the process of applying scientific knowledge happened in various professional contexts. He claimed professions used reflection-in-action, knowing-in-action and reflecting-in-practice, which refer to different ways in which professionals reflect. Reflection-in-action occurs when professionals think about what they are doing while they are doing something, such as a specific task or skill. They also do something such as modify the way they undertake the task or skill while they think about it. To be able to achieve this the professional must have specialist knowledge and theories from which they draw. Knowing-in-action is the practical knowledge required to be able to practise their profession. Schön (1987) describes this as being a trait that a competent professional practitioner will have and that this is different to the professional knowledge that is learnt in the university based professional schools. According to Schön (1983, 1987) professional practice requires the practitioner to experience a range of situations or experiences time and time again, resulting in repetition. Repetition then leads to the professional being able to respond in a spontaneous or automatic way when confronted by the same or a similar situation. Schön (1983, 1987) also ascertained that a practitioner will develop a repertoire of expectations and techniques that they have previously utilised. With specialisation, practice becomes more routine and repetitive as the knowing-in-practice requires less thinking about options but may cause a narrowness in thinking to occur. Because of their specialisation, the practitioner may not be open to new ways of seeing, thinking or doing (Schön, 1983, 1987).

In providing detailed analysis of how professionals reflect and why this is important, Schön's (1983, 1987) writings and work have influenced a number of more recent proponents of reflection. Many have expanded on Schön's views of reflection to include more than just reflection-in-action and reflection-on-action. Patel and Metersky (2021) and Bassot (2023) advocate that reflection-for-action is also important. Greenwood (1998) argues that reflection-before-action is also part of the reflective process. Van Mannen (2014) and Asselin et al. (2013) support Greenwood's (1998) idea that reflection also involved an

emotional aspect that is professionals need to be aware of their feelings in relation to a situation. As well as considering the significance of emotions in the reflective process, contemporary theorists (Asselin et al., 2013; Brookfield, 1998, 2011, 2014, 2017; Edwards, 2017; Ghaye, 2011; Greenwood, 1998; van Manen, 2014) have used the term critical reflection to emphasise the need to consider multiple perspectives when coming to a judgement on a professional situation.

3.2.2. Critical Reflection

While other theorists such as Schön (1983, 1987) discussed that reflection is part of being a professional, and van Manen (2014) who says reflection includes an emotional component, Brookfield (1998, 2009, 2011, 2016, 2017) too is part of the discussion about what reflection encompasses. Brookfield (1998, 2009, 2011, 2014, 2016, 2017) has written extensively on critical thinking, critical reflection and critical social theory. It is his work on critical reflection that is most relevant to this study. Critical reflection according to Brookfield (2009) is different to that of reflection. It is more than just reflection at a deeper level. Critical reflection also involves consideration of moral, social and power dynamics that occur as part of framing our practice as well as how we develop alternate assumptions about our practice (Brookfield, 2009; Smith, 2011). By this Brookfield (2009) means for reflection to be critical, it is unequivocal in exposing and questioning the assumptions we use and involves the individual questioning their experience and exchanging or transforming an assumption. Critical reflection according to Shandomo (2010) “blends learning through experiences with theoretical and technical learning to for new knowledge construction and new behaviours or insights” (p. 301). Brookfield (2009, 2011) takes the view that critical viewpoints differ from person to person and are based on each individual’s experiences and contexts which represents the beliefs of a majority group. Brookfield (1998, 2017) claimed that seeing through the lens of our learners’ eyes and examining our practice this way, assists us to facilitate learning and teach more effectively. Brookfield’s viewpoint is pertinent to the learner focus of this study because he argues it is important to understand the students’ perceptions in any learning context.

3.3. Nursing as a Profession

As noted earlier, theorists such as Schon (1983, 1987) and Glazer (1974) saw nursing as a minor or helping profession, being task oriented rather than reflective in the role they performed. This view of nursing changed as nursing emerged from a vocation into a profession. In Australia this occurred between 1985 and 1993 (Department of Education, 2001; Secretariat, 2002) when initial nursing training moved from a hospital-based apprentice-like model and moved into the higher education sector (Adamson et al., 1995;

Francis & Humphreys, 1999; Lusk et al., 2001; Nelson, 2012). The move into higher education came about as part of the reforms made to meet the changing demographics due in part to an aging population and the community's health care needs. As noted earlier Glazer (1974) identified such a move to the higher education sector as a requirement for being a professional. The change allowed for nursing to become more scientific and autonomous with its own specialty knowledge and practice rather than be seen as subordinate or subservient to medicine (Adamson et al., 1995; ten Hoeve et al., 2014). The move into the higher education sector was also seen as a way to improve the status of nursing as a career and bring nursing into alignment with other health care professions such as medicine, occupational therapy and physiotherapy (Francis & Humphreys, 1999) and allowed nursing education to become self-regulatory (Francis & Humphreys, 1999). As a result of the move into higher education, nurses have become more autonomous in their practice and are taught to question their knowledge and practice. By questioning, reflection has become a more important aspect in nursing practice.

3.4. Reflection in the Nursing Profession

Influenced by theorists such as Schön (1983, 1987) and Brookfield (1998, 2016, 2017) reflection has been included in the initial education and ongoing professional development of a number of professions such as nursing. Bulman et al. (2014) argue that reflection is useful for the nursing professions as it allows nurses to “critically develop themselves, learn from their practice, and actively make a difference to their practice/work” (p. 1220). Atkins and Murphy (1993) identified from their review of the literature that reflection is a valuable learning tool that forms a necessary process in not only nursing education, but also in professional education. Reflection is seen as a crucial component of being able to learn from professional practice. Schön (1983, 1987) advocated that it was reflection that helped align theory with practice allowing for practical placements to be able to deliver the inherent knowledge and skills owned by the profession from which the learner can draw. McLeod et al. (2015) argue that through self-assessment and self-reflection, practitioners are able to evaluate their own practice. Patel and Metersky (2021) identify that nurses engage in reflection-in-action, reflection-on-action and reflection-for- action at different times and with different experiences within their nursing practice. They gain essential learning from these experiences that is valuable for reflecting on past events, while in the moment and for future events or experiences they are exposed to. Wain (2017) supports this and explained that reflection enables both professional and personal development and can be used as a way of determining continuous life-long learning. (Wain, 2017) further posed the idea that reflection supports life-long learning by allowing insight into professional practice as well as informing practice through the development of analysis,

deeper understanding, and critical inquiry. It is these ideas as well as the transition of nursing into a profession and a self-regulating body that influenced the introduction of standards of practice for nurses and a code of ethics becoming part of the regulatory framework of nursing.

3.5. Reflection a Part of a Regulatory Framework in Nursing

3.5.1. Standards of Practice

With the move of nursing education to the higher education section and away from the vocational setting, there was also a move towards a more formalised regulatory framework. A number of different countries, including England, Ireland, Canada, New Zealand (Grealish, 2015; NCNZ, 2016; Nelson, 2012; Nicol & Dosser, 2016; O'Connor et al., 2003; Rees, 2013; Wain, 2017) have included reflection within their nursing practice standards. In Australia, competencies for registered nurses were first introduced in 1990 (ANRAC, 1990) While they were subsequently updated in 2000 (ANCI, 2000) it was not until 2006 that they became standards of practice (ANMC, 2006; NMBA, 2010). Both the competency standards and standards for practice have included reflection as a component.

The Nursing and Midwifery Board of Australia (NMBA) recognise that reflection is a requirement for the nursing profession and have continued to include reflection in the Registered Nurses Standards for Practice (2016).

More specifically Standard 1 of the NMBA Standards of Practice for the registered nurse requires registered nurses to “use a variety of thinking strategies and the best available evidence in making decisions and providing safe, quality nursing practice within person-centred and evidence-based frameworks” (NMBA, 2016, p. 3). In Standard 1.2 the registered nurse “develops practice through reflection on experiences, knowledge, actions, feelings and beliefs to identify how these shape practice” (NMBA, 2016 p. 3).

The Registered Nurse Accreditation Standards by which the Australian Nursing and Midwifery Accreditation Council (ANMAC) assess nursing education providers also require that the Registered Nurse Standards for Practice (NMBA, 2016) are included in the undergraduate nursing curriculum as part of preparation for professional practice and to demonstrate that the undergraduate nursing students have met the standards required for their initial registration. Therefore, reflection has been incorporated into the nursing curriculum of every Australian university as a teaching and learning strategy (ANMAC, 2019; Grealish, 2015).

3.5.2. Code of Ethics

The code of ethics for nurses developed by the International Council of Nurses (ICN) (2012) and adopted by the NMBA, also contains a number of principles relating to reflection. Principle 5: Teaching, supervising, and assessing states in 5.1 that “It is the responsibility of all nurses to create opportunities for nursing students and other nurses under supervision to learn, as well as benefit from oversight and feedback. (ICN, 2012 p. 13); and in 5.1 c., that as part of their teaching and supervisory roles, nurses must “reflect on the ability, competence and learning needs of each student nurse who they teach or supervise and plan teaching and supervision activities accordingly” (ICN, 2012 p. 14). Registered nurses must comply with these standards to ensure that they meet the requirements for the profession and to provide safe care for patients (ICN, 2012 2012). As reflection has been embedded in the code of ethics and the practice standards for the registered nurse, the need for all nurses to reflect on their own practice as well as develop the reflective skills of others, including student nurses are requisites for nursing as a profession.

3.6. Teaching Reflection in Undergraduate Programs

Given that reflection is considered critical in nursing and is part of the regulatory framework, how reflection is taught in undergraduate nursing programs is an important issue. For example, it has been suggested in contemporary nursing literature (Asselin, 2011; Barbagallo, 2019; Stirling, 2015) that reflection needs to be embedded both in the classroom as well as in professional experience placements because students need to understand reflection, and what it means before they are able to reflect-on-action, in-action and for action while on professional experience placements. For this to occur both in the classroom and in the professional experience environment reflection needs to be regarded as a way of improving nursing practice, not just as something that has to be assessed as a way of meeting learning outcomes (Boud & Walker, 1998; Finlay, 2008). A focus needs to be on how reflection is taught in the classroom with constructive alignment (Biggs et al., 2022; Coulson & Harvey, 2013) and scaffolding (Coulson & Harvey, 2013; Larrivee, 2008) across the entire curriculum. Constructive alignment is where teaching and learning activities along with assessment items are systematically aligned to the intended learning outcomes (Biggs et al., 2022). Scaffolding is where teaching and learning activities are introduced to students with increasing complexity where one concept builds on another in a meaningful way (Bruner, 1960; Wood et al., 1976). Reflection must also be viewed as important by the nursing teachers and academics in order for them to assist undergraduate students with their learning and to assist with their reflective processes (Bulman et al., 2014; Coulson & Harvey, 2013; Jacobs, 2016). Therefore, reflection needs to be integrated within classroom teaching and across the curriculum, and not just seen as something that has to be

undertaken and only relevant while on practical placement (Boud & Walker, 1998; Coulson & Harvey, 2013; McLeod et al., 2015).

While the importance of reflection has been discussed in the standards of practice and incorporated into the assessment of professional experience placements, little research has been conducted on how undergraduate nurses are taught to reflect (Clarke, 2014). Clarke (2014) argues that reflection needs to be threaded into all aspects of the curriculum. What is required is the development of teaching strategies that focus on students' abilities to gain the required skills and personal attributes for reflection and reflective practice to occur. For while it is an expectation that nurses should engage in reflection as part of a curriculum, it is not explained or modelled well by educators (Jacobs, 2016; Horton-Deutsch & Sherwood, 2023).

It is argued that while discussion of reflection in relation to professional judgement of nursing students has tended to be too much about understanding a negative aspect of a situation or event, reflection can also provide focus on positive outcomes as well (Nicol & Dosser, 2016; O'Connor et al., 2003). Reflection can be a very valuable learning tool to help understand why things did go well (Nicol & Dosser, 2016) and for learning from these positive experiences (O'Connor et al., 2003; Horton-Deutsch & Sherwood, 2023). McLeod et al. (2015) in their review of the literature on strategies to facilitate undergraduate students' reflection identified that the most effective way in which learning from their experiences occurs is through the connection of reflection to their practical placements. McLeod et al. (2015) further identified that reflective activities also need to be contextual to the practical placements the students are undertaking which was also supported by Mann et.al (2009) and Parrish and Crookes (2014).

McLeod et al. (2015) additionally discussed that reflective activities need to be supported by reflective dialogue with their teachers or educators who had also been taught how to teach and facilitate reflection. A major point identified by Mann et al. (2014) also acknowledged by McLeod et al. (2015) is that repeated exposure to reflection must also be integrated throughout the curriculum and in each stage of the practical placements.

As a further refinement on the discussion about teaching reflection in nursing Nicol and Dosser (2016) argue that many nurses are very familiar with reflection on action but are not conscious of when they reflect in action or before action. Reflecting in action or before action is important because nurses need to reflect in order to develop an action plan for future practice. Thompson and Pascal (2012) identify that reflection for action provides enrichment with the process of knowledge development. Pierson (1998) endorses this and further explains that by supporting nursing students in the reflective processes while they are

on practical placements, aspects of practice may be discussed and action plans identified. This support, Pierson (1998) also argues, is beneficial for the students as it encourages them to be reflective but also engage in innovative thinking.

One of the ways in which reflection has been introduced into the nursing curriculum is through the use of reflective models. These reflective models have been used as a pedagogical tool provided for students as a framework on which to base their reflections. Completing a written reflection often forms part of the nursing students' assessment of their professional experience placements.

3.7. Reflective Models

There are a number of reflective models which are relevant to nursing education, those of Kolb (1984), Gibbs (1988), Johns (1996, 2013, 2022) and Driscoll (2007) in particular. Reflective models according to Wain (2017) provide a structure where learning can be evaluated. They allow for theories, concepts and knowledge to become embedded in practice and are useful to assist with the analysis of complex issues to arrive at an outcome. (Esterhuizen, 2023; Finlay, 2008; Horton-Deutsch & Sherwood, 2023; Regmi & Naidoo, 2013; Wain, 2017).

Kolb's experiential learning cycle (1984) involves a four-step process involving experience, observation, conceptualisation and experimentation. Gibbs (1988) expanded on this to provide additional steps. He included the steps of identifying the problem, reflection on possible implications, analysis and planning for action. As part of this analysis, he also focused on feelings and including a structured debriefing which he saw as important following an event (Gibbs, 1988; Mathieson, 2016). Gibbs' model allowed for a more structured way for practitioners to work through Kolb's cycle. While Gibbs' model is used by nurses as a way of structuring reflection by describing the experience while on practical placements (O'Connor et al., 2003), it has also been critiqued for being superficial in nature and that it does not assist with the development of quality reflection (Husebø et al., 2015).

It is argued that the more prescriptive models of reflection such as those of Gibbs (1988) and Driscoll (2007) provide a useful beginning point for nursing students' reflections as they provide a structure and a framework on how to reflect (Finlay, 2008). The Johns model (1996, 2022) is less prescriptive than that of Gibbs (1988) and Driscoll (2007). Johns (1996, 2013, 2022) model provides a more open structure than that of Gibbs (1988) and Driscoll (2007) as it allows for the emotions, values and attitudes of the individual to be considered in context of the event that occurred rather than just the events (Cox, 2005).

Boud and Walker (1998) claim that for many academics, reflection has become a process that focuses more on the technical aspects of what is required for reflection and has

become oversimplified in its nature. For example, it is argued that due to overly prescriptive sequencing of the steps of reflection students can become more mechanical in their reflective activity and see reflection more of a process of completing a checklist than a learning experience. What is required is less focus on students using a technical process of reflection and more on the development of teaching strategies that focus on students' abilities to gain the required attributes for reflection and reflective practice to occur (Horton-Deutsch & Sherwood, 2023).

Both Finlay (2008) and Stirling (2015) argue that the strengths and limitations of each model should be discussed with the students as a way of providing opportunities to prevent both complacency with their reflection and simple descriptive reflections becoming the norm. Teachers and students often see prescriptive reflective models almost as a checklist (Boud & Walker, 1998; Finlay, 2008) or as a way of providing what is required in order to be assessed rather than fostering actual reflection and reflective skills. Finlay (2008) and Stirling (2015) also identify that reflective models should be used as an initial trigger for reflection and that for reflection to become more complex and less structured, a number of models should be made available to students. Finlay (2008) also discussed that reflection and reflective activities can be impeded as students become more focused on a response to the questions, rather than true reflection. (Finlay, 2008). Reflective models such as Gibbs (1988), Kolb (1984) and Johns (1996, 2013, 2022) were identified by Barbagallo (2021) to be both a barrier and an enabler for reflection as students can be restricted by having to follow a model. Some students found following a structure as it helpful for improving reflective abilities through enhanced articulation and understanding of experiences (Barbagallo, 2021).

While academics might argue reflective models are useful in nursing to assist them and the nursing students with the process of reflection, there is a significant need to understand how students view reflection in order to inform teaching and learning and provide appropriate reflective activities to foster reflection (Boud et al., 1985; Boud & Walker, 1998). The nursing students' perceptions of reflection in order to understand their experiences of reflection will be the focus of this study. Exploring nursing students' perceptions of what reflection means to them will not only enhance possible teaching and learning opportunities and inform curriculum on reflection but will also contribute to the body of knowledge on how nursing students see reflection and what this means to them, and which reflective techniques assist with reflection.

3.8. Techniques and Activities to Assist with Reflection

Many reflective techniques have been adopted to support undergraduate nursing students with their reflection. These have been discussed by a number of authors and include the use of reflective journals (Bulman & Schutz, 2013; Eaton, 2016; Ghaye, 2011; Johnson, 2013; Langley & Brown, 2010; Pierson, 1998; Reljić et al., 2019; Smith, 2011), debriefing (Driscoll, 2007; Husebø et al., 2015) and critical incidents (Eaton, 2016; Ghaye, 2011; McKinnon, 2016; Parrish & Crookes, 2014). Reflective questions and questioning (Bulman & Schutz, 2013; Driscoll, 2007; Ghaye, 2011) as well self-assessment (Bulman & Schutz, 2013; Johnson, 2013) and concept maps (Ghaye, 2011; Smith, 2011) have also been discussed. The below discussion is focussed on reflective writing as exploration of the value of this technique is a predominant focus within contemporary literature. In order to identify other reflective techniques and activities found to be useful for reflection within undergraduate nursing student, this study will explore students' perceptions of what they found to be useful to them.

3.8.1. Reflective Writing

Reflecting writing has been seen as one way in which nursing students are able to develop their reflective capabilities (Bassot, 2023; Biggs et al., 2022; Delves-Yates, 2021; Esterhuizen, 2023; Jasper, 1999; Rolfe et al., 2011). It also needs to be recognised for being a reflective activity and not just a way of meeting assessment criteria (Coleman & Willis, 2015; Coulson & Harvey, 2013; Coward, 2011). Boud and Walker (1998) state that presenting written reflections students must feel safe in the notion that their thoughts and feelings expressed will be accepted as legitimate. Boud and Walker (1998) further discuss that there are inherent requirements for reflection to occur. Teachers and academics need to provide boundaries and the context for reflection (Boud & Walker, 1998; Finlay, 2008) as reflection before an event is as important as that which occurs during or after an event. Academics also need to be supported with education in on reflection particularly if they are novice academics (Kennison, 2012). Jasper (1999) identified that reflective writing was essential for nursing students to assist with their personal development and professional practice. She further explained reflective writing skills were an effective way for students to recognise their learning needs by providing direction to recognise achievements (Jasper, 1999). Reflective writing has also been determined as being a challenging task for student nurses to complete (Kennison, 2012). In part this is due to the nursing students not possessing the necessary skills to reflect or not possessing the maturity to engage with purposeful reflection (Coleman & Willis, 2015) or the time it takes for a written reflection (Smith & Jack, 2005). Larsen et al. (2016) confirmed in their study that greater retention of learning occurs when daily reflective writing was completed as part of professional

experience placements than if completed less frequently. While their cohort was medical students, the findings can be applied to that of nursing students.

The general consensus in a number of studies that explore student and educators experiences and perceptions of reflective writing for example (Coulson & Harvey, 2013; Coward, 2011; Howlett, 2019; Jayasree & John, 2013; Kennison, 2012; Pierson, 1998; Reljić et al., 2019; Smith & Jack, 2005; Williams et al., 2009) is that reflection needs to be included in the curriculum, support and mentoring is required, as a structure or process to follow is important, and finally that time needs to be allocated for order for meaningful reflection to occur.

3.9. Summary

This chapter has provided an overview of the background literature relevant to reflection. Important seminal work was identified and discussed in relation to reflection and reflection in nursing.

The next chapter (Chapter 4) focuses on the perceptions of reflection that are present in other health related professions such as physiotherapy (Roche & Coote, 2008) and medicine (Larsen et al., 2016) as well as in nursing and nursing education (Gustaffsson & Fagerberg, 2004; Maginnis & Croxon, 2010) The five studies (Chong, 2009; Fernández-Peña et al., 2016; Hong & Chew, 2008; Jayasree & John, 2013; Mahlanze & Sibiya, 2017) located during the search of the literature which focuses on the perceptions of undergraduate nursing students will be discussed in detail. The purpose and aim of the study conducted for this thesis will also be discussed along with the research questions developed.

Chapter 4: Perceptions of Reflection

Within the literature, there are a number of studies that have discussed perceptions of reflection, that is, how reflection is seen and understood and how effective students perceive efforts to teach it are. Some studies have explored perceptions of reflection by the registered nurse (Gustaffsson & Fagerberg, 2004), physiotherapy students (Roche & Coote, 2008), medical students (Larsen et al., 2016), pre-registration mental health students (O'Donovan, 2007), community health care nurses (Smith & Jack, 2005), paramedic students (Howlett, 2019) interdisciplinary simulation-based education (Lee et al., 2020), post graduate nursing education (Bulman et al., 2012, 2014; Langley & Brown, 2010; Stirling, 2015), student advanced nurse practitioners (Glaze, 2001, 2002), the differences between what student nurses learn in practical skills labs and what they experienced on practical placements (Maginnis & Croxon, 2010). Some of these studies, while they do not focus on nurses, acknowledge aspects that are also applicable to nursing students, educators or academics. For this reason, they have been included in the below discussion.

4.1.1. Nursing and Other Professions

While some of the literature written on perceptions of reflection has focused on registered nurses undertaking post graduate studies, there are also a number of studies that investigated undergraduate and post graduate students in other professions. Fullana et al. (2016) are academics working at the same university who are involved with the implementation of reflective learning within the undergraduate degree courses of nursing, psychology, environmental science and social education. In their collaborative study, Fullana et al. (2016) explored students' perceptions of the benefits and challenges with reflective learning. Within each of the four courses (nursing, psychology, environmental science and social education) a different reflective learning activity was used within the curriculum as part of their assessment. The multidisciplinary approach taken by Fullana et al. (2016) is different from other studies as they did not interview the students together, instead each group was interviewed separately within its own specialty area. Across all reported groups Fullana et al. (2016) there was a consensus that the methodology of reflective learning improved student learning by encouraging them to be more aware of their attitudes towards learning. Fullana et al. (2016) also confirmed with Boud and Walker (1998), that students reported not being as open or person in their reflection if it was being assessed. Fullana et al. (2016) also supported other studies such as Vivekananda-Schmidt et al. (2011) that students were concerned their reflections would be viewed as inappropriate if they are based on evaluating professional practice where others were involved and the impact that may have on the outcome of the assessment. Therefore, they may not have provided true reflective accounts, instead focusing on what they were to be assessed against.

Roche and Coote (2008), focused on a group of physiotherapy students' perceptions of reflection and compared their levels of reflection pre and post completion of a module on reflection. The findings from this study (Roche & Coote, 2008) showed a change in the students' perceptions as they moved from seeing reflection as being focused on performance to a view where reflection could also be useful in their future practice. No mention was made by Roche and Coote (2008) as to the timing of when these students were re interviewed following the completion of the module. It is possible to speculate however that the closer in time to an event or intervention, that there will also be an impact on the quality and nature of the reflection that occurs.

Interdisciplinary education is at the forefront of a number of professions. Due to the nature of health care and the interactions that take place between professions, interdisciplinary education opportunities have been included in the accreditation requirements of a number of professions in Australia including nursing (ANMAC, 2019), midwifery (ANMAC, 2021), paramedicine (PAC, 2020) and medicine (AMC, 2024). As a result, a number of interdisciplinary studies in relation to reflection have been undertaken, specifically in the simulation arena.

Lee et al. (2020) included nursing and medical students within the high-fidelity simulation scenarios they ran. Once the undergraduate nursing and medical students had completed the simulation program they were required to complete reflective journal on their experiences. The findings from Lee et al. (2020) confirmed that significant learning was achieved as a result of the interprofessional collaboration within these fidelity simulation scenarios. While each cohort of students identified different aspects of their learning as important, they all acknowledge a change in their understanding of the roles of each of their respective disciplines. The medical students in this study (Lee et al., 2020) changed their perception of nurses and nursing. The nursing students' perspective on doctors also changed. By developing a collaborative approach to patient care in the safe environment offered by high fidelity simulation activities, Lee et al. (2020) found the collaboration at the undergraduate level increased the confidence with communication between nursing and medical students, which in turn will allow for great opportunities to enhance safe patient care following graduation.

As Lee et al. (2020) identified in the previous discussion collaboration provides opportunities for learning through the sharing of experiences with others. Gustaffsson and Fagerberg (2004) found that through reflecting, registered nurses were able to exchange experiences with each other. The registered nurses also believed that by exchanging experiences with each other they enhanced the nursing care they provided. By sharing experiences, Gustaffsson and Fagerberg (2004) proposed that through examination and

understanding of the content of reflections made by the registered nurses, there would be a better comprehension of how and when reflection would be used. These findings were also confirmed by Vivekananda-Schmidt et al. (2011) in their study on the perceptions of reflection with medical students. Gustaffsson and Fagerberg's (2004) findings concluded that through reflection, registered nurses perceived that they were not only able to learn about what they had achieved professionally, but also through reflection they developed competence and confidence to assist with the teaching and learning of other nurses. Vivekananda-Schmidt et al. (2011) also identified the same aspects in their study with undergraduate medical students. They also discussed that reflection was part of lifelong learning and for this to be promoted by educators and academics through the use of appropriate feedback, mentoring and tools to facilitate the reflective abilities of undergraduate students (Vivekananda-Schmidt et al., 2011).

Smith and Jack's (2005) study on perceptions of reflection and how it is seen as best learned explored whether it was the written reflections or the process of reflecting that was perceived to be more effective by the students. One student in their study conceded that there is no link between reflection and practice as you can be a good nurse or practitioner without the use of formal reflection processes. The students in this study (Smith & Jack, 2005) also reported that while reflection is important as a learning activity, it does not need to be adopted only as a written reflection. They perceived that when it not documented as a written reflection, and included in verbal discussion the process became more of a problem-solving activity.

As the findings from the studies included in this section may be transferable to the student cohort of undergraduate nursing students that is the focus of this investigation, these studies also have implications for informing the teaching and learning of reflection in undergraduate nursing students.

4.1.2. Nurse Educators and Academics

The views and perceptions of nurse educators and academics are also important to understand as their views will often determine how reflection is modelled to undergraduate nursing students. As part of their investigation into the perceptions of reflection by nurse educators, O'Connor et al (2003) identified that a small number of nurse educators viewed reflection as a way of developing and valuing their own professionals nursing and their nursing practice. O'Connor et al. (2003) identified that nurse educators thought that student nurses tended to undervalue the experiences they obtained during practical placements. They also made comment that nursing students' views on reflection were also influenced by

how their educators and academics regarded reflection, as well as how valuable and useful the educators and academics perceived reflection to be (O'Connor et al., 2003).

The study undertaken by Burnard (1995) explored nurse educators' views of reflection and reflective practice. Burnard (1995) found that the nurse educators made a clear distinction between what was reflection and what was reflective practice. Reflection occurred as they looked back at their own clinical practice. Through the use of reflection, they were able to enhance and expand on their academic knowledge. Reflective practice was part of what they did as a nurse and was seen as an important part of nursing education. Reflective practice involved thinking about practice, relationships with others and being a part of the process of nursing (Burnard, 1995). The nurse educators who took part in Burnard's (1995) study believed that the process of reflection made them more competent and confident practitioners. Burnard (1995). also found that reflection would also contribute to improved patient care, however, his participants did not provide any examples of how this occurred (Burnard, 1995).

There are also studies relevant to perceptions of educators and academics that also included students as well. A number of these will be discussed in the below section as the findings from these studies are relevant to both perceptions of educators and that of students.

4.1.3. Studies Which Compared Nurse Educators and Nursing Students Within the Same Study

The findings by Burnard (1995) discussed in the previous section on nurse educators and academics are also supported by Bulman et al. (2012) and Barbagallo (2021) in their studies on what reflection means to nurse educators and post graduate nursing students. The post graduate students in Bulman's (2012) study believed that reflection was involved with informing their thinking as well as their actions as nurses and that reflection was involved as part of the change and improvement of their practice. Barbagallo (2021) also confirmed that value was placed on reflection by students and educators. Reflection was a good learning tool for allowing them to develop insight into nursing care provision (Barbagallo, 2021) The nurse educators who were part of the study undertaken by Bulman et al. (2012), discussed the significance of difficult experiences and the intentional learning that followed as being part of the reflective process. Barbagallo (2021) also established that personal growth was achieved through making sense of experiences, identifying what went wrong or what worked and allowing students to improve on their practice as nurses. It was these experiences that assisted with their reflective ability. (Bulman et al., 2012). Barbagallo (2021) stressed the paucity of research conducted on nursing students' perceptions and

experiences with reflection and highlighted the need for further studies to be conducted in this area, in particular, to understand the motivation and factors that impact on quality reflective practice in nursing students.

4.2. Perceptions of Reflection – Undergraduate Student Nurses

The majority of the literature on perceptions of reflection previously discussed has related to professions other than nursing, or to registered nurses and educators' perceptions rather than those of undergraduate nursing students. For reflection to inform teaching and learning in the pre-registration nursing curriculum, however, undergraduate nursing students' perceptions of reflection need to be explored. The five articles located in the search of the literature (Chong, 2009; Fernández-Peña et al., 2016; Hong & Chew, 2008; Jayasree & John, 2013; Mahlanze & Sibiyi, 2017) which focused on undergraduate nursing students' perceptions of reflection, were all different in the approach they took. The following discussion outlines the area of focus for each study, with a more detailed analysis to follow.

The study conducted by Hong and Chew (2008) considered the perceptions and motivations of reflection experienced by nursing students as a way of informing impediments to their reflection and improving students' motivation towards reflective practice. Jayasree and John's (2013) approach explored the perceptions and attitudes undergraduate nursing students have towards reflection and reflective practice. The emphasis taken by Chong (2009), Fernández-Peña et al. (2016) and Mahlanze and Sibiyi (2017) was on undergraduate nursing students' perceptions of reflection during their professional experience placement and how reflective journals were used or implemented to support the students' reflective processes. All three studies (Chong, 2009; Fernández-Peña et al., 2016; Mahlanze & Sibiyi, 2017) explored distinct aspects of the reflective journals completed by the students.

The five studies outlined above (Chong, 2009; Fernández-Peña et al., 2016; Hong & Chew, 2008; Jayasree & John, 2013; Mahlanze & Sibiyi, 2017) all focused on the perceptions of undergraduate nursing students. All five studies discussed the benefits of reflection as part of professional experience placements. No mention, however, was made by any of these authors as to whether reflection and reflective practice was also useful in the classroom. All authors (Chong, 2009; Fernández-Peña et al., 2016; Hong & Chew, 2008; Jayasree & John, 2013; Mahlanze & Sibiyi, 2017) identified that undergraduate nursing students perceived reflection to be beneficial. Reflection was perceived to be a useful learning strategy and learning tool that was beneficial for learning and clinical practice (Chong, 2009; Jayasree & John, 2013; Mahlanze & Sibiyi, 2017). However, as the focus was on the professional experience placements, the learning was also focused on the

clinical aspects only. Reflection was perceived by nursing students to assist with their decision making and allowed them to become more insightful and self-aware (Mahlanze & Sibiya, 2017), and more critical in their thinking (Jayasree & John, 2013) by providing triggers which allowed them to consider range of perspectives when examining clinical situations (Jayasree & John, 2013).

Several barriers were also perceived by nursing students to impact on their ability to reflect (Chong, 2009; Hong & Chew, 2008; Jayasree & John, 2013; Mahlanze & Sibiya, 2017). Many students acknowledged that reflection required dedicated time (Chong, 2009) and support to reflect (Jayasree & John, 2013) as they were not sure on what they could or should be writing about (Chong, 2009; Hong & Chew, 2008). As a result they often felt and often felt a fear of reprimand if they had negative thoughts or negative aspects (Chong, 2009; Hong & Chew, 2008). Motivation was also seen as a barrier to reflection (Hong & Chew, 2008) a many students would only complete written reflections if they were a mandatory requirement as part of their professional experience assessment (Jayasree & John, 2013). Only one of the studies (Chong, 2009) described that the undertaking of reflection caused some students psychological stress. The number of students who identified experiencing psychological stress may not be as significant as what was reported by Chong (2009) because the only options the students in their study could respond to were agree, disagree or not sure. The use of a five-point Likert-type scale would have allowed respondents to more options from which to select. According to Coe et al. (2021) there should be variation within the options from which to select, or otherwise the information gained from the question may not accurate. The lack of options does not allow for variations with responses to be explored (Coe et al., 2021). Psychological stress associated with reflection (Chong, 2009) is an example where further exploration within the question could have occurred.

Reflective writing was highlighted as being a way in which undergraduate nursing students could scrutinise their feeling and reactions on both a professional and personal basis (Fernández-Peña et al., 2016) and a way in which professional and clinical learning could be explored (Mahlanze & Sibiya, 2017). Reflective writing was also perceived as requiring skill to complete while on professional experience placements (Chong, 2009; Fernández-Peña et al., 2016) and was also viewed as being not as easy a process for reflection when compared to verbal discussion (Fernández-Peña et al., 2016). While students often focused on the negative aspects of the situation on which they were reflecting (Chong, 2009; Hong & Chew, 2008) they also felt empowered to consider alternatives (Mahlanze & Sibiya, 2017) hence learning was achieved through their reflective writing (Jayasree & John, 2013). It was also found that some undergraduate nurses identified that

you do not need to be a good nurse to reflect, however all good nurses will reflect. (Jayasree & John, 2013). It was through the use of reflection that improvements in nursing practice occurred through identification of personal strengths and weaknesses (Fernández-Peña et al., 2016).

The role of mentors and role models was perceived to be important as part of reflection and reflective writing for undergraduate nursing students (Chong, 2009), as they perceived the need for guidance, support and mentoring (Fernández-Peña et al., 2016; Hong & Chew, 2008) to enhance the process of reflective writing. It was viewed as being essential that the mentors also had a good understanding of the process of reflection as well as being able to reflect themselves (Chong, 2009).

All of the studies identified (Chong, 2009; Fernández-Peña et al., 2016; Hong & Chew, 2008; Jayasree & John, 2013; Mahlanze & Sibiya, 2017) were adamant that reflective practice was important and needed to remain as part of the education of undergraduate nursing students (Jayasree & John, 2013). Reflection is also important within professional experience placements as there was a lack of clarity of reflective processes (Hong & Chew, 2008), and that nurse educators should be required to have a good understanding of the nursing curriculum in order to support the students (Chong, 2009; Mahlanze & Sibiya, 2017). There was only one paper (Fernández-Peña et al., 2016) which recommended further study be undertaken on faculty perceptions of reflective learning so that strategies can be developed to assist undergraduate students with their reflective processes.

In summary, the literature reporting on student perceptions of reflection and reflective practice focusses on written reflection as part of the assessment of professional experience placements. Whereas those studies that investigated the perceptions of educators or academics explored what the educators perceived reflection to be. The studies focused on how reflection was used or valued as educators and/or by their nursing students and did not explore their conceptions or their understandings of what reflection meant to nursing students or what the nursing students perceived reflection to be. The literature search undertaken for this study indicated that there is only a very limited number of studies that have explored perceptions of reflection within undergraduate nursing cohorts (Chong, 2009; Fernández-Peña et al., 2016; Hong & Chew, 2008; Jayasree & John, 2013; Mahlanze & Sibiya, 2017). This paucity in the literature has highlighted a gap that this study will focus on with the aim of contributing to the body of knowledge on undergraduate nursing students' perceptions of what reflection means to them.

4.3. Purpose and Aim of the Study

The study's purpose was to contribute to the body of knowledge on how reflection as part of professional practice is perceived by undergraduate nursing students and to inform undergraduate nursing education, and in particular, the teaching and learning of nursing students. Educational research involves a systematic and scholarly approach to address an area of interest which has a direct relationship to that of teaching and learning within education (Coe et al., 2021; Cohen et al., 2018).

4.4. Research Questions

In order to identify and describe the various ways in which third year undergraduate nursing students perceive professional reflective processes, the study explored three research questions:

1. What do undergraduate nursing students perceive reflection to be?
2. How important or valuable do they see reflection and the ability to reflect on past, present and future professional practice to be?
3. Which types of learning activities or experiences encountered during their nursing program facilitate reflection?

4.5. Summary

This chapter provided discussion of the ways in which perceptions of reflection have been included in the literature relating to nursing and other professions. The five studies located within the literature that focus on perceptions of reflection in undergraduate nursing students were analysed in detail.

The next chapter, (Chapter 5) will discuss the chosen methodology for this study, that of phenomenography (Marton, 1986; 1992). Student selection and recruitment of the participants will also be discussed. The interview process and issues that arose will also be included in detail. A brief overview of the process used for analysis of the data will be provided with a more in-depth account following in Chapter 5.

Chapter 5: Methodology

This chapter will describe and justify the methodological choices within this study. The chosen methodology, phenomenography was selected for this study because it allowed for a focus on the various ways in which reflection was experienced and perceived by third year undergraduate nursing students. The study participant group and how these were selected, along with an overview of how the data was analysed are also discussed in this chapter.

5.1. Ontology and Epistemology

5.1.1. *Ontology*

The ontological position of any study will depend on the way in which the researcher views the world (King et al., 2019). Whitehead et al. (2020) state that ontology is based on the world view taken by the researcher. It is the study of existence or being and encompasses the nature of reality (Crotty, 1998; Mertens, 2024; Whitehead et al., 2020). Moon and Blackman (2014) and Silverman (2022, 2024) refer to ontology as being what exists in the world, from which knowledge can be acquired. It is what exists for us as humans to know about (Crotty, 1998; King et al., 2019; Moon & Blackman, 2014; Richardson-Tench & Nicholson, 2022; Silverman, 2022, 2024; Whitehead et al., 2020).

There are two distinct viewpoints on ontology taken by researchers: a realist view in which one reality exists that can be examined and comprehended independent of human experiences, or a relativist view where multiple realities exist as each individual mentally creates their own version of reality (Crotty, 1998; King et al., 2019; Moon & Blackman, 2014). A realist ontology takes the view that as humans we exist independently from the real world and that the real world is comprised of cause and effect relationships that are identified through the use of quantifiable data collection and analysis (Crotty, 1998; Green & Thorogood, 2018; King et al., 2019; Liamputtong et al., 2016; Liamputtong, 2021; Moon & Blackman, 2014). A relativist viewpoint also considers that there are many ways in which individuals view the world (Coe et al., 2021). When taking a relativist ontological approach, the researcher examines and expounds on how people engage and exist in the world together. Accordingly the data collection and analysis in relativist studies are more focused on exploring the understandings and experiences that individuals have with the phenomenon rather than quantifiable outcomes obtained from the study of the phenomenon in a realist study (Crotty, 1998; King et al., 2019; Liamputtong et al., 2016; Liamputtong, 2021; Mertens, 2024; Moon & Blackman, 2014).

By taking a relativist approach for this study, the researcher was able to gain insight on what reflection means to the participants. The researcher was also able to examine the

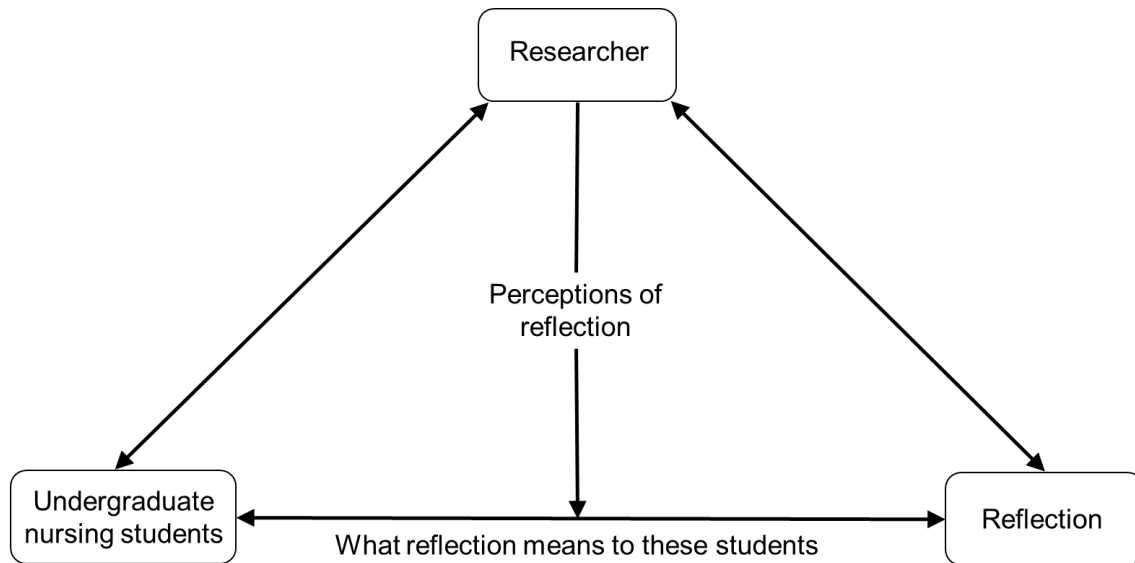
reflective learning opportunities to which these undergraduate nursing students were exposed during their nursing program and in view of participants how these activities fostered reflection. The data obtained from this study is informative about aspects of teaching and learning of undergraduate nursing students and will contribute to the body of knowledge about their perceptions of reflection.

5.1.2. Epistemology

Epistemology is the theoretical or philosophical theory of knowledge that underpins an investigation (Crotty, 1998; King et al., 2019; Liamputtong, 2021; Mertens, 2024; Whitehead et al., 2020). Epistemology described by King et al. (2019) is about knowledge and what we claim to know is known and how we know or understand what we know. Silverman (2022, 2024) discusses that we gain knowledge through the measurement of phenomenon or through developing an understanding of how individuals make sense of situations. A point also made by Moon and Blackman (2014) is that not only is epistemology about how knowledge is acquired or created, it also involves considering the validity and pertinence of how knowledge is constructed. Coe et al. (2021) also argue that thorough the analysis of descriptions and observations made by individuals on a phenomenon, knowledge about the phenomenon is then identified and developed. Whitehead et al. (2020) explain that epistemology provides the focus for the research study being undertaken. Liamputtong et al. (2016) discuss that the nature of knowledge can be explained in different ways or paradigms, for example constructivism, positivism, and pragmatism. The approach taken by the researcher will determine the way in which the phenomenon is explored. A constructive approach was taken for this study. Constructivism according to Patton (2015) focuses on the realities that are socially constructed by different groups of people and their interactions with others. Constructivism has also been referred to as an interpretative approach as it aims to describe, explore and generate meaning from within a social or practice context (Biggs et al., 2022; Liamputtong et al., 2016). By taking this approach the researcher was able to explore the perceptions and value of reflection as experienced by these third-year undergraduate nursing students. The researcher was also able to make links between the nursing students and with the phenomenon itself. Refer to Figure 3.1 below which demonstrates these links and forms the theoretical framework for this study.

Figure 5.1

Theoretical Framework



Adapted from Bowden & Walsh (2005)

For this study, the researcher explored a cohort of third undergraduate nursing students' descriptions of reflection to determine what these nursing students perceived reflection to be analysis. The focus of the examination and analysis of the interviews with participants was on the different ways in which these nursing students perceived reflection. The understanding developed from this study will contribute to the body of knowledge on how reflection is viewed by undergraduate nursing students as well as contribute to the teaching and learning of undergraduate nursing students.

5.2. Differences Between Phenomenology and Phenomenography

Phenomenology a qualitative research approach that focuses on how humans perceive a phenomenon, how it is described, judged, and remembered. Phenomenology is also about how individuals feel about the phenomenon, how they make sense of it, as well as how it is spoken about with others. It is the way in which individuals within a group interpret the world and make meaning from their experiences (Liamputtong, 2021; Mertens, 2024). It is this aim of phenomenography that makes it a distinct research methodology different from the aim of phenomenology.

In the tradition of phenomenology, phenomenography is also a qualitative research approach that explores peoples' experiences with a phenomenon. Where phenomenology explores the essence of the lived experience of the phenomenon, phenomenography is different to phenomenology in that it focuses on the variations or differences in the many

ways of how people experience the particular phenomenon (Bayuo et al., 2024; Bowden, 2000; Dahlgren & Fallsberg, 1991; Marton, 1981, 1986; Marton & Säljö, 1976; Stolz, 2020).

Phenomenography like phenomenology, grounded theory and naturalistic inquiry is a research methodology that uses an empirical interpretive approach focused on human experience (Biggs, et al., 2022; Cossham, 2017; Hajar, 2020). Phenomenography first came to the forefront as a research methodology through the seminal study of Marton and Säljö (1976). Marton and Säljö in 1976 sought to understand the variations between students in how they arrived at different outcomes, answers or understandings when exposed to the same learning activity.

Dahlgren and Fallsberg (1991) also identify specific differences between phenomenology and phenomenography. Phenomenology views the descriptions of the phenomenon itself as being most important (Dahlgren & Fallsberg, 1991) whereas phenomenography, uses the description derived from analysis of the transcripts of interviews and the components or aspects of the phenomenon being explored to arrive at a shared collective understanding of the phenomenon (Dahlgren & Fallsberg, 1991).

Phenomenology and phenomenography have also been differentiated by Cibangu and Hepworth (2016). Phenomenology they say places reflexivity as a central concept whereas the inception of phenomenography was to inform curriculum. They (Cibangu & Hepworth, 2016) further explain that phenomenography relies on categories of description to ascertain experience and meaning. Categories of description are derived from the data analysis and describe the ways in which the phenomenon is experienced by the participants (Bayuo et al., 2024) and are discussed in detail in section 5.6. Phenomenography focuses on the collective understanding of groups to descriptively illustrate the range of conceptions or perceptions of the phenomenon (Åkerlind, 2023; Bayuo et al., 2024; Harris, 2008). While phenomenology was considered for this study, phenomenography was selected as the chosen methodology, as the researcher is investigating the various and differing ways that nursing students perceive reflection to be with a view to better teaching and learning for the students.

Table 5.1 below outlines the key differences between phenomenography and phenomenology.

Table 5.1*Differences between Phenomenology and Phenomenography*

	Phenomenology	Phenomenography
Aim	To explore what the essence of the phenomenon is.	To describe the variations in the ways that individuals understand or perceive a phenomenon to be and what does it mean to them.
Focus	First order perspective – what is the phenomenon? There is a direct relationship between the researcher and the phenomenon and how the phenomenon is experienced by the individual.	Second order perspective – the researcher focuses on the relationship between the individual and the phenomenon. Emphasis is on the collective meaning obtained through exploring the similarities and variations in the way the phenomenon is perceived by the participants.
Data collection	In depth and semi structured interviews, focus groups, observation.	In depth and semi structured interviews, open ended questions.
Analysis of data	Simultaneous with data collection.	Conducted after all data has been collected
Sample size	Will depend on phenomenological approach taken. Commonly until data saturation reached	10 to 20 is considered sufficient to allow for all variations to be identified within categories of description.
Outcome of analysis	Descriptive interpretation of the meaning or essence of the phenomenon.	The qualitatively different ways in which the phenomenon is perceived by the participants determines the outcome space

Adapted from: Barnard et al. (1999), Bayuo et al (2024), Ornek (2008)

5.3. Phenomenography in Teaching and Learning

As noted, phenomenography was first reported as a research methodology by Marton and Säljö in 1976 (Marton & Säljö, 1976). They conducted an experiment focusing on first year university students at the University of Göteborg to examine the qualitatively different ways in which the students understood the academic article they were asked to

read. Analysis of the descriptions provided by the students produced a clear distinction between surface and deeper learning among these students. It is this approach which has been influential in research into student learning (Entwhistle, 1997; Biggs et al. 2022). Marton and Booth (1997) argue that the research methodology perspective of phenomenography is that of a research specialisation which has a focus on learning. By learning more about how learning takes place, teaching is better informed (Marton & Booth, 1997). An increasing number of qualitative studies focused on teaching and learning being undertaken are using a phenomenographic approach (Ashworth & Lucas, 2000; Daniel, 2022; Hajar, 2020; Khan et al. 2019; Tight, 2016a; 2016b; Wright & Osman, 2018).

Phenomenography has also been widely used in Australia around the concepts of teaching and learning in higher education (Åkerlind, 2005a; Biggs et al., 2022; Bowden & Green, 2005; Bowden & Walsh, 2000; Dall'Alba et al., 1989; Entwhistle, 1997; Han & Ellis, 2019; Stenfors-Hayes et al., 2013; Tight, 2016a; Trigwell, 2000; Trigwell et al., 2005). Further, Phenomenography is a recognised methodology for health care research (Assarroudi & Heydari, 2016; Balding et al., 2023; Barnard et al., 1999; Stenfors-Hayes et al., 2013), particularly in the area of nursing (Barry et al., 2017; Bayuo et al., 2024; Brammer, 2005; Cutler et al., 2017; Forbes, 2011; Han et al., 2009).

By understanding the variations and differences in the way that phenomenon are understood by students, the approach then becomes valuable in evaluating the delivery of the quality of the education (Barry et al., 2017) when examined or evaluated from the learners' perspective rather than from the teachers' or educators' point of view (Sandbergh, 1997). The analysis has the potential to inform teaching and learning. Phenomenographical studies have also been useful in exploring different approaches to teaching (Stenfors-Hayes et al., 2013) and in further understanding deep and surface learning (Marton & Säljö, 1976). Deep and surface learning according to Marton and Säljö (1976) and Wilson Smith and Colby (2007) relates to how the learner focuses on the learning material. A surface learning approach is when the learner has minimal engagement with the concept or the phenomenon itself and does not involve reflection or search for meaning within the concept. Deeper learning occurs when the learner searches for the meaning in greater detail and in a more integrated way and retains the meaning longer than those who experienced surface learning (Biggs et al., 2022; Booth, 1997; Marton & Säljö, 1976; Trigwell et al., 2005). Those students who experienced deep learning also provided more variations in the different ways the phenomenon was understood (Booth, 1997). Therefore, phenomenographical inquiry was useful in understanding the differences among learners and how they understood the conception of the phenomenon.

5.4. Methodology Justification

This study took a qualitative approach with phenomenography as the selected research methodology. As previously noted, phenomenography focuses on describing the variety of experiences of the phenomenon and what this means to the individual or person, rather than searching the essence or characteristics and meaning that make the phenomenon what it is (Assarroudi & Heydari, 2016; Marton, 1981; Säljo, 1997; Svensson, 1997). Sjöström and Dahlgren (2002) contend that phenomenography has a place not only in health care, but also within nursing research. They emphasise that due to the differences in ways patients experience their health conditions, that a variety of ways in providing care for them can be considered (Sjöström & Dahlgren, 2002). Sjöström and Dahlgren (2002) further state in their article that phenomenographical research may have implications for the education of undergraduate nursing students. By being aware of different approaches to care and caring and how the individual understands and experiences their health conditions, student nurses can be better prepared as they become registered health care professionals.

Phenomenography also has a place in research on higher education according to Entwistle (1997) and Biggs et al. (2022) as investigating differences in the conceptual understanding of students is significant to teaching and learning and should be encouraged. The interviews from which data is collected are designed in a way for students to reflect on their experience and their perceptions of the phenomenon. Data analysis concentrates on the meanings and understandings with the phenomenon. Sjöström and Dahlgren (2002) and Barry et al. (2017) advocate that phenomenography is well situated in educational research and nursing education. By identifying what is understood by students, academics and educators this research methodology has an impact on improving teaching and learning of the concepts of the phenomenon and as well as academic scholarship (Åkerlind, 2023; Entwistle, 1997; Marton & Booth, 1997; Ornek, 2008).

This study will contribute to the body of knowledge of what is understood or perceived by these learners (undergraduate nursing students) about the phenomenon in question, reflection. Through developing a greater understanding from the nursing students' point of view, ways of informing teaching and learning of reflection are then also identified.

5.5. Second Order Perspective

Phenomenography does not focus on one way only of experiencing the world, but on the variety of ways that it is experienced (Åkerlind, 2023; Bayuo et al., 2024; Cossham, 2017; Daniel, 2022). Marton (1981) refers to this as being a second order perspective and makes a clear distinction between first order and second order perspectives. In a first order perspective statements are made about the phenomenon is whereas a second order

perspective is more focused on the variations and differences in the ways individuals experience, understand, and perceive the phenomenon (Marton, 1981). In phenomenographical studies, by taking a second order perspective, the researcher's focus is on the phenomenon being studied and how other people experience the phenomenon while the researcher's own experience is bracketed (Marton, 1981; Marton & Booth, 1997). Bracketing, a concept in both phenomenography and phenomenology where the researcher sets aside their own experiences and beliefs, assumptions and judgements along with any biases they may have about the phenomenon being explored in the study (Crotty, 1998; Dörfler & Stierand, 2021; Liamputtong, 2013, 2021; Thomas & Sohn, 2023).

If we look at this from the perspective of reflection, a first order perspective would aim to examine what reflection is, whereas a second order perspective explores what reflection means to the person and how they experience reflection. Phenomenography is also interested in the different ways in which the phenomenon is described (Marton & Booth, 1997).

5.6. Categories of Description

In phenomenography, categories of description are the specific groupings applied to the different aspects of the phenomenon from the viewpoint of the learner and the relationships that occur between these (Åkerlind, 2005a, 2023; Bayuo et al., 2024; Daniel, 2022; Marton & Booth, 1997). Categories of description illustrate differences and similarities in the variety of ways in which people experience a phenomenon (Marton, 1981; Marton & Pong, 2005; Orgill, 2012). Analysis of interview data and the variations of the meanings and relationships between the data determines the categories of description (Åkerlind, 2023; Barnard et al., 1999). Generally, between two and six categories are constructed from the qualitatively different ways in which the phenomenon is experienced by the participants in the study (Larsson & Holmström, 2007). These categories also contain structural and referential relationships which link the categories of description (Åkerlind, 2005a, 2023; Barnard et al., 1999; Daniel, 2022; Hajar, 2020; Marton & Booth, 1997). The referential aspects refer to the meanings given to the phenomenon with the structural aspects relating to the context of how the phenomenon is experienced and understood by the participants in the study (Barnard et al., 1999; Marton & Pong, 2005; Rotar, 2024). Each category is related to the phenomenon and reveals a distinctively different critical aspect structurally inclusive relationships are logically related to each other to form a hierarchy (Åkerlind, 2005a; Barnard et al., 1999; Fey et al., 2014; Marton & Booth, 1997; Rotar, 2024). Phenomenographers according to Bowden (2000) endeavour to find the most important characteristics of the different ways in which individuals associate with the phenomenon. It is the interview data and what is drawn from the data analysis that determines the categories. These categories

of description are not predetermined prior to the analysis of the interview data (Dall'Alba et al., 1989). It is this approach to the data analysis that is specific to phenomenography (Barnard et al., 1999; Bowden, 2000; Dall'Alba et al., 1989; Marton & Booth, 1997; Svensson, 1997) and sets it apart from other methodologies.

It is from the categories of description that the outcome space is determined. Marton and Booth (1997) define the outcome space as being “the complex of categories of description comprising distinct groupings of aspects of the phenomenon and the relationships between them” (p. 125). In phenomenographic research the outcome space is often depicted diagrammatically (Bowden, 2000; Hajar, 2020) or through prose (Åkerlind et al., 2005). The outcome space is the diagrammatic illustration of the variations in the ways which the participants of the study see or experience the phenomenon and the interrelations between them. (Assarroudi & Heydari, 2016; Balding et al., 2023; Barnard et al., 1999; Marton, 2015; Marton & Booth, 1997; Marton & Pong, 2005).

The findings from this research study represents the variety of ways conceivable in which undergraduate nursing students at a particular point in time (the third year of their nursing program) perceived what reflection means to them. As the focus of phenomenographic findings is on the collective rather than the individual, the findings emanating from this study's population sample can then be applied to the population of undergraduate nursing students in general (Åkerlind, 2005a, 2023; Marton & Booth, 1997).

5.7. Research Population – Sampling

The participants invited to take part in this study were selected using purposive sampling. Purposive sampling refers to the way in which the participants included in the study were selected (Campbell et al., 2020; Creswell & Guetterman, 2021; Mertens, 2024; Patton, 2015). Purposive selection allows the researcher to select participants best suited to inform the research problem and allow the researcher to understand the phenomenon being studied (Campbell et al., 2020; Creswell & Creswell, 2022; Green & Thorogood, 2018; Kervin et al., 2016). Purposive sampling is an intentional way of recruiting a population who have particular characteristics and are likely to be information rich and have a depth of understanding of the phenomenon being studied (Hennink et al., 2020; Silverman, 2022, 2024). The participants selected for this study were all third year undergraduate students in their final year of their nursing program. This cohort was deemed to be most appropriate for this study as they were best placed to provide insight into perceptions and value of reflection and activities, they had encountered throughout their nursing program that facilitated reflective processes.

This study was conducted at a large Australian university which at the time of the data collection had five campuses spread across four states and territories, each of which delivers the Bachelor of Nursing degree. As the researcher is employed in a leadership role on one of these campuses, all third year undergraduate nursing students enrolled in the Bachelor of Nursing from that particular campus were excluded from participating in the study. The reason for this was to prevent any perceived power disparity between the researcher and the participants, and maintain ethical research standards (Creswell & Creswell, 2022; King et al., 2019).

A maximum variation in terms of the sampling (Creswell & Guetterman, 2021; King et al., 2019; Miles et al., 2014; Patton, 2015; Mertens, 2024) was adopted as the cohort of third year undergraduate nursing students differed on some aspects or characteristics which included age, gender, cultural background and grade point average (GPA). Phenomenographic studies use a purposive sampling of participants as a wide variation is required for this type of study (Barry et al., 2017). For this study however, the participants recruited did not include all of these aspects. Age and GPA were the only aspects of difference due to the limited uptake and willingness by the students to be part of the study.

5.7.1. Participant Recruitment

Initially 120 third year undergraduate nursing students from one campus at the university were sent an email inviting them to take part in the study. The campus was chosen as it was in the same state as the researcher but not where she was employed. Hence it was feasible to travel to the campus to collect the data for the study. A plain language statement and consent form were also included in the email sent. Once participants confirmed their willingness to participate, the plan was that the researcher's supervisors would select participants to be included in the study and to allow for variations in age, gender, cultural backgrounds, academic achievements and grade point average (GPA). Limited willingness to participate in the study occurred, with only four participants being recruited, so a subsequent email was sent. The aim was to collect data from twenty participants in line with the literature (Larsson & Holmström, 2007). Following the second invitation and still with limited recruitment, emails were sent to the entire third year nursing student cohort at the other three campuses where the researcher did not work. However, it also resulted in limited responses and consent to take part in the study with an additional one student being recruited, bringing the total number of participants at the end of 2019 to five.

The researcher's supervisor and co supervisor subsequently reviewed a list of nursing students enrolled in third year to select a range of students with various GPA to take

part in the study. GPA only was selected to provide variances between academic ability as students with a high self-motivation or high level of conscientiousness perform academically better and achieve a higher GPA than those whose self-motivation or level of conscientiousness was low (Cheng & Ickes, 2009). The plan for a variation in demographics of participants, as discussed earlier, was not considered due to the limited uptake with participant recruitment. As phenomenographical studies require as much variation as possible (Barry et al., 2017), a spread across GPA was to include academic ability which for this study may have influenced the reflective abilities of the participants. Emails were sent to the selected students again with limited take up. In total over 2000 emails were sent to students across an eighteen month period with only eleven responses in total being received. Of these eleven, only ten resulted in students consenting to take part in the study.

5.7.2. Impact of COVID-19

At the time that participants were recruited for the study the global pandemic of COVID-19 occurred. Willingness to participate was likely impacted by COVID-19 as increased anxiety was anecdotally reported by students across the campuses and discussed in recent literature (Alomari et al., 2021; Rasmussen et al., 2022; Usher et al., 2023). The increased levels of anxiety experienced by the nursing students was reported to be related to the unpredictability of student practical placements (Rasmussen et al., 2022; Usher et al., 2023). The effect of COVID-19 and restrictions posed on and by health care organisations severely contributed to this unpredictability of practical placement availabilities. As a result of COVID-19 restrictions in place during this time, students were moved from an on-campus face to face course delivery to an online mode for their classes. The amount of change and unpredictability with conditions likely impacted on the recruitment of students who perhaps felt they did not need any additional university commitments. The ten students who consented to participate remained in the study and proceeded to interview. Six interviews took place between April and November in 2019 prior to the pandemic, and four were conducted between June and September 2020. When the COVID-19 restrictions were lifted in October 2022 it was decided not to attempt further recruitments of participants. Additional student recruitment at this time would have impacted University's timelines to complete this doctoral qualification.

5.7.3. Sample Size

The size of the sample required for qualitative studies is determined by the research methodology chosen (Creswell & Guetterman, 2021; Creswell & Creswell, 2022; Mertens, 2024; Patton, 2015). Researchers using phenomenography methodology usually recruit between 10 and 30 participants as this is seen as a sufficient number in which to discover a

range of differences in ways of understanding the phenomenon without the data becoming too unwieldy to analyse (Bowden, 2005; Larsson & Holmström, 2007; Mason, 2010; Trem, 2017; Trigwell, 2000, 2006). There was no mention in the discussion by these authors of how this number was determined to be sufficient. Ten students were successfully recruited and interviewed for this study.

5.8. Ethical considerations

Ethics approval for this study (Ethics Register Number 2019-5E) was granted by Australian Catholic University on the 28th February 2019 (Appendix A and Appendix B) conformed with the National Health and Medical Research Council (NHMRC) guidelines for the Ethical Conduct of Research (2007 (Updated 2018)), the 2023 National Statement on Ethical Conduct in Human Research (2023) and the Australian Code for the Responsible Conduct of Research (2018). These guidelines and codes determine how research is to be conducted and have been provided to ensure that research study participants will not be intentionally harmed by the research they are participating in. The guidelines focus on the notions of research merit and integrity, respect for the participants, justice, beneficence and include specific requirements for studies on marginalised or vulnerable groups. There are a number of considerations that need to be demonstrated prior to ethics committee approval, as well as during and following the study, including merit of the study, confidentiality, consent, data collection methods which only collect data that has been agreed upon, respect for the participants, any potential power imbalances that may present, building trust and rapport, storage of data and dissemination of findings (Coe et al., 2021; Creswell & Creswell, 2022; Green & Thorogood, 2018; Hennink et al., 2020; Kervin et al., 2016; King et al., 2019; Mertens, 2024; Miles et al., 2014; Silverman, 2022, 2024).

A plain language statement including information regarding the purpose of the study, the data collected, the use of audio recordings as part of the interview, how the data will be used, and results dissemination were all provided to the participant prior to interview. The same information was explained to each participant just prior to the commencement of their interview. Written consent was obtained from each participant prior at the time they agreed to be part of the study. Consent for the interview was also given verbally prior to the commencement of the in-depth interview. Data obtained from the participants during interviews was audio recorded and transcribed with their permission. Confidentiality of the study participants was maintained with only the researcher being privy to the identity of each participant. Data collected was deidentified prior to transcription and analysis. All hard copies of consent forms and data collected are stored in a locked cabinet in the office of the researcher on university premises. As of September 2024, digital copies are kept on the University's secure server. An external hard drive containing digital copies is also kept in a

secure location in the researcher's office at the University in the event of loss of data from the server.

Participants were also informed that findings from this study may be presented in written documents such as journal articles or conference proceedings, as well as being included in the final thesis submission by the researcher. Copies of reports or articles will also be made available to the participants at their request. All of this was explained and provided to the participants both verbally and in simple language statements prior to them providing written consent to be part of the study. The plain language statement (Appendix C), information emailed to students (Appendix D), participant consent form (Appendix E) and ethics approval (Appendix A and Appendix B) have been included in the appendices.

5.9. Data Collection Methods

Data collection methods for phenomenographic studies include in-depth and semi-structured interviews. In-depth interviews are where open-ended questions are structured to encourage the participants to relate their understanding of the phenomenon being studied (Barry et al., 2017). Interview questions developed are based on the research questions that form the basis of the research project (Marton & Booth, 1997). Hennink et al. (2020) describe the in-depth interview as being a conversation with purpose. In-depth interviews are an important part of the research process as they reinforce the purpose of the study by securing detailed insight into the phenomenon from the point of view of the study participants. In-depth interviews are used to capture information of individual personal experiences, thoughts and stories. Semi-structured interviews which use more open-ended questions which allow for discussion between the researcher and the participant (Kallio et al., 2016) were not used for this study. In-depth interviews and a structured interview guide were used for this study (Appendix F and Appendix G). The in-depth nature of the questions allowed the researcher to explore with the participants areas of relevance with further probing. The structure of the interview guide meant that the researcher was guided throughout the interview. This ensured that all participants were asked the same questions of the same information was provide for everyone (Hennink et al., 2020). The use of the interview guide allowed the researcher with a means to structure the interviews and adhere to the questions for all participants. By following the interview guide the researcher was able to reduce her own bias of the phenomenon from being introduced during the interviews and is supported by Bowden (2005) in his discussion of the interview process.

The location for interviews is also important. Recorded interviews in a public place do not allow for privacy and confidentiality and background noise may interfere with audio recordings. The home environment may also raise issues of safety for the researcher or

allow other people in the home to be part of the interview. An unsuitable location may impact on establishing, maintaining and increasing rapport with the research participants (Hennink et al., 2020; King et al., 2019). Face to face interviews for this study were initially conducted on the university campus in a private meeting room to prevent interruptions and for this to be a neutral place for the participant and provide privacy. In-depth interviews were audio recorded to enable an accurate summation of the discussion and discourse to be obtained and retained. Following COVID-19 and government regulation preventing close contact between individual, interviews were conducted via an online environment such as Zoom and Skype. These interviews were also audio and video recorded with consent of the participant.

5.9.1. Pilot Study

In-depth interview questions and a question guide were developed from the research questions for this study and trialled in a pilot. This was in line with recommendations from Bowden (2005) that a pilot study be conducted to test the questions as well as to assist the researcher with conducting the interview. In phenomenographical research, an interview guide is also required to ensure the researcher provides the same introductory information for all participants (Hennink et al., 2020). Hennink et al. (2020) discuss the need for the interview guide to be piloted in order not only for questions to be rephrased, but also to determine whether the research questions are able to be answered through the collection and analysis of the data obtained during the interview. The pilot study was conducted following approval from the universities' ethics committee.

The interview guide and questions were piloted in April 2019 (Appendix F and Appendix G) with three academics teaching in the Bachelor of Nursing program. Open questions focused on informing the researcher about how nursing students experience would inform teaching and learning outcomes. Questions were based around having the students in the study explain situations or learning experiences that had assisted them to reflect, what they understood reflection to mean and how valuable they saw reflection both in the present and future nursing practice. Following refinement of the questions and input from my supervisors, the questions were then piloted with two third year undergraduate nursing students. The pilot with the first student identified one question only that required rephrasing. The question was rephrased during the interview as the participant was unclear as to what the initial question was asking. No further changes were made to the interview questions or interview guide following the pilot of the questions with the second student. As the data obtained from the first pilot interview contained the rephrased question, and the same rephrased question was asked of all participants, the data obtained during this pilot interview was included for analysis. The participant of the first pilot provided written consent for interview and consent for the data to be included in the main study. The interview of the

second student who was part of the pilot was also included in the data obtained for this study.

5.9.2. Collection of the Data

Data collection commenced in April 2019 and continued up to March 2020 with face-to-face in-depth interviews with six interviews being conducted during this time. Due to the COVID-19 pandemic, face to face data collection could not continue after this date as this was not allowed by the university due to the government regulation of social distancing. A further four remote interviews were conducted between March and September in 2020 via Skype or Zoom as this technology allowed for the closest possible communication with participants while conforming with the pandemic requirements of social distancing (King et al., 2019). Each interview (face to face as well as video and audio) was approximately 26 minutes in duration. These interviews were video and audio recorded. Video and audio recordings allowed for geographical distances to be accommodated during the ever shifting health restrictions associated with COVID-19 (Oliffe et al., 2021; Saaijärvi & Batt, 2021). They provide a close replication to face to face interviews allowing for nonverbal communication to be considered (Saaijärvi & Batt, 2021; Siedlecki, 2022). Audio recordings allow the researcher to concentrate on the interview instead of taking notes, review the interview at a later time with greater accuracy with the transcription of the data (Siedlecki, 2022). The audio recordings of all interviews were then transcribed verbatim by a transcription service into a word document ready to be analysed. This is a preferred method for qualitative studies (King et al., 2019) as it allows the interview to be captured without the need to take detailed notes during the interviews

5.9.3. Analysis of the Data

For many qualitative methodologies including phenomenography, analysis of the data is an iterative process where continual sorting and revisiting occurs, which then allows for a more refined focus and understanding to occur (Åkerlind, 2005b; Dahlgren & Fallsberg, 1991; Srivastava & Hopwood, 2009). When conducting phenomenographic studies, Bowden (2005) recommends that analysis of the data does not commence until all the interviews have been conducted. By waiting to analyse the data, Bowden (2005) reports judgmental observation by the researcher is prevented from occurring during the interviews progress. Delaying the analysis, increases rigour of the data through the reduction of personal bias or judgement of the researcher. The findings from the data are not able to influence the researcher during interviews in the way that they ask their questions or provide areas for further prompting. Bowden (2005) refers to the reduction of bias as bracketing of the researcher and their perspective and relationship with the phenomenon. Bowden (2005) also

discussed that bracketing by the researcher leads to reproducibility of the study as the categories of description identified during data analysis are related to all interviews collected. For this reason, data saturation where an adequate sample of participants does not find further or new ideas (Creswell & Creswell, 2022) is not relevant, as analysis of the data does not commence until all the interviews have been completed. With phenomenographic interviewing, the aim is to limit any input by the researcher to only include planned sequences or questions that are primarily designed to introduce the phenomenon to the participant.

Analysis of the data aims to establish categories which describe the qualitatively different ways in which the participants experienced the phenomenon (Åkerlind, 2005a; Barry et al., 2017; Dahlgren & Fallsberg, 1991; Han & Ellis, 2019; Sjöström & Dahlgren, 2002). It is these qualitative descriptions that are important to the phenomenographic research process. Categories of description are developed from the variations of differences identified from the data (Åkerlind, 2023; Daniel, 2022; Svensson, 1997). Within phenomenography, categories of description provide discreet features that distinguish the concepts of each category from each other. The categories form a hierarchy through the display of increasing levels of understanding of the participants' conceptions of the phenomenon identified and the relationships that exist between each category (Åkerlind, 2023; Dall'Alba et al., 1989; Daniel, 2022).

Data analysis described by Green (2005) involves reading and re-reading of the transcripts in their entirety. Marton and Booth (1997) discuss the process taken by them when analysing data. First, the transcripts are to be read in their entirety to enable a singular aspect of the phenomenon to be identified. A second reading of all the transcripts searching for this aspect is conducted. The transcripts are then examined again to ascertain a second aspect. This process is continued to identify additional aspects or variations of the phenomenon to be examined. From this the qualitatively different ways in which the participants view and experience the phenomenon will be identified (Marton & Booth, 1997). Marton and Booth (1997) also state that it is important to extract the variations in way that participants experience the phenomenon from the ways that they express the phenomenon. By focusing on the experiences, obtained from the individual participant, data at the collective level is more robust when compared to the data from an individual (Marton & Booth, 1997).

Dahlgren and Fallsberg (1991) while following the process discussed by Marton and Booth (1997) provide seven detailed steps on how to extract the data from the transcripts. These steps include: Step 1 - familiarisation of the data, step 2 - condensation, where the significant ideas or statements are extracted, step 3 - where comparison of the extracted

aspects are compared to identify variations, step 4 - is where these variations are then grouped, with step 5 being where the first attempt is made to identify the essence of similarities and differences between the transcripts. Steps four and five are repeated and revised until the researcher is satisfied that the analysis provide sufficient variations. The groups are then labelled (step 6) and finally contrasting of the categories of difference occurs (step 7) as this is where the final similarities and differences occur (Dahlgren & Fallsberg, 1991).

Han and Ellis (2019) in their discussion on how to undertake phenomenographical data analysis compared Dahlgren and Fallsberg's (1991) approach to that originally taken by Marton et al. (1992) and Säljö (1997) in their early studies. Han and Ellis (2019) included that an additional step, used by Marton et al. (1992) and Säljö (1997) as part of their analysis process for checking of reliability and credibility was not part of the approach taken by Dahlgren and Fallsberg (1991). Checking of reliability and credibility is where Marton et al. (1992) and Säljö (1997) would have a section of the data coded by an independent researcher.

An independent researcher to analyse the data for this study was not included in the research process as the analysis was part of the researcher's independent work for this thesis. For this study, analysis of the data followed the seven steps outline by Dahlgren and Fallsberg (1991). Further discussion of the data and the findings from its analysis will be provided in Chapter 4.

5.10. Rigour and Trustworthiness of the Study

An important aspect of undertaking qualitative research is to identify the rigour and trustworthiness of the study. In qualitative studies rigour is assessed through the evidence presented by the researcher that demonstrates the strength and complexities of the research design and methods to answer the research questions (Cypress, 2017; Johnson et al., 2020). The authenticity of the data is represented by the analysis of thick and rich descriptions provided by the researcher in the discussion of their findings (Bloomberg & Volpe, 2019; Cohen et al., 2018). Lincoln and Guba (1985, 2000) proposed that rigour and trustworthiness could be demonstrated and confirmed within the study through various techniques employed by the researcher. These will be addressed below. Lincoln and Guba (1985, 2000) argued in their discussion that credibility, dependability, confirmability and transferability, were also needed to be considered as part of the study design to ensure value and significance of the study (Lincoln & Guba, 1985, 2000). A number of strategies have also been identified (Baillie, 2015; Cope, 2014; Cypress, 2017; Johnson et al., 2020; Koch & Harrington, 1997; Lincoln & Guba, 1985, 2000; Miles et al., 2014; Tracy, 2010) to

show how these important aspects should be met as part of the process of the study. Techniques or strategies to enhance trustworthiness and rigour within a research study include reflexivity, prolonged engagement with the research setting, member checking, rich or thick descriptions, an audit trail, exceptional or negative responses exposed during the data analysis, peer debriefing and triangulation (Baillie, 2015; Cope, 2014; Lincoln & Guba, 1985, 2000; Miles et al., 2014). Credibility, dependability, confirmability and transferability together with the strategies employed for implementation will be outlined below.

5.10.1. Credibility

Credibility focuses on how the findings of the study make sense to the reader and how well these are represented to the reader. (Baillie, 2015; Balding et al., 2023; Bloomberg & Volpe, 2019; Cope, 2014; Cypress, 2017; Lincoln & Guba, 1985, 2000; Miles et al., 2014). Ways in which credibility can be demonstrated is the use of peer review and member checking. For this study a fellow researcher or critical friend can assist with the validity of the study through peer debriefing. The critical friend or fellow researcher can provide support and challenge the researcher about their study, findings and assumptions (Baillie, 2015). They are also able to provide professional perspectives on the evaluation of the data analysis and interpretations (Bloomberg & Volpe, 2019; Long & Johnson, 2000). In this study peer debriefing with her supervisors as well as having a critical friend who is also an academic undertaking a research project was employed.

5.10.2. Member Checking

Member checking is a way of establishing credibility that data collected is accurate and has been presented by the researcher as true reflection of the views of the participants (Baillie, 2015; Bloomberg & Volpe, 2019; Lincoln & Guba, 1985, 2000; Long & Johnson, 2000). Member checking was considered by the researcher but discarded as an option. The nursing students who participated in the study, have since become registered nurses. They have had more exposure to reflection within the workforce, and their perceptions and views of reflection may have changed as a result.

5.10.3. Dependability

Dependability is achieved through the logical way that the research process is documented. (Balding et al., 2023; Bloomberg & Volpe, 2019; Cope, 2014; Lincoln & Guba, 1985, 2000; Polit & Beck, 2010). It is involved with the quality and integrity of the process of data collection and analysis (Miles et al., 2014). Dependability is also measured based on the processes and descriptions provided by the researcher that would make it possible for the study to be replicated in similar conditions and with a similar population group (Miles et al., 2014). For this study a journal was used by the researcher to record all steps of the data

analysis and the decisions made to arrive at the findings arrived at from the data. Green (2005) also argues that dependability is met through the interview transcripts and the rigorous adherence to the data contained within these. Multiple readings of the transcripts and use of peer review of the analysis of these was also undertaken by the researcher.

5.10.4. Confirmability

Confirmability requires the researcher to demonstrate how their interpretations and findings from the data have been reached and how these truly reflect the responses from the participant, not the views or biases from the researcher (Balding et al., 2023; Bloomberg & Volpe, 2019; Cope, 2014; Lincoln & Guba, 1985, 2000; Miles et al., 2014). One of the strategies to ensure this is met through the researcher being aware of their views and how this may influence the research outcome. This is achieved through being reflexive. Reflexivity requires the researcher to be aware of and take a critical view of their role within the study. It also required them to examine their own knowledge, beliefs, ideas, values and biases with the research topic or phenomenon at the centre of the study, or with the population group who are taking part in the study, the questions asked during the interview and with the analysis of the data (Berger, 2013; Dodgson, 2019; Guillemin & Gillam, 2004). Ways in which the researcher can do this is to maintain a reflective journal of assumptions, potential biases and interpretation of the data while it is being undertaken as a way of bracketing their own perceptions and potential subjectivity with the study (Bloomberg & Volpe, 2019; Cope, 2014; Tracy, 2010). For this study the researcher kept a reflexive journal. A statement of the researcher's perspective of the phenomenon of reflection is included in the thesis in Chapter one. The development of the reflexive statement is evidence of the researcher's reflexive approach to this study.

5.10.5. Transferability

Transferability relies on the reader and other researchers to determine if they would be able to replicate the study within their own context or with the same sample group and be able to make generalisation on the subject or phenomenon being studied (Balding et al., 2023; Bloomberg & Volpe, 2019; Cope, 2014; Cypress, 2017; Lincoln & Guba, 1985, 2000). Context rich and meaningful or thick descriptions taken from the participants interviews allow for the researcher to present detail of the findings of the study in order for an understanding the process taken with the research study to be communicated (Baillie, 2015; Lincoln & Guba, 1985, 2000; Miles et al., 2014; Polit & Beck, 2010). The detailed description provided in the analysis of the data also required the researcher to undertake a repeated review of the transcript from which the analysis is drawn. The use of quotes obtained from the interviews provides evidence of emerging themes as thorough understanding of the phenomenon was

shown (Baillie, 2015; Bloomberg & Volpe, 2019; Cope, 2014; Lincoln & Guba, 1985, 2000; Polit & Beck, 2010). It is through incorporating rich and thick descriptions into the analysis that other researchers can determine if they would be able to replicate this study.

5.11. Summary

This chapter has discussed the origins of phenomenography and that this research methodology is situated within educational research. Phenomenography has been utilised not only by educationalists but also by health care workers as a valid way to conduct research. Phenomenographical data analysis allows for the variations and differences in the ways in which the research participants understand the phenomenon of the study. This chapter has also identified the ethical considerations required for a research project as well as how rigour and trustworthiness was demonstrated. Through the use of phenomenography, this study will contribute to the body of knowledge of how undergraduate nursing students perceive reflection and the learning activities that foster reflection. The findings aim to inform teaching and learning activities for educators and academics to employ to enhance reflective processes and suitable learning activities to support reflection.

The following chapter (Chapter 6) discusses the findings of my study. From the analysis of the data collected, six categories of description were developed. This next chapter will discuss each of these in detail, explain the critical variations that occur between each of the categories. The discussion will be supported by verbatim quotations taken from the transcript of the interviews with the participants.

Chapter 6: Findings

In this chapter, the findings from ten in-depth interviews conducted with third year undergraduate nursing students from a large multicampus Australian University will be discussed. In line with phenomenographic research methodology (Dahlgren & Fallsberg, 1991; Marton, 1986), the qualitative variations in the perceptions of reflection of these students have been examined and collated into six distinct categories of description (Åkerlind, 2023; Balding et al., 2023; Daniel, 2022; Marton & Pong, 2005). The findings represented in each category of description are discussed and linkages between each are outlined. The hierarchical structure of variations formed from the analysis of the data (Åkerlind, 2005a) is also depicted. The discussion below is also supported by verbatim quotations taken from the transcribed interviews. As the verbatim quotations contained a number of superlatives such as “ahhs” and “umms” these have been removed for ease of reading. Removal of these superlative does not detract from the data or its meanings.

6.1. Categories of Description

Following the data analysis approach of Dahlgren and Fallsberg (1991) discussed in the previous chapter, six categories of description have been developed that together answer the study’s three research questions. The categories of description in this study focused on the perceptions of reflection of third year undergraduate nursing students who were about to complete their nursing program.

Within phenomenographical studies, categories of description are derived from the analysis of the empirical data of the study (Bayuo et al., 2024; Reid et al., 2011), and show the variations in the way in which a phenomenon is perceived, seen or experienced by individuals. Categories of description are formed from the researcher’s analysis and interpretation of both the differences and similarities within in the data (Balding et al., 2023; Marton & Booth, 1997). Each category of description in this study displays a different way in which the undergraduate nursing students experienced reflection and identifies discreet features and key concepts of the collective experience these students had with the phenomenon.

Marton in 1998 identified four distinct and interrelated characteristics of categories of description being relational, experiential, content-oriented and qualitative. Hajar (2020) describes these as follows:

Categories of description are both relational and experiential because they reflect the relationship between the subject and her/his own experience of a phenomenon. They are content-oriented because they focus on the meaning of the phenomenon, and qualitative and descriptive since they are made visible through language. (p.8)

Each category of description is linked to the previous one as the critical aspects associated with the understanding of the phenomenon increases in complexity. The structural aspects run across each category forming a hierarchy of increasing awareness of the phenomenon (Åkerlind, 2023). Table 6.1 depicts the hierarchical progression of the logically related categories as they move from left to right to indicate the different ways in which students perceive reflection and indicates the ways the students' understanding and perceptions of reflection grow. Explaining the findings in this way is consistent with the recommendations discussed in the literature on phenomenography (Åkerlind, 2005a, 2023; Dall'Alba et al., 1989; Daniel, 2022; Marton & Booth, 1997; Marton & Pong, 2005). As the categories of description advance within the hierarchy there is a move away from a surface learning approach taken by the students towards one where a deeper approach is taken. Learners who adopt a surface approach (Biggs et al., 2022; Biggs, 1987; Ramsden, 2003; Webb, 1997) to their learning demonstrate an inability to relate their previously learnt knowledge to new knowledge and integrate learnings as a whole and adopt a more procedural and compartmentalised approach to learning. Deep approach learners (Kember, 1991; Lake & Boyd, 2015; Lueung & Kember, 2003; O'Connor, 2010; O'Connor et al., 2003; Wilson Smith & Colby, 2007) search for understanding, making the experience meaningful for their own experiences. As the categories of description become more hierarchical there is a move away from a content-oriented approach to one where deeper understandings are demonstrated.

It is also important to note that while this study was conducted at the same particular point in time of their nursing studies, it was not established in the findings that all students interviewed demonstrated being at the same place with their understanding of what reflection is, the value that they place on reflection and the outcomes that result from reflecting. As with all phenomenological studies, the categories of description depict the central meaning within the findings from the collective of the student cohort, rather than individuals (Åkerlind, 2005a, 2023; Balding et al., 2023; Daniel, 2022; Khan et al., 2019; Marton & Booth, 1997).

6.1.1. Categories of Description – Variation in the Ways Reflection is Perceived by Undergraduate Nursing Students

The six distinctive categories of description included in Table 6.1 were developed from analysis of the data. The critical aspects of variations between each of the categories of description are presented in Table 6.2 and focus on the collective experiences with the phenomenon. The hierarchy moves from left to right in order of complexity. The three distinct structural aspects within each category of description highlight what the students who participated in this study perceived reflection to be, the value placed on reflection by the

participants as well as what they saw as the outcome achieved through their use of reflection. The structural aspects link each of the categories as these aspects run through all six categories and show the different ways of understanding within each category of difference (Åkerlind, 2023). These three structural aspects will be discussed in more detail below. The six categories of description identify that reflection:

- is important for nursing
- is a process for meaning making
- is essential for professional growth and development
- requires interaction and engagement
- is necessary for integration and consolidation
- is integral for confidence building and empowerment

6.1.2. Structural Aspects Within the Categories of Description

Within each category of description, there are three distinct structural aspects, which emerged from the analysis of the data: 'Perceptions of reflection', 'Value of reflection' and 'Outcomes of reflection'. Following the tradition of phenomenographical methodology (Åkerlind, 2023; Bowden & Green, 2005; Marton, 1986; Marton & Säljö, 2005), these three structural aspects were not predetermined, they emerged through analysis of the empirical data. During the final stages of the data analysis, it was found that the first two structural aspects 'Perceptions of reflection' and 'Value of reflection' aligned with the first and second research questions developed for this study (What do undergraduate student nurses perceive reflection to be? and How important or valuable do they see reflection and the ability to reflect on past, present and future professional practice?). The third structural aspect, 'Outcomes of reflection' however does not align with a research question; rather, it describes the outcomes the participants in this study saw as stemming from reflection. The findings for the third research question (Which types of learning activities or experiences encountered during their nursing program facilitate reflection?) will be addressed separately from the first two questions in a later section.

Table 6.1

Categories of Description: Critical Aspects of the Range of Variation in the Ways Reflection is Perceived by Undergraduate Nursing Students

	Category 1:	Category 2:	Category 3:	Category 4:	Category 5:	Category 6:
	Reflection is important for nursing	Reflection is a process of meaning making	Reflection is essential for professional growth and development	Reflection requires interaction and engagement	Reflection is necessary for integration and consolidation	Reflection is integral for confidence building and empowerment
Perceptions of reflection	Is part of nursing practice	Involves looking back on what occurred	To become a better nurse	Exposure to a significant event	Theory to practice integration	Ability to predict future outcomes
Value of reflection	For patient care and patient safety	From making sense of experiences	For identifying areas for improvement	Through engaging with others	Recognition of good and bad practice	For building confidence and self-awareness
Outcomes of reflection	Providing best possible practice	Seeing different perspectives	Provides understanding of self and of reflection	Integrated into learning activities	Assists with thinking critically	Promotes self-improvement through empowerment

6.1.3. Categories of Description- Critical Aspects of Variations.

The following table (Table 6.2) summarises the critical aspects of the variations of both the referential and structural aspects of the categories of description developed from the data obtained in this study. These critical aspects of the variations in each category of description and the structural aspects will be discussed in detail in the next section. The discussion will be supported by selected verbatim quotations taken from the participants' interviews. Selected quotations will provide examples to support the categories of description, structural aspects and the emerging meanings drawn from the analysis phase of my study.

Table 6.2

Critical Aspects in the Variations Between Each Category of Description.

Category	Differences between categories
Category 1 ↓	A broad appreciation of reflection is evident. The need for best practice care is identified. Reflection is adopted in a very structured process driven way.
Category 2 ↓	A deeper appreciation of reflection is emerging. Reflective processes are becoming more critical.
Category 3 ↓	Developing a stronger sense of what reflection is as a process. Beginning to internalise the process of reflection. View of reflection is becoming wider and less structured due to exposure and experience. Reflection is beginning to be incorporated into daily life.
Category 4 ↓	The value of social interaction as part of reflection is recognised. Critical reflection allows for questioning of contexts. Reflective activities that assist with reflection are identified.
Category 5 ↓	Reflection has become an internally developed process. Reflection is seen to assist with the integration and consolidation of theory and skills to professional clinical practice. Critical thinking skills are developing.
Category 6	Reflection is seen an actively internalised process allowing for a sense of professional identity to transpire. Thinks about and engages with reflection in a more critical and holistic ways.

6.2. Category 1: Reflection and its Importance for Nursing

Reflection is an important part of being a nurse and for the provision of best possible patient care and safety. Reflection occurs in a very externally defined process driven way.

6.2.1. Critical Aspect of Variation

The critical aspect of variation in this category is that reflection is perceived as being an important part of being a nurse, for nursing as a profession as well as for the provision of current and future nursing practice. This category demonstrates the least sophisticated or most basic thinking in relation to the phenomenon of interest.

6.2.2. Representative Quotations From the Interview Transcripts

While reflection was not identified as having a direct correlation to the linking of nursing theory to practice, there was indication that reflection was required for the best possible practice and nursing care to be provided. The process of reflection was seen as being very structured and linear in nature. The process of reflection followed a very structured step by step process. Gibbs reflective cycle (Gibbs, 1988) was often used as the framework for reflection from which there was no digression. The following quotation demonstrates this procedural focus.

“it's just... What happened, why did it happen, what worked well, what didn't work well, what would you do differently next time” (Participant 5).

As undergraduates, attending professional experience placements and in university based practical laboratory classes, nursing students were always under the constant direct supervision of registered nurses. The direct supervision also prevented mistakes from being made by the students as the registered nurses were able to stop the student from conducting a particular skill, or though asking them question to clarify why they were doing what they were. The transition from a student to a registered nurse would not allow for the same level of direct supervision. As registered nurses they would be more accountable for their own actions and for the provision of care for patients they were assigned. Colleagues to whom they could refer would be available but there would also be an expectation to be autonomous in seeking out information when required or clarifying aspects of their role or practice when uncertain. They could well be the one that other health care professionals might refer to or seek advice from. As part of the transition from a student to a registered nurse, reflection was perceived as being a tool that could assist with a change from being in a dependent nursing student role to one that was autonomous and accountable as registered nurse. Thus, reflection was seen as important for nursing practice. The following quotation exemplifies the importance and the uncertainty of the responsibilities and transition of roles.

“I think it's really important to reflect on my past two years of nurse - of student nursing, um, especially so that I can um - I can improve my practice for ...,”

transitioning to a registered nurse. I think that's very important ... because it's a lot different going from student to registered nurse” (Participant 9).

Reflection was seen as being a valuable way to explore appropriate options for safe patient care provision, in particular because every patient and patient situation is different. With increasing complexity of technology and everchanging environments within the professional nursing arena, there is an increased possibility for errors to occur. The ability to reflect on patient care provided, especially if mistakes occur, allows for change in practice to be made. One area of concern noted was the risk for medication errors and is illustrated by the below quotation.

“...I think as a new grad and a future RN which is only a few months away, I think that it's going to be a very um valuable skill because if you don't reflect, then you - you can't really learn from your mistakes and that can have a very big effect on patient safety and it's - yeah, it can end up very badly if you keep making the same mistake over and over” (Participant 7).

Reflection was perceived as a way of informing nursing practice. Reflection could provide an opportunity for the provision of best patient care commensurate with the level of knowledge, skills and professional practice attained. The following quotation demonstrates this well.

“...it's also about, ..., providing the very best care for your patient as well, and if you are not constantly, ... trying to find out how you can do things better and better in your practice, then, ... ultimately the patient doesn't get the best care that they need.” (Participant 10).

6.3. Category 2: Reflection and Meaning Making

Reflection is an important process for making meaning from experiences. By looking back on what has occurred new or different options can be considered.

6.3.1. Critical Aspects of Variation

The critical aspects of variation within this category are that reflection was a tool from which multiple perspectives on experiences or events could be identified which allowed meanings to be made from these experiences.

6.3.2. Representative Quotations From the Interview Transcripts

Reflection also involved making meaning of the events, situations or activities students had been exposed to as part of their theoretical classroom education and while on professional experience placements. By looking back on events and making meaning from

them, these students were then able to see different perspectives from the event they had been exposed to. The following quotation exemplifies options that were considered and demonstrated an expansion of understanding from that of the more procedural approach taken in Category 1.

“There's the - the practical procedure that we do...you know, change a dressing, aseptic technique; [also] how could we have done it better? How could we have set things up better and - and made an environment less risky but also particularly the interactions with others and who should we involve” (Participant 3)

By looking back on what had occurred during events or situations, reflection was perceived as a way in which good, bad or less optimal decisions were identified. The many variations of perspectives that were distinguished from their decisions were related back to what had occurred in the event or situation to which they had been exposed. Meanings were then able to be built as revealed in the below quotation.

“... reflection is looking back on events that have just occurred or previously occurred. Um, an experience that I've had, and how – what has happened; how it affected me; ... how I felt about it; how I perceive the other person felt about it. And then, you know, what I would do differently... and obviously it's going to be somewhat subjective because it's in my mind and it's my interpretation, and for someone else is going to be completely different.” (Participant 2)

Reflection was valued for being a way to assist with the analysis of all aspects of the event (what they did or did not do, what others did or did not do and the effects that those decisions had on the outcome for the patient) and the reasoning behind the decisions made. The below quotation is an example of the way could make sense of the situation and meaning from it.

“If you don't reflect, then you're never going to get better, um and you're never going to like see, if you get like that situation again, you're never going to see it in a different way, you're always going to have the same mindset going in and that's not always the best thing.” (Participant 6)

Reflection allowed for an understanding of the experience or event to be made where different perspectives were considered. By looking back on what had occurred and considering the different perspectives available from their acquired theoretical knowledge and from what had seen or experienced with their colleagues while on their professional experience placement undergraduate nursing students were able to make meaning of what occurred during the event or situation and consider different options for nursing practice.

6.4. Category 3: Reflection for Growth and Development

Reflection is an essential component for personal and professional growth and development to occur. Reflection is being integrated into daily life.

6.4.1. Critical Aspects of Variation

The critical aspect of variation within this category is the understanding of the process of reflection and how reflection could contribute to personal and professional growth and development.

6.4.2. Representative Quotations From the Interview Transcripts

In this category reflection was perceived as something that could assist with the identification of gaps within nursing knowledge and/or practice, thus highlighting areas for improvement. What they also perceived, though, is the value of reflection and its valuable contribution towards having a positive impact not only on their current nursing practice, but also on their future nursing professional. One student explained it in this way.

"...in first and maybe a lot of second year, I didn't really completely understand or appreciate what was so important about reflection. But it was only – I would almost say, ... my placement that I had ...that it really became obvious that it's so important to – okay, we go there, we do our – you know – we test out our skills. We, um, practise the things that we've been taught, but it's only when you stop, and you think, and you reflect on it, and you don't – I didn't notice, but I was – like, I would go, um, at the end of the day, and actually do my reflection, but I was noticing that it just becomes part of you as a nurse – transitioning from a student to a nurse, ..., that it has to be part of what you do all the time" (Participant 2.)

Reflection was perceived as a means that could assist with the identification of personal strengths and weaknesses. Through understanding and acknowledging their own strengths and weaknesses it was perceived grow and development as a person could occur as explained in the following quotation.

"... and again, that's another ... learning tool ah in the sense of ah that not necessarily focusing - not necessarily focusing on ...saying that you know oh, okay you know I feel that I'm developing further than the other student...or I'm falling behind the other student, but it's the... important - the real important part of it is saying okay, we both have our various strengths and we both have our various weaknesses and that's okay because everyone is different...and everyone learns differently. So that's also ...sometimes a good - oh, what's the word I'm after? Ah, a good feeling to grasp on..." (Participant 1)

Growth as a nurse was perceived to be important. Expansion of acquired nursing knowledge and practice through the employment of a wider and more extensive foundation from which to work was perceived as a way these undergraduate nursing students could develop as a nurse. Reflection was perceived as a way to support personal and professional growth and understanding. This was explained by a student as follows.

“...as a student it’s [reflection] really important because it allows us to understand our knowledge gaps and our skill gaps and our own um personal gaps as well, ...like our own strengths and weaknesses, ... which is really important to understand that. That’s really the foundation, and then build on it with your skills, your nursing skills and your theory.” (Participant 8)

Within this category the understanding of reflection and the reflective processes used could assist with growth and development as registered nurses. The following quotation highlights the additional aspects considered when reflecting, demonstrating a greater understanding of reflection.

“And I think taking procedural steps in reflection like any other process we do is important. I think it reminds us to consider all the angles, not just think about what I did, but what are the other impacts and what I might have reacted to that I didn’t realise and by doing that you get a - a more deeper understanding of what we do.” (Participant 3)

The development of understanding of what reflection is and how reflection could be used to assist with professional growth and development and is exemplified in the following quotation:

“And I think – so it kind of means to me improving on more – on myself and reflecting on how I can improve.” (Participant 4)

Value was placed on the understanding of what reflection is and how reflection could assist with identifying gaps in learning and areas for improvement within nursing practice. Through researching and utilising available nursing related literature to support learning, growth and development, reflection was also seen as a way of contributing to individual personal growth and development.

6.5. Category 4: Reflection Through Interaction and Engagement

Reflection is often triggered by exposure to an event or situation. The ability to share these experiences with others through social interaction is seen as a valuable part of the reflective process. Reflection also needs to be incorporated into learning activities.

6.5.1. Critical Aspects of Variation

The critical aspect of variation in this category was that social interaction and engagement with others was identified as being key to facilitating reflection.

6.5.2. Representative Quotations From the Interview Transcripts

Significant events often happened during professional experience placements. It was perceived that the social interaction and engagement that occurred following the significant events were what assisted these students in my study with their reflective abilities. By focusing on what occurred during the significant event, the students in my study perceived they could identify important aspects that occurred in the situation that could trigger their reflective processes. These important aspects were also explored and enhanced through the social interaction with others in the form of debriefing. The following excerpt is an illustration of this.

“Yeah, the debrief and the reflection on the practice, what we did, how we intervened, and the outcomes, it was...Excellent learning experience. It was about the way that he spoke to us. And about the way he encouraged us and...reassured us”
(Participant 5).

The following excerpt demonstrates the value placed on the social interaction and engagement with others as being essentially linked to reflection.

“...and then reflection as a group, which I find sometimes even more beneficial because we know what we know...but it's actually when you listen to other people that you realise, oh, okay, I didn't even think of that, and that's how you can really evolve all facets of you as a nursing practitioner” (Participant 2).

Some of the ways in which engagement with others could occur included group debriefing and reflection during and following professional experience placements. It was often following a significant event that collaboration with others occurred. Social interaction with others was involved as part of their reflective processes. Through sharing, exploring and discussing experiences that had been encountered as individuals, as well as through observing others reflecting, students in my study were able to identify what could assist with their reflective abilities. Communication with others as well as the constructive criticism and feedback provided to them by patients, peers and professional experience placement facilitators were identified as factors that could contribute to the reflective processes used while in the professional experience placement environment. One student stated the importance of listening to their peers in the following statement.

“Because I’m not going to just treat people that are like me. I’m going to be treating people that are very different to me, and that would respond to, ... different approaches. So, it’s – yeah. I find it really beneficial to listen to my peers” (Participant 2)

Engagement and social interaction with others as part of the reflective process was valued more than individual written reflections. While reflective writing assisted with personal reflection of the professional experience placements, the ability to discuss events with others in the professional experience environment fostered reflective skills more than the written reflective pieces which formed part of assessment requirements. The below quotation provides an example of how this student valued the social interaction.

“Because I think there’s two sides of reflection. There’s ... the practical procedure that we do.....you know, change a dressing, aseptic technique; how could we have done it better? How could we have set things up better and - and made an environment less risky but also particularly the interactions with others and who should we involve”. (Participant 3)

6.6. Category 5: Reflection for Integration and Consolidation

Reflection is necessary to assist with the integration and consolidation of theory and practice. A deeper approach to learning has occurred.

6.6.1. Critical Aspects of Variation

The critical aspect of variation in this category is that reflection assists with the development of critical thinking skills.

6.6.2. Representative Quotations From the Interview Transcripts

Within this category reflection was perceived as a vital component required for the integration of acquired theory to professional experience placements. The meanings made from significant events along with the social interactions identified in Categories 2 and 4 allowed students to form a foundation or the building blocks from which integration and consolidation of reflection could occur. An understanding of the relationships between an event they had been exposed to, theoretical knowledge, clinical skills and concepts obtained during their nursing course could then develop. One student explained it in this way:

“in first year, you’re thrown a whole lot of new concepts, and they don’t really mean anything to you. They tend to cause you stress, overwhelm you, and it’s like they’re all very foreign. But I found that throughout the second year, you start to integrate, and you understand the purpose of them, and why they’re important. It’s not a matter

of, this is what I have to do, so I'm going to do it. They're all things that are going to inform you to be the best nurse you can be, and I get that now." (Participant 2).

Reflection was valued as a way develop a stronger or more solid understanding of nursing practice which allowed for the recognition of good and bad nursing practice. Reflection was a tool that could assist with filling the void identified between theory and practice, as practical skills and knowledge within nursing practice are not seen in silos, but instead integrated with each other.

In addition to being aware of the value of interaction with peers, students perceived the larger the number of nurses they were exposed to, the greater the variety and number of options for practice behaviours they had from which to draw on. Reflection was also a way for students to examine the practice of their colleagues and peers. Through the use critical thinking and decision-making skills, they were able to distinguish good from bad or sub optimal practice and apply that learning to their improve on their own nursing practice. The following quotation exemplifies how reflection assists with the ability to distinguish good and bad practice.

"...so you're not really re - reflecting on your own practice, but you're reflecting on the practice of other nurses and thinking okay, well, this is what they said, that didn't work, what else could have been said and things like that...Like I think some nurses just get so caught up in the busyness of ... daily life, but it's good that I feel like I have the ability to recognise that oh, that's not good practice and I should - like I'm going to do it this way." (Participant 7)

Finally, reflection at this level (as a factor in practice-related decision making) was perceived by students as being an important part of their 'toolbox'. To reiterate, reflection was used as a means or tool from which to examine and integrate their own nursing practice with their theoretical knowledge and practical nursing skills as explained in the below quotation.

"It's actually just about kind of being very self-aware and, and trying to, trying to improve yourself all of the time, and acknowledging the good things that you're doing as well and going okay, well, I did that really well so I'm going to actually continue doing that, ... next time, you know, so that I can build on that like toolbox of knowledge that I have." (Participant 10).

The outcome of the integration and consolidation of theory to practice, was perceived to enhance critical thinking skills. By engaging in critical thinking and analysis of acquired theory and linking to professional practice relationships, students were able to identify good practice from bad. Through reflection and the discernment of the good and bad practice to

which they had been exposed, options based on why they determined the observed practice as being bad or good were able to be considered. The following example demonstrates the application of critical thinking in what reflection means to this participant.

*“Reflection means - in the context of nursing - means ...taking a step back from what's occurred, so whether that be a clinical procedure, a conversation with someone, colleagues, patients and looking back and critically thinking about - did that work well? How could I have improved? When it didn't go well, what went wrong? What difference perceptions were taken? **And can I take a different tact next time to improve it?**” (Participant 3).*

6.7. Category 6: Reflection Allows for Building Confidence and Empowerment

Reflection assists with the ability to predict future outcomes. A more holistic approach to reflection occurs. A sense of professional identity has developed.

6.7.1. Critical Aspects of Variation

In this category the critical aspect of variation is the higher order of thinking and understanding. Reflection is viewed as being integral for self-improvement and empowerment as thoughts and feelings are also considered as part of the process of reflection.

6.7.2. Representative Quotations From the Interview Transcripts

In this category students perceived reflection could be used to predict future outcomes, which could then be incorporated into nursing practice. Through the inclusion of their thoughts and feelings students perceived there was a greater understanding of what reflection was and how the use of reflection could assist them as nurses. The ability to use reflective processes had a positive impact on them as people, not just as nurses. Reflection was valued as a way to build on their levels of confidence in their ability to reflect.

“And I think – so it kind of means to me improving on more – on myself and reflecting on how I can improve.” (Participant 4)

A move from away from a simple, practical and procedurally structured format and process of reflection such as the approach described in Category 1 had occurred. A greater conceptual and abstract understanding of what being able to reflect meant had now formed. The students have changed in the way they reflect. Reflection is perceived as a way to help with forecasting potential future outcomes of care. Reflection can assist with their practice as a nurse, by being able to predict outcomes and draw on alternatives when confronted with

issues and unexpected situations arising while in the clinical environment. The following quotation demonstrated how the analysis of a situation can assist with predicting future outcomes.

“So, I think it's sort of like a learning - a lessons learned exercise.... It could probably also be something to do with like risk meeting [mitigation], where..., if you're planning for future activities, ... that are similar to something else that you have undertaken that you could actually go back to those lessons learned and then, ... analyse how, um, another event that's similar..., will turn out in the future’ (Participant 10).

It was acknowledged by the students in my study that using reflection could improve on their confidence not only in their nursing practice, but also in their ability to reflect. It was perceived though building confidence that a better understanding of themselves as individuals developed. This in turn was seen to assist with their development and improvement as nurse and as a person. Students also saw themselves as being empowered by their ability to reflect on and draw on all of the other aspects that have been included and discussed in the previous five categories. Empowerment occurred through their increased ability to reflect on their practice. One student explained the benefits of reflection in this way:

“So, again, I find that a benefit of reflection is it can be really empowering because it makes – it reinforces that you know more than you think you know.... and also identifies areas that you need to brush up on. ... and then – and that obviously empowers you and then, okay, so what didn't go so well, and what can I take away? What do I need to actually now go away and research? Because I didn't understand. ... and then in doing that, I feel that it just – it comes somewhat full-circle, and then you come back, and you feel more empowered. You don't want to actually be like, oh, I hope I don't have to deal with that situation again. You're like, okay, bring it on.” (Participant 2)

Empowerment was also perceived as being an important part of self-improvement and development of their emotional intelligence as exemplified in the following excerpt from the transcripts.

“I think it - it takes a certain level of experience to reflect in the moment...I think it's actually hard to reflect while some - something is happening, I think that takes ...skill and life experience and like a little bit of emotional intelligence too. Because unless you have insight into what you're meant to be reflecting on right there and then, sometimes if you're in a state of anxiety or panic, that just doesn't even come up for you to even reflect up on it” (Participant 8)

6.8. Research Question Three

As previously explained, the responses to the third research question exploring 'Which types of learning activities or experiences encountered during their nursing program' facilitated reflection did not emerge from the data as a theme within all of the categories of description. Instead, it was addressed in response to a specific question asked of the participants during their interviews for this study. It was in Category 4 where students identified that the integration of reflection into activities assisted with and enhanced their learning and facilitated their ability to reflect. The types of activities that enhanced their reflection were varied. Some students explained that sharing and exploring their experiences with other students and nurses in relation to significant events assisted with their reflection. They also identified that reflection was not restricted to professional experience placements as it also occurred as part of their classroom activities. Others commented that reflection was enhanced when real life situations and case studies are incorporated into their classroom learning. Practical laboratories were considered as useful by some, others identified the written reflective pieces they completed while on professional experience placements and as a form of assessment as being important.

6.8.1. Representative Quotations From the Interview Transcripts

The students in this study also determined the need for reflective activities to be incorporated into interactive learning activities while in the classroom. Engagement by the tutor was seen by a number of students to enhance their reflection. The following excerpt explains this.

"... I think I don't know what class they were – it was, but there was definitely tutorials back in first year that like specific teachers broke it down a little bit more and like cause it's a different style of writing like you are allowed to use first-person and the – like when you're talking about your feelings and all of that, it's very subjective to like how you felt; like it's not wrong or right. And it's just – it's a very different way of writing than our other assignments which I think is good. But I think it's assumed that we know how to reflect already before we start our degree, but a lot of – like I came straight from school, so like it was a very new skill for me, so it was a bit of like an unknown" (Participant 7).

It was not only engagement from the tutor that enhanced reflective abilities and processes, students also thought that any activity requiring them to actively engage fostered their reflective ability.

"...so I think ...when - when I do anything that ...encourages engagement, like any type of student involvement, um so even - even case studies, um practical work,

...you know where it really does involve ...more engagement from the students rather than just the tutor just sort of talking” (Participant 8).

Having a smaller class size for tutorials was also seen as a way to foster reflection for some students.

“... it’d be tutorials, because like it’s more one on one, like smaller class, ... and like you can ask the teacher more questions, I think” (Participant 6).

Reflection should not just be an activity that occurred while on professional experience placements or as part of an assessment item. The realistic situations discussed in tutorials were reported by the students in my study to be ways in which reflection was cultivated. Reflection could be undertaken with others, but also on an individual basis often as part of an assessment item they were working on. The students perceived they could build on their reflective experiences and learnings as a result of these classroom activities. Activities that promoted reflection in the classroom were also perceived as a way of preparing them for understanding of events or experiences these students they might be exposed to outside of the classroom and in their professional experience placements. The following quotation explains this well.

“... I think, ... in the tutorials I found when we've, ... when we reflect on scenarios that we're reading or learning about I found that helps a lot to put it in perspective when we do [go into practice] like on clinical placements and then going through it together in the tutorials helps a lot. And also I found... it most helpful when we do reflective assessments, ... because you put a bit more effort into it because it's an assessment obviously and it helps you, ... grow your understanding on the reflection cycle and how to do it properly” (Participant 9).

Students in this study, acknowledged that practical laboratory classes were valuable for assisting with their reflective abilities. The use of patient focused scenarios and case studies along with patient simulation manikins within these classes allowed the student to learn and practice new skills while in a safe environment.

“... I think the practical labs really help. I think you, you get more of an opportunity to, ... talk as a group, ... I mean, tutorials you can as well, but often, ... ah, you can get a good mix of clinical and sort of, ... a-as well as emotional support as well. So, like if, you know, you're not just there sort of emotionally as a nurse but you're, you, you clinically, you sort of, there are practices that you need to reflect on as well. And I think, ... in a practical lab you can incorporate both of those things, while a tutor, a tutor is actually assessing you. ... they can actually raise issues that you may not

have noticed, and you can talk about them, ... and, and in a learning environment that's a safe environment to actually carry that out" (Participant 10).

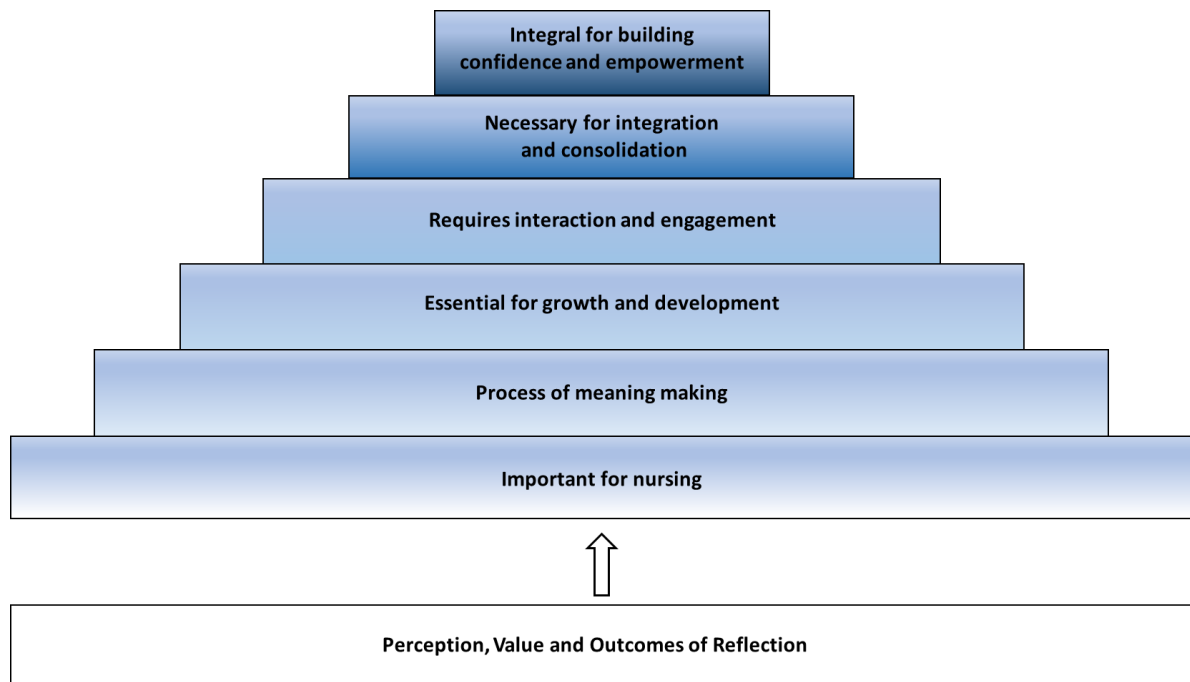
As significant or critical events do not occur on a daily basis, having the opportunity to be immersed in real life experiences through the use of simulation scenarios, case studies or written assessments that encouraged their reflection was also seen to be valuable. These types of reflective activities were perceived by these students as ways in which they could engage with reflection as well as developing reflective abilities to support their professional journey.

6.9. Outcome Space

As is the practice in phenomenographical research, the analysis of the data then forms the categories of difference and the outcome space (Åkerlind, 2023; Marton, 1986; Yates et al., 2012). Table 6.1 presents the categories of description developed from this study with Figure 6.1. presenting the outcome space and hierarchy which occurs between the categories of description. The outcome space is the diagrammatic illustration representative of the variations in the ways which the participants of the study see or experience the phenomenon and the interrelations between them (Åkerlind, 2023; Assaroudi & Heydari, 2016; Balding et al., 2023; Barnard et al., 1999; Hajar, 2020; Marton, 2015; Marton & Booth, 1997; Marton & Pong, 2005). Themes of expanding awareness depict the variations between the categories of description where a hierarchical and more comprehensive awareness or understanding becomes evident as each new critical variation is introduced within the categories (Åkerlind, 2023; Daniel, 2022).. Figure 6.1 represents the developmental progression of the categories of description with the lower order categories being depicted at the base of the pyramid and the higher more complex categories represented towards the top of the pyramid. Perceptions, Value and Outcomes of Reflection are the structural aspect that run through each of the categories of description and demonstrate the shared experience associated with the phenomenon (Åkerlind, 2023; Daniel, 2022; Hajar, 2020; Marton & Pong, 2005). These are depicted at the foundation of the pyramid with the arrow showing the direction the hierarchy takes.

Figure 6.1

Outcome Space. The Hierarchy Occurring Between the six Categories of Description.



6.10. Summary

The data analysis for this study was undertaken following the phenomenographical approach outlined by Dahlgren and Fallsberg (1991). The qualitative variations in the ways reflection was perceived by the students in my study identified a shift away from a basic understanding of reflection to encompass a more complex and sophisticated grasp of what reflection can provide for not only for their nursing practice, but also for them as a person.

The findings from this study indicated that reflection for the third-year undergraduate nursing students who took part in my study required social integration and engagement with their colleagues and peers. Reflective activities that were found to facilitate reflection were varied and included written assessments and patient-based case studies. Activities were best located in tutorial classes, practical laboratory classes and while on professional experience placements.

Through developing a greater understanding of what undergraduate nursing student perceive reflection to be, how they saw reflection assisting them with their current and future practice as well as the activities that fostered reflection, the findings from this study have strong implications for teaching and learning. The findings can be used as a way to inform the design and development of reflective learning activities and experiences within the undergraduate nursing curriculum.

In the following chapter (Chapter 7) the findings from this study are compared to the current body of literature and will explore new knowledge of what is known about reflection in nursing and nursing education. Research Questions One and Two will be intertwined with the discussion on each of the six categories of description. Research Question Three will be address separately. The limitations associated with conducting this study are also identified.

Chapter 7: Discussion

This chapter presents a comparison of the findings from this study on undergraduate nursing students with current literature to determine new knowledge that has emerged. These new understandings of the professional reflective processes of undergraduate nursing students will also contribute to what is known about reflection and how it is utilised within nursing practice.

In the first section the main findings of the study addressing research questions one and two will be discussed in relation to the broader context of the existing literature on reflection. The second section will focus on the discussion of research question three, with the limitations of the study included in the fourth section. The final section in this chapter provides suggestions or areas for further research that could be conducted to add to the body of knowledge of what is known about student perceptions of reflection.

7.1. Category 1: Reflection is Important for Nursing

In Category 1, reflection was perceived to be important for nursing practice. Reflection was also valued for the contribution it makes towards patient care and patient safety. Reflection allowed for best practice care for patients, which was seen by the students in my study as the outcome of reflection in this category. Students felt accountable for their own actions and the care they provided for others as they were cognisant they were dealing with people's lives and their welfare. Reflection was identified as a way in which they could measure and assess themselves, as well as the care they provided.

Reflection was seen as important because it was related to patient care and was included in the practice standards for the registered nurse (NMBA, 2016). McKinnon (2016) explained the value of reflection as being a way in which nurses self-regulate making themselves accountable for their professional development to prevent complacency and ritualistic or habitual nursing practice. There did not appear to be any links made by the students in my study between the requirement for reflection as stated in the nursing practice standards and practice itself. While reflection was perceived to be something students were required to do as part their nursing course in order to become registered nurses, no mention was made in any of the interviews of the requirement to actually demonstrate competence in reflection. The students showed little evidence of understanding the registration requirements of meeting the practice standards either as students or registered nurses. Reflection did not have any personal meaning to them. Reflection was something that they had to do in order to become a registered nurse.

Consistent with classic learning theory (Biggs et al., 2022; Biggs, 1987; Ramsden, 2003; Webb, 1997), the critical aspect of variation in Category 1 showed that some students

adopted a surface approach to their learning and did not to relate their academic knowledge to practice and integrate learnings as a whole. It was perceived that reflection was going to be useful once they were registered nurses, but at this stage in time there was still a reliance on direction from others. They could not clearly articulate the jump or changes required from being a student to a registered nurse and how reflection would assist them once qualified. Category 1 shows a procedural and concrete understanding of what reflection entails and contrasts with the critical variation represented in Category 6 ('Reflection is integral for confidence building and empowerment') where a more complex understanding and conceptual perception of reflection has developed. Category Six articulates the personal benefits and impacts that reflection had on consolidation of knowledge within nursing practice.

The seminal works on reflection by Dewey (1910/2011, 1933) explored the concept of reflection and what it means to be reflective. According to Dewey (1910/2011) reflective thought is the "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends" (p. 6). Dewey (1910/2011) also argued that reflective thought involves a number of processes including critical thought, analysis and inquiry. Participants in my study also perceived these same processes were part of being reflective, however not all of these processes were identified in Category 1 due to the procedural and surface learning approaches taken with reflection. It was not articulated in the transcripts how reflection was perceived to assist with critical thought, analysis or inquiry to develop as a nurse.

Emeritus professor Gary Rolfe, a British nursing academic and scholar with over four decades of expertise in reflective practice in nursing in 2001, put forward a reflective model specifically for the profession (Rolfe et al., 2011). Writing on the subject a decade later, Rolfe (2011, 2014) highlighted that not all practitioners will develop a deeper reflective ability. They may never move away from the prescriptive, concrete, and structured way of reflection. It is only when they are able to construct personal knowledge and related theory from their experiences that they progress to the next level of reflection. Both Dewey's (1910/2011, 1933) and Rolfe's (2011, 2014) conclusions support the findings from my study. The study demonstrated that there are a range of reflective capabilities as demonstrated by the hierarchical progression from Category 1 towards Category 6.

Understanding the differences and capacities for learning and understanding of a novice and their development to becoming a proficient professional has also been discussed in the literature. The important work of Patricia Benner, published in 1984, examined experiential learning, skill acquisition and articulation of knowledge into nursing practice and is representative of the contemporary move away from procedural or process driven nursing

care to one where clinical judgement and patient centred care is now legitimised and valued. The findings from my study also relate to Benner's (1982, 2001, 2004) investigations into the development of a novice practitioner to that of an expert as the study shows a difference in the meaning of reflection depicted in Category 1 from the critical variations included in Category 6. Benner (1982, 2001, 2004) equated years of experience as a nurse to the level at which the nurse is considered to be, with a student being a novice and a new graduate as being an advanced beginner. It could also be argued that within a particular group, such as in the third year undergraduate nursing students in my study, Benner's (1982, 2001, 2004) stages from a novice to an expert may be exhibited before they have completed their nursing program. Indeed, this phenomenon became evident through my study as the hierarchy associated with the categories of description demonstrated Benner's (1982, 2001, 2004) progression from a novice to an expert with reflection.

Rolfe (2011), like Benner (1982, 2001, 2004), referred to practitioners at this level in their professional development as being novice practitioners. While Benner (1982, 2001, 2004) referred to their level of nursing experience, Rolf (2011) focused on the reflective capabilities. It was also voiced during an interview with one of the participants in my study that life experience contributed to their reflective abilities. While this student was still in the early stages of their nursing career, they were able to recognise the importance of being able to reflect, as well as the value what this could bring to their nursing care provision. In contrast the critical aspects of variation of Category 1 saw reflection as a required process and stayed within the guidelines for required tasks. Drawing on Benner's (1982, 2001) idea of novice practitioners, avenues for improvement on practice were not evident. There was more of a focus on following the steps contained within a framework such Gibbs reflective cycle (1988) without relating acquired nursing related knowledge to practical skills.

In Category 2, a deeper view of reflection was emerging. Meanings could be made through considering options and thinking more critically about reflection. It was the consideration of alternate points of view gained from events or experiences that is the critical aspect of variation between Category 1 and Category 2.

7.2. Category 2: Reflection is a Process for Meaning Making

In Category 2 it was perceived that meanings could be made from reflection through the process of looking back on events or situations that occurred. Many of these events transpired while students were on professional experience placements. Reflection was valued as a way to make sense from experiences to which they had been exposed to. The outcome of reflection allowed for different perspectives on the event or situation to be seen

and considered. Reflection offered an opportunity to explore different angles or viewpoints on the events and make meanings from them.

As previously discussed in Chapter 2, Schön (1983, 1987) proposed that specific requirements were instrumental in becoming a professional and reflective practitioner. It was in Category 2 that Schön's (1983, 1987) idea of reflection-on-action was described by some students. Schön (1987) discussed reflection-on-action as a step or process that professionals used to assist with making sense of what had occurred during an event. In this process professionals were also able to identify new or alternate perspectives (Schön, 1983, 1987). One student commented that if you do not reflect or use reflective processes such as Gibbs' model (1988) the growth into the professions does not occur.

Dewey (1910/2011) also determined that reflective thinking requires an appropriate or possible solution to the situation being reflected on. The possible outcomes determined need to be suitable, fitting for the decision made and presented in a sequential manner. Dewey's (1910/2011, 1933) ideas were also confirmed in my study. Meanings were beginning to be made by reflecting on the different perspectives or options as a result of looking back on events. Meanings however were limited as critical thinking processes were still developing.

Schön (1983, 1987) further developed the work of Dewey (1910/2011, 1933) and identified that professionals were able not only to reflect-on-action, but also to reflect-in-action. According to Schön (1983, 1987) reflection-on-action occurs following an event which allowed the individual to make sense of what occurred whereas reflection-in-action required the individual to think about what is occurring while it is occurring. While Schön (1983, 1987) contended that reflection-in-action involves the implicit intuitive knowing concerned with the action, he acknowledged that it takes time to develop the knowledge required by a professional to be able to reflect-in-action. Reflection-in-action Schön (1983, 1987) also stated occurred prior to reflection-on-action. This was not found to be the case within my study. It was identified by students in my study that it took a lot of experience to be able to reflect-in-action. As will be discussed in relation to Category 6 there was some evidence of reflection-in-action being experienced by participants. The findings from my study also support Schön's (1983, 1987) ideas as the students within Category 2 were only able to perceive that reflection occurred by looking back on what had occurred (reflection-on-action) not while they were in the moment (reflection-in-action).

Metacognition has been widely discussed in the education literature in relation to reaching and learning since the 1970's. Metacognition is the capacity to be aware of and potentially develop our thinking processes, in other words it is how we think about thinking

(Flavell, 1979; Krasiejko, 2010; Krathwohl, 2002; Papeontiou-louca, 2003; Pintrich, 2002; Reid et al., 2011; Rhodes, 2019; Zohar & David, 2009). In Category 2 the application of metacognitive knowledge as part of reflection is evident. As has been explained, students in my study identified that that reflection allowed them to consider both the positive and negative aspects of an event or situation as well as how they could change their practice. It was within this category that a deeper appreciation for reflection was beginning as metacognitive processes were adopted. While there was still a task focused linear process taken with the process of reflection, a more critical aspect of thinking and understanding of personal strengths and weaknesses was also becoming evident.

It is the understanding of what reflection is as a process and how reflection could contribute to personal growth and development that is a critical aspect of difference in, Category 3.

7.3. Category 3: Reflection is Essential for Professional Growth and Development

In Category 3 a stronger sense of what reflection is as a process is developing and becoming more internalised and part of daily life. There is less reliance on following a framework or a model. Reflection is seen by the students in my study as being essential for professional growth and development to occur.

Reflection provides students with a learning opportunity to evaluate themselves as well as understand more about what reflection could offer them as a professional. The perception of becoming a better nurse contributed to the understanding of reflection being an essential component of personal and professional growth rather than a task or requirement to complete in order to meet assessment requirements.

As discussed earlier in relation to Category 2, both Glazer (1974) and Schön (1983, 1987) determined that professional knowledge develops from repeated exposure over time to the same types of situations. This notion of the importance of time was also confirmed by the students in this study. Within Category 3 the view of reflection become wider as the exposure to reflection increased.

It became evident within this category and the next (Category 4 'Reflection requires interaction and engagement') that the view of reflection changed to something seen as valuable to them as individuals rather than just being valuable. Instead of reflection being seen as something that had to be done, the perceptions of reflection transformed. Reflection was envisaged at a deeper level and the process of reflecting was seen as enhancing not only nursing practice, but also impacted on daily life through their interaction with others. It was this tipping point that became a lightbulb moment for the students in my study as evidenced in the data. It was at this point that a change transpired from seeing or viewing

reflection as separate parts that did not relate to each other, to comprehending relationships between inherent meaning, personalisation of reflection and nursing practice occurs. A deeper approach towards reflection is evident in the students interviewed for this study and was consistent with those in other studies published in the literature (Kember, 1991; Lake & Boyd, 2015; Lueung & Kember, 2003; O'Connor et al., 2003; Webb, 1997; Wilson Smith & Colby, 2007), as they searched for understanding in order to meaningfully connect learning to their own reflective experiences.

In Category 3 reflection was valued for making sense from experiences and different perspectives, allowing for the identification of areas where reflection itself could be improved on. An example of this was evident with one student (Participant 3) who was able to express that reflection was a way to “consider all angles” as well as “what are the other impacts” as part of their nursing care. Nursing care provided would be suboptimal if all of these considerations were not included as part of identifying problems or solutions. It is evident from the findings from my study, that the critical variations found in Category 3 demonstrated the value reflection played as a way to identify areas for improvement with nursing care.

It was evident in this category that a deeper approach to learning has translated into a more comprehensive acceptance and adoption of reflection leading to the belief that reflection impacted on them as a person. An appreciation of themselves and what reflection can do for them was adopted demonstrating a more reflective view of reflection, which in turn allowed for the capacity for them to become a better nurses. The students in my study perceived that understanding more about reflection could offer opportunities to develop and expand their nursing practice. By undertaking reflection, they were able identify areas for improvement in their nursing care in order to provide sounder and safer outcomes for their patients.

Within some of the literature reflection was perceived as way individuals were able to understand themselves as person in a different and newer light (Bulman & Schutz, 2013; Esterhuizen, 2023; McKinnon, 2016; Thompson & Thompson, 2023). Through understanding what reflection is and how reflection can be used, not only in their studies or while on practical placements but also in daily life, the students in my study identified they were able grow as a person. Brookfield (1998, 2009, 2017) posed the idea that as individuals we have different experiences and contexts that influence how we view and adopt reflection. Esterhuizen (2023) discusses the idea of a transitional space being a place where individuals learn and develop. They do this through considering the interactions that occur between subjective experiences that people have along with the feedback received from their interactions with the people and the situation that occurred in the outside world. It

is within this transitional space where reflection on learning and how we change occurs (Esterhuizen, 2023).

Reflection was also perceived by the students in my study as being a tool that could be used to assist within daily life outside of their nursing course and as a way to develop more as a person. Reflection was perceived as way of understanding themselves as person in a different and newer light. McKinnon (2016) and Thompson and Thompson (2023) argue that an understanding of oneself and self-awareness develops from and is informed by the learning experiences we are exposed to. Reflection assists with how we acknowledge our personal strengths and weaknesses. Reflection also assists with identifying barriers as well as the support and assistance that may need to be included to overcome these (McKinnon, 2016).

The critical aspects of variation between this category and the next, Category 4 is that of social interaction. The ability to share experiences with others was seen to be important as was the need for reflection to be incorporated into learning activities.

7.4. Category 4: Reflection Requires Interaction and Engagement

Social interaction and engagement with others are a critical aspect of difference introduced in Category 4. Critical reflection played an important role in the ability to reflect on significant or critical events and question the contexts within. The social interaction and engagement with peers and colleagues that occurred in either formal or informal groups was found to be useful. Social interaction and engagement provided students with avenues for reflection and were ways to consider how others reflect and viewed significant events. A variety of reflection-focused learning activities were also identified in Category 4, as being helpful with reflection. Reflective activities such as maintaining reflective journals, writing reflective pieces while on practical placements as well as reflective activities used within the classroom environment or assessment tasks were perceived to assist with reflection. These learning activities were structured in ways to encourage students to consider multiple points of view and assist them to move beyond their own thinking about reflection. The types of reflective activities identified by the students in my study as being useful to support reflective processes are also supported by current literature (Esterhuizen, 2023; Finlay, 2008; Maginnis & Croxon, 2010) and will be discussed further in the section below addressing research 'Which types of learning activities or experiences encountered during their nursing program facilitate reflection?'

One way reflection was perceived in Category 4 was to assist students during their interaction with others that occurred following exposure to significant events. McKinnon (2016) argued that exposure to these types of event events allowed for critical evaluation

based on the situation to occur. Through being able to critically examine all aspects of what occurred, professionals are able to improve their practice (Thompson & Pascal, 2012). As noted, the students in my study also identified areas for improvement following events that they had been exposed to. The social interaction with others was a way in which they were able to see aspects of the situation from a different perspective. Social interaction was perceived as being vital because reflecting with others allowed for experience with and exploration of how others reflected. The sharing of experiences through group reflection allowed the students to experience an assortment of perspectives and responses that they may not have thought of (Thompson & Thompson, 2023). Thompson and Thompson (2023) also contend that group reflection is very valuable with promoting double-loop learning. Single-loop learning according to Argyris and Schön's theory of action (1974), occurs when determined actions are modified based on differences between actual and projected outcomes and result from repeated experience with the situation they are exposed to (Argyris & Schön, 1974; Greenwood, 1993, 1998). Double loop-learning occurs when reflection is used to question the values and assumptions associated with the action that is taken (Argyris & Schön, 1974; Greenwood, 1993, 1998). It was in this category that a double-loop learning processes were adopted.

Dewey (1910/2011) also determined that intellectual curiosity developed through social stimuli and was therefore an important part of learning. Eaton (2016) confirmed Dewey's claim and gave the examples of peer discussion and feedback as ways in which reflection was enhanced through reflecting with others; she also determined that discussion about the subjective experiences and subsequent interpretation and analysis that occurred in a group setting provided each individual a different aspect from their own interpretation of how they saw events. There was value placed on what was gained from the social interactions and engagement with others and how improvements with reflective abilities occurred as a result.

A deeper approach to learning by mature aged learners has been identified by Lake and Boyd (2015) who also ascertained that the late adolescent/young adult learners scored higher for adopting a surface approach to their learning. The deeper approach to learning also aligned to the levels of reflection discussed by Rolfe (2011), Biggs et al. (2022), Kember (1991), Lueung and Kember (2003) and Wilson Smith and Colby (2007). Within the participant group of students in my study a higher number of mature aged students was represented than late adolescent/young adult age students. It is of note however that not all participants in my study who were of late adolescent/young adult age exhibited surface learning approaches to their reflection. Some of the younger participants revealed a complex understanding of reflection and were able to articulate how it was through interaction and

engagement with others that they took a deeper approach that could also be aligned with the upper level of Benner's (1982, 2001) novice to expert findings. Benner (1982, 2001) aligned years of practice as nurse to the level of expertise, however the students in my study also demonstrated expertise with their reflection being at the competent or proficient levels therefore challenging Benner's (1982, 2001) view that it is years of experience that leads to their level of proficiency. According to Benner (1982, 2001) those who were at the competence level were able to see their actions in terms of being able to contemplate their plan and consider all aspects individually, whereas those at the proficiency level were able to consider all aspects and view the situation as a whole rather than a piece meal way. The progression from competent to proficient was seen in my study as students made the transition from a structured or surface approach to reflection and moved within their thinking towards a more abstract concept of reflection with a deeper level approach to their understanding being observed. This was evidenced in the hierarchy of critical aspects of difference in the categories of description developed from the data obtained in my study.

The critical variation between this category and Category 5 was that through reflection critical thinking skills were developed to assist with the integration and consolidation of theory and skills to professional clinical practice.

7.5. Category 5: Reflection is Necessary for Integration and Consolidation

Reflection was perceived by the students in my study as being necessary for the integration and consolidation of their nursing theory into professional practice. Reflection was valued as a way to recognise good nursing practice from that which was viewed as bad. The ability to critically think was identified as being the outcome of reflection for this category.

Category 5 revealed a deeper understanding and thinking about reflection. Students were able to think more critically about reflection and their nursing practice. By integrating theory into practical placement experiences, good practice from bad was determined not only in themselves, by also in colleagues and fellow students. Bayuo et al. (2024) and Hatlevik (2012) confirmed that there was a direct correlation between students' perceptions of reflective skills and theory to practice application. In order to integrate nursing theory and practical experience reflective skills and ability were required. Tashiro et al. (2013) identified that it was once nursing students entered the professional experience arena that their theory to practice gaps were identified. It was the gaps that produced confusion and quandaries within their thinking that were the impetus for reflection to occur. Both Hatlevik (2012) and Tashiro et al. (2013) align with Dewey's (1910/2011, 1933) philosophy that individuals are able to understand their experiences via internal examination or reflection and use this as a

way to improve on practice. Rolfe (2011) discussed the progression of reflection being related to theory and knowledge building. It is during the stage described in Category 5, that the students in this study were able to apply their acquired nursing knowledge to the professional experience placements. It is this particular aspect applying theory to practice that aligns with the expansion of awareness of reflection in this category.

Students were able to recognise differences in the nursing care provided by others they observed or worked with during their professional experience placements. The literature discussed previously in Category 1 by Delves-Yates and Hill (2021) as well as (Bulman & Schutz, 2013) also support the findings within Category 5. Delves-Yates and Hill (2021) argue that reflection is a way for nurses to maintain an appropriate standard of care and a useful way to identify and reveal areas where standards are not being met or where care erosion is present. Bulman and Schutz (2013) further claim reflection assists nurses with the development of their clinical judgement, decision making, accountability and critical thinking as they progress from students towards professionals.

In Category 5 the ability to recognise a variety of practice in others also allowed for reflection to highlight how their own practice could be enhanced. The comparisons made allowed gaps in their own knowledge and skills to be identified. These gaps were also seen to be a way in which goals could be set to assist with improvement and with the nursing care they were providing for their patients while on their professional experience placements. One student within this category identified that they were beginning to transition from a student to a registered nurse through their ability to use reflection to ascertain what was good, bad or sub optimal practice not only in others, but within their own practice (Participant 9). Another stated that it was at this stage they valued reflection and identified that reflection was important for growth as a professional (Participant 10). It was through thinking about what nursing related knowledge could be drawn from as well as through observation and engagement with others (previously identified within Category 4) that the integration and consolidation of learnings and experiences occurred while on professional experience placements. Karimi et al. (2017) confirmed in their study on nursing students that reflection on professional experience placements increased their personal and professional development.

Critical thinking was also perceived as a requirement for reflection. Critical thinking uses cognitive processes such as analysis, judgement and evaluation from alternate points of view (Cottrell, 2023; Mulnix, 2012). By reflecting on issues or events in a structured way such as that of Gibbs' (1988) model, the students in my study were able to base their decisions on justifiable evidence which they then synthesised to form different stances from what they had previously taken. It was also through their critical thinking and analysis that

they perceived they were able to maintain patient safety through their nursing care and the interventions they provided for their patients.

As stated previously Schön (1983, 1987) identified that professionals were able not only to reflect-on-action, but it also over time were able to reflect-in-action. Both Glazer (1974) and Schön (1983, 1987) determined that professional experience develops from repeated exposure over time to the same types of situations. The notion of importance of time was also confirmed by the students in my study as they developed more experience with reflecting. Repeated exposure according to Glazer (1974) and (Schön, 1983, 1987) allows the individual to respond to the situation and reflect-in-action. It was though their increasing ability to think critically and analyse in the moment, that they were able to recognise good, bad or sub optimal options for care.

The critical aspect of variation that is identified in Category 6 are that thoughts and feelings are included as part of the holistic and more critical approach taken with reflection. A sense of professional identity has transpired.

7.6. Category 6: Reflection is Integral for Confidence Building and Empowerment

In Category 6 reflection was perceived as an integral to predicting potential outcomes of nursing interventions or plans of care that were implemented. Reflection was valued for the way it assisted with building confidence and personal self-awareness. The outcome of reflection was seen as the ability to promote self-improvement through empowerment. A holistic approach to reflection now takes place with a sense of professional identity emerging.

Category 6 aligns with Benner's (1982, 2001, 2004) description of an expert in that students in my study were able to use reflection to make decisions based on predicting future outcomes. The findings in Category 6 also exemplify that metacognitive knowledge impacts on reflection through the ability to not only predict future outcomes as previously stated, but also to build confidence and self-awareness and promote self-improvement through empowerment. Metacognitive knowledge according to Pintrich (2002) relates to how the person thinks about and uses their knowledge of how a variety of strategies may be adopted.

As the critical aspects of the categories of description increased with their complexity, so too did the learning approach taken by the students in my study moving from that of a surface approach to one of deeper learning. This is exemplified in Category 6 wherein students were able to predict future outcomes for nursing interventions they made as part of their provision of nursing care. In turn it allowed them to become more confident and self-aware of their abilities as a nurse. Bulman and Schutz (2013) and Thompson and Pascal

(2012) discuss how reflection is a way in which professionals and nurses can learn from their experiences and as a way in which future practice can be informed and changed. Schön (1987) also supports the idea that reflection is a requirement in order to be a professional, whereas the Reid et al. (2011) discuss the idea of professional knowledge and identity as being an important aspect of student progression to becoming a novice professional. Based on the findings of Lake and Boyd (2015) relating them to Benner (1982, 2001, 2004), Biggs (1987) Biggs et al. (2022), Prosser and Trigwell (1999), a deeper approach to learning along with the students' life experience influenced the differences in the categories of description in my study. A basic understanding of reflection moved to one where reflection became more complex in nature. Those students in my study who adopted the more complex understanding of their learning and in their reflective abilities become more confident with reflecting as evidenced in the hierarchical differences between the categories of description.

A difference between reflection-in-action and reflection-on-action was identified in Category 6. Reflection was used on a daily basis and within life outside of nursing studies. Repeated exposure to reflection (Glazer, 1974; Schön, 1983, 1987) allows the individual to respond to the situation and reflect-in-action. Schön (1987) also explained that reflection-in-action was the step that came before reflection-on-action. One student in my study identified that it takes skill, life experience and emotional intelligence to be able to reflect-in-action (Participant 8). This student was able to articulate how reflection-in-action occurred, but also acknowledged unless they had insight into what was being reflected on at that particular moment, it was not evident that they would actually be reflecting-in-action. Schön (1983, 1987) is an experienced educator and professional, therefore it is possible to speculate that his ability to reflect-in-action prior to reflection-on-action is something that he was able to do, whereas a student or novice professional would need to develop the skills and capacity to be able to do so.

It was this last category of description that the highest order of thinking and experiencing of was evident. Reid et al. (2011) also explored the notion of the novice to expert student and the move to that of a novice professional. The expert student, they explained, was one who was moving towards the development of professional skills and knowledge along with the particular discipline specific attributes of the profession they become part of. It became evident in this category that the students in my study were beginning to think like a professional. One student explained that they felt empowered as a result of understanding more about reflection, what reflection could provide them as a person and how reflection had assisted them. Another student perceived that their heightened self-confidence and self-awareness made it possible for them to predict possible future outcomes for their implemented nursing care. Knowledge about the person's self-

awareness is also an important aspect of metacognitive knowledge (Flavell, 1979; Pintrich, 2002).

7.7. Research Question Three

Much has been published on the use of written reflective activities in nursing education. The students within my study identified a number of learning activities or experiences that facilitated their reflection. The data represented included indications of what third year students see as useful for reflection. Some participants identified thinking about and making sense of reflection on significant events or real-life situations that occurred during their professional experience placements as being valuable for developing their reflective ability. Working with case studies during tutorials, practising clinical skills, reflective writing assessment items, and sharing experiences with others in group discussions were also activities that participants felt helped influence and expand their reflective competence and confidence.

For some students it was the practical classes or simulated immersive learning activities which took place in the practical laboratory space that they perceived as being valuable for their reflection. Some recognised the reflective writing pieces required for professional experience placements or as written assessment items included in some units of study as being useful tools to assist with their reflection. As noted, the sharing of experiences with others was also acknowledged by many of the students in this study. It was the collaborative reflection that occurred in groups which influenced and expanded on their reflective abilities. As they had been exposed to a variety of experiences during their nursing program that required them to reflect and learn from their reflections, the students in my study also identified that these types of activities were able to increase their understanding of what reflection was. Some students were able to perceive a deeper appreciation and value of reflective activities and the learnings they gained from them whereas other students in my study identified the ways these activities could assist with their understanding of reflection and of the processes they used while reflecting.

Previous work on this topic has also found that nursing learners develop reflective capacity through a range of activities. Benner (1982, 2001) in her previously discussed work on the novice to expert in Category 1, also supported professional experience placements and practical skills such as those learnt in the practical skills laboratories assisted with the development of professional expertise. Maginnis and Croxon (2010) support the use of practical skill laboratories as a way of assisting students to integrate their nursing skills into that of practical placements as a form of theory to practice integration. Some students within my study also acknowledged that it was the reflection that occurred in and outside of the

practical skill laboratories and simulated patient experiences that was significant for learning. Maginnis and Croxon (2010) concluded from their study into the transfer of learning of undergraduate nursing students to the professional experience environment that the written reflections that the students completed highlighted both strengths and weakness with the students' education. Maginnis and Croxon (2010), however, did not discuss the effects that the act of reflection had on the students' abilities to be able to perceive these strengths and weaknesses. My study differs from the research conducted by Maginnis and Croxon (2010) in that it focuses on students in their third and final year of their study and therefore contributes new knowledge how reflection is taught and used to support undergraduate nursing education.

My study also found that assessment items such as written reflective pieces facilitate the student to become more aware of and critical of their own nursing practice. This not only has implications for their practice as students, but also for their future practice as registered nurses. Finlay (2008) and Patel and Metersky (2022) drawing on the work of Schön (1983) posited that both reflection-in-action and reflection-on-action contain the elements that professionals required to not only be able to connect with their feelings about what occurred within a particular situation, but they also need to be able to apply the appropriate theory to the situation in order to shape their actions and develop new understandings from the situation. The use of written reflections is one way in which students are able to reflect-on-action and reflect-for-action.

There is however a tendency for reflective activities to include questions that need to be addressed which in turn makes the activity into one where reflection can become stifling or superficial in nature (Finlay, 2008). Regmi and Naidoo (2013) discussed the need for a reflective framework to be part of written reflections as they allow for professionals to learn and reflect-in-practice which Roulston (2010) also describes as learning-in-action or reflection-in-action. Frameworks such as those of Gibbs (1988), Johns (2013, 2022) and Driscoll (2007) provide guidance through questions that guide the reflective process. The students in my study identified that the use of a framework assisted them with their focus on how to reflect and what they considered needed to be included in their reflection. Epp (2008) found from their review of the literature that written reflections were used as part of the theory and practical aspect of nursing education and showed a low level of reflection. Many of the written reflections completed by students were based on their description of what occurred rather than on analysis. Some students in my study identified that they found written reflections difficult to write and therefore they tended to focus on answering the questions provided by the framework structure such as that by Gibbs (1988). Greenleaf Brown et al. (2022) in their later review of the literature confirmed the findings from other

authors for example Regmi and Naidoo (2013), Cadman et al. (2003), Pierson (1998) and Norrie et al. (2012), who suggest that journals completed by nursing students were an effective way to promote reflection. Greenleaf Brown et al. (2022) also commented that through the use of frameworks incorporated into reflective journaling that there was also an increase in clinical judgments as well as emotional competence shown by students which was also confirmed by Delves-Yates (2021), Rolfe et al. (2011) and Bulman and Schutz (2013).

Written case studies that also incorporate written reflections was one strategy introduced by ter Maten-Speksnijder et al. (2012) in their study into reflection with postgraduate nurse practitioner students. While the student cohort was different to that of the students in my study, ter Maten-Speksnijder et al. (2012) identified that the case studies were valuable for students to be able to see what should be ensured as part of nursing care as well as the rationales behind what they would implement. While ter Maten-Speksnijder et al. (2012) students were already registered nurses the study found that their cohort of students when presented with incomplete patient data tended to make preliminary conclusions without considering all aspects of the case study. These findings showed the importance of case studies as a learning opportunity and also as way of being able to influence student learning through the process of teaching and supporting reflection. The students in my study identified that the use of case studies in the tutorial classes and as part of written assessments was found to be valuable for them to be able to reflect.

Debriefing post simulated immersive learning activities such as those that occur in practical laboratories or with high fidelity patient manikins as well as post critical events has also been identified by the students in my study as being useful activities to enhance reflection. Debriefing and structured group feedback play an important part in simulated immersive learning activities. It is through reflection-on-action and the subsequent examination and discussion of what took part during the activity, that is seen to be most valuable component of a simulated immersive learning activity (Beyea & Kobokovich, 2004; Beyea et al., 2007; Fey et al., 2014; Medley & Horne, 2005). It is through structured debriefing (Husebø et al., 2015) that students are able to use their metacognitive knowledge to identify future decisions for the nursing care provision. The practical laboratories and simulated immersive learning activities allow students to learn and practice their skills in a safe environment where mistakes are allowed to be made without injury or harm being caused to actual patients (Beyea & Kobokovich, 2004; Beyea et al., 2007; Medley & Horne, 2005). They are also a way in which reflection-in-action can be enhanced as simulated immersive learning activities can be paused prompting questions asked of the students

which in turn allows them the opportunity to analyse what other options they may be able to adopt, and by doing so correct their mistakes (Brady et al., 2009).

As discussed in the earlier section of Category 4 'Reflection required interaction and engagement' the students in my study identified that reflection following these types of activities was valuable for their learning and with their reflection. The social interaction with others allowed for them to see various options or viewpoints from the perspective of the other person. Fey et al. (2014) and Lestander et al. (2016) agreed that the debriefing following simulated learning activities needs to be structured, given adequate time to provide complete and non-judgemental with what is feedback is provided to the students.

Reflection on critical incidents or significant events was also reported by a number of students in my study to be valuable and beneficial for their reflective learning. Critical incidents or events according to Tripp (2012) result from the way in which an event is viewed, the interpretation of what occurred and the value judgement and significance that is then applied to the event. McKinnon (2016) also refers to events such as these as being "lightbulb moments" (p. 53) due to the way in which the analysis of the situation and the knowledge that is acquired may only become evident to the person who determines the situation to be deemed critical event. In my study Category 4 described a lightbulb moment when students perceived that exposure to significant events was a part of reflection. One student (Participant 7) identified that for them a significant event allowed them to reflect on their practice including their thoughts and feelings analysis and evaluation about what occurred. They also referred to 'how they came out the other side' and what they learnt from the experience. Simulated immersive learning activities that replicate challenging or significant events that occur within professional experience setting within a safe environment (Beyea & Kobokovich, 2004; Beyea et al., 2007; Medley & Horne, 2005) provides opportunities for students to analyse and evaluate their actions and feelings and make meanings from these (Fey et al., 2014).

7.8. Limitations of the Study

In Chapter 3 Methodology the recruitment of participants was discussed in detail with the aim to select participants across a range of age, gender academic achievement (GPA) and cultural backgrounds. However, this did not eventuate. The nursing profession is female dominated with only 11.7% being male (Ahpra, 2024). While there is greater representation with the numbers of males in the profession increasing from 10.8% since 2015/16 (Ahpra, 2024) they are significantly underrepresented in the profession. While invitations to be part of my study were sent to the entire cohort of third year undergraduate nursing students only female domestic students responded. The participant group were also predominantly mature

aged students who did not enter the program directly following completion of their secondary schooling. Some of the participant group had also previously commenced or completed other university degrees higher education qualifications. While there was a possibility for this group to contain a higher percentage of deep learners (Lake & Boyd, 2015), the findings from my study did not support this as there was a spread of surface and deep learning across the categories of description. The GPA for the participant group within my study was between 4.52 and 6.31 which is at the higher end of the range.

Those students who self-selected to be part of my study were all domestic students and did not include any international students or student for whom English was a second language. It was not possible therefore to consider how the perceptions, values and outcomes of reflection from this group nor from those who may have had a GPA lower than those of the students in my study might have been different if these groups were included. Further study into this group of students could inform the teaching and learning of reflection within the curriculum with greater relevance to the international student cohort or those from which English was a second language or those with a lower GPA.

At the time student recruitment was occurring, COVID-19 emerged. At this time students were impacted by unpredictability with their professional experience placements due to restrictions enforced by the health services and the state and territory governments of the time. The amount of change affecting students impacted on their levels of uncertainty, anxiety, distress and stress (Rasmussen et al., 2022; Usher et al., 2023) with greater impact experienced by third years undergraduate nursing students (Rasmussen et al., 2022). All of these factors were highly likely to have impacted on the recruitment phase and therefore limited the number of participants included in the study.

It became evident through the data analysis process that further questions or to address the third research question 'Which types of learning activities or experiences encountered during their nursing program facilitate reflection?' would have expanded the findings from this study. While the findings identified the types of activities that facilitated reflection students, how they valued the activities and the outcomes they obtained from the activity was only superficially discussed during the interviews as students were not asked to elaborate on why the activities were considered to be useful. Further exploration of these areas may have provided rich data to inform the teaching and learning of undergraduate nursing students and is therefore recommended for further research studies of the perceptions of reflection.

7.9. Summary

This chapter has provided discussion of the literature that relates to the findings from my study. The categories of description show the various ways in which reflection is perceived, as important and valuable by students. The outcomes from reflection demonstrate how they perceived reflection was able to assist them with their current and future nursing practice. The findings from my study also support the view that there are different levels of reflection evident across nursing students.

The findings from my study will inform the teaching and learning of reflection within the undergraduate nursing curriculum of the University in which the study took place. Through understanding more about nursing students' perceptions of reflection, scaffolding of different activities throughout the curriculum can occur in a more structured manner. The structured and scaffolded approach will allow for movement from surface learning activities towards those that are more deep learning focused. The categories of description developed from my study will also allow for the complexities of higher reflective abilities to also be incorporated in to learning activities to provide the nursing students who are equipped with reflective skills and insight to become registered nurses and professionals who can provide high quality patient care.

The next and final chapter in this thesis (Chapter 8) discussed the conclusions made from undertaking this study and makes recommendations for teaching and learning of undergraduate nursing students. Recommendations are made for further studies into the perceptions of reflection in undergraduate nursing students and in the evaluation of scaffolding of reflective activities into the nursing curricular.

Chapter 8: Conclusion and Recommendations

In this final chapter of this thesis, the conclusions, and recommendations drawn from the findings of my study will demonstrate the importance of understanding undergraduate nursing students' perceptions of reflection as well as the need for activities that foster their reflective abilities. This chapter will also identify further areas for research to be conducted into the perceptions of reflection in undergraduate nursing students.

8.1. Conclusions Made from the Study

The categories of description developed from the data obtained in my study show a hierarchy of increasing complexity in the way that the students perceived reflection, the value that they associate with reflection as well as the outcomes that occur because of them reflecting. My study shows how undergraduate nursing students relate reflection to nursing practice from a surface approach to a deeper level. Demonstrated in the hierarchy of the categories of difference and the critical variations between the categories and consistent with the findings from Lueung and Kember (2003) and Mezirow (1991) there are different levels of reflection that occur among students. Surface approaches to reflection align to surface understanding and learning. Higher levels of reflection aligned to deeper learning approaches and demonstrated a greater understanding of reflection. The application of phenomenography as the chosen methodology allowed for these perceptions to be identified. The notion of surface and deeper learning (Biggs et al., 2022; Biggs, 1987) and novice to expert (Benner, 1982, 2001, 2004) identified in earlier discussion in Chapter 7, provides opportunities for a scaffolded approach to the teaching of reflection and how reflective activities can be introduced into the undergraduate nursing curriculum. The findings from my study have shown that not all third year undergraduate nursing students have the same capacity for reflection. The categories of description demonstrate the various ways in which reflection is perceived with the hierarchical development of awareness between categories. As the categories increase in complexity, a greater understanding of reflection emerges. A greater emphasis on their (the students') place in the nursing profession became evident. The higher the category, the more complex their thinking about reflection and the more empowered the students see themselves as becoming through reflection.

While reflection was reported in my study as being important for nursing, the students who took part did not articulate why reflection was included into the practice standard for the registered nurse. The need for graduate nurses to be reflective practitioners is something that needs to be introduced into the nursing curriculum at a first year level when nursing students are learning about what it is to be a nurse. Reflection has been included into some

aspects of teaching and learning within the nursing program at the university where the study was conducted, for example as part of teaching the concepts of the clinical reasoning cycle and 'how to think like a nurse' (Levett-Jones, 2023), but scant focus is paid on informing students on what reflection is, how to reflect, and the importance of being able to reflect as part of professional practice. This gap is one which needs to be addressed within the education of undergraduate nurses for them to understand that reflection is part of being a professional. The focus for teaching and learning needs to move away from only being seen as relevant for assessments completed while on professional experience placements to a more holistic approach to an integrated curriculum in which reflection is included throughout. As discussed by Marton et al. (1993) learning moves from a less complex form where one's knowledge of the phenomena is based on what has been taught to a more complex form where learning acts to change a person. Marton and Booth (1997) also note that there are two levels of learning. The first level focuses on the act of learning and the consequences of the learning, with the second level being where meaning is found through engaging with the actual learning task. Within my study, it was within the first 3 categories of description (Categories 1, 2 and 3) were the first act of learning and its consequences identified by Marton and Booth (1997) was evident as with the second level of engagement with the learning (Marton & Booth, 1997) being found in Categories 4, 5 and 6.

Reflective activities were found to be important to facilitate reflection in the undergraduate nursing students who took part in my study. Activities such as case studies and authentic clinical based situations when incorporated into the classroom teaching and learning, enhanced students' reflective abilities. Reflective writing pieces were also highlighted as ways in which reflection occurs. A main finding however was that these students found that social interaction with others as part of process of reflecting was a key factor in building their reflective capacity. This was also evidenced as Category 4 emphasises that reflection requires interaction and engagement. The sharing of experiences allow for the unique contributions that each individual brings and fosters the development of professional knowledge and critical thinking and analysis skills allowing for confidence building to occur (Bassot, 2023; Esterhuizen, 2023; Thompson & Thompson, 2023).

From what I know now as a result of conducting my study, it is important for more reflective activities to be incorporated into the classroom learning that focus developing critical thinking skills. As was highlighted in the findings, the process of reflecting with others increased the students' ability to examine options or different perspectives in the care that could be provided.

8.2. Recommendations for Teaching and Learning

A number of recommendations for teaching and learning have been identified in the findings to assist with the reflective processes of undergraduate nursing students. These will be discussed in greater detail in sections to follow. These recommendations include:

1. Undergraduate nursing students need to be informed of what reflection is, what is involved with the process of reflecting and the benefits they will gain from reflecting. It is proposed that a module on reflection be introduced to undergraduate nursing students as part of their first year unit on transitioning to becoming a professional in the nursing profession. Teaching undergraduate nursing students about reflection early in the curriculum conveys the importance of being able to reflect-on-action and reflect-on-practice.
2. Discussion of why reflection is part the practice standards for registered nurses and being a professional needs to be introduced into a first year first semester unit that relate to nursing as a profession.
By introducing these concepts early in their nursing studies, students will become familiar with the aspects of the registered nurse standards of practice and code of conduct, where reflection is included and why it is part of these standards that will define their undergraduate curriculum and graduate nursing career (ICN, 2021; NMBA, 2016, 2017).
3. Include scaffolding of reflective activities across the curriculum. Review of the curriculum to determine the best activities at which year/semester level to promote reflection. Scaffolding of activities and knowledge about reflection needs to be integrated into first year first semester units and continue through to the end of their final year of study. When students are in their third or final year of study it is too late to provide learning modules about reflection and its importance for registered nurse. Linking in with formal learning about reflection, the constructive alignment and scaffolding reflective activities like those identified in my study as being useful for reflection need to be integrated into classroom learning (Biggs et al., 2022; Coulson & Harvey, 2013; Larrivee, 2008). Reflective activities should not focus on professional experience placements only. Based on the findings from my study less complex reflective activities should be introduced first as surface learning approaches are found to be evident with a lower level of understanding of reflection. As reflective capabilities increase with experience and more theoretical knowledge and skill are introduced into the curriculum, the reflective activities also need to become more complex. As the categories of

difference and critical aspects of difference demonstrated in my study become more sophisticated so too should the activities to facilitate reflection.

8.3. Recommendation for Further Studies

As identified in Chapter 5, there were no international students or students for whom English was a second language who took part in my study as recruitment was a self-selection process. International students have been exposed to different experiences with education in their own country, which is different to the adult learning constructivist approach in widely used in Australian universities. Currently there are large numbers of international students (33.7% nationally) enrolled in the undergraduate nursing program at the university where this study took part. Therefore, a phenomenographic study is recommended to be undertaken with international students to determine findings relevant to this cohort. It would allow for a determination of what reflection means to them and what activities they perceive as fostering reflection. The potential outcome from that study would inform the teaching and learning of that particular cohort and determine how to better support international student with incorporating reflection into their nursing studies and professional experience placements.

The review of the literature for this study found that reflection in nursing programs is predominantly situated with professional experience placements. Little was found that refers to reflection in the classroom setting and integration into the nursing curriculum in a holistic manner. Based on these findings, and the third recommendation for teaching and learning discussed earlier in Section 8.2. conducting further research into the scaffolding of reflective activities and the linkage of them to formal learning could provide insight into the effectiveness and benefits experienced by undergraduate nursing students as they progress through their nursing program. A study such as this could also contribute to greater understanding of the integration of reflection within nursing programs from an international perspective.

8.4. Conclusion

This final chapter of my thesis has presented the conclusions drawn from my study on the perceptions of reflection in third year undergraduate nursing student, how important or valuable to they see reflection to be in nursing practice and which activities they found useful to facilitate reflection. Also presented are the recommendations for teaching and learning of this student group. The chapter concludes with recommendation for future study into the perceptions of undergraduate nursing students.

This phenomenographic study into the perceptions of reflection in undergraduate nursing students has filled a gap identified in the current contemporary literature on

perceptions of reflection. The knowledge gained from this study will allow me to explore ways in which reflection is better integrated into the nursing curriculum of undergraduate nursing students and further develop the reflective capabilities that make reflective practitioners.

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Tables

Table 2.1: Studies Selected for Review

Authors	Origin	Purpose	Sample group	Methodology	Key findings
Hong and Chew (2008)	Malaysia	To explore students views of reflective practice. Identify factors that motivate reflection and reflective writing, what impedes these and what motivates reflective practice	31 students (8 included in focus group)	Mixed methods. Survey and focus group	Reflective learning in the form of written journals assisted their learning. Barriers included time and not being sure what to write or write about and English as a second language. Negative feelings associated feedback or being reprimanded for what they wrote.
Chong (2009)	Malaysia	To examine the perception of student nurses towards reflective practice in the clinical environment	98 final year students	Mixed methods. Descriptive survey	Reflection was a useful activity. Some students were sceptical about reflection. The validity of reflection as tool to assess practical examination in the clinical setting was not conclusive.
Jayasree and John (2013)	Oman	To assess the perception and attitude of reflection and reflective practice	38 third year students	Qualitative descriptive survey	Students have a positive attitude towards reflective practice. Repeated guidance and supervision are key to reflection.
Fernández-Peña et al. (2016)	Spain	To assess nursing students' perceptions of the usefulness and challenges of reflective learning	107 third year students (3 included in focus group)	Mixed Methods questionnaire and focus group	Reflective learning was a positive initiative in the curriculum. Levels of reflection were identified from descriptive to advanced critical thinking. There is a need for clear evaluation criteria for written reflection.
Mahlanze et al. (2017)	South Africa	To determine student nurse's perspectives of written journal writing as a means for personal, professional development and clinical learning development	40 second year students	Mixed methods Quantitative and descriptive survey	Written reflections were seen as a valuable tool with improved decision making and increased involvement with their learning. Students felt empowered to explore their attitudes and perspectives on situations.

Table 5.1: Differences between Phenomenology and Phenomenography

	Phenomenography	Phenomenology
Aim	To explore what the essence of the phenomena is.	To describe the variations in the ways that individuals understand or perceive a phenomenon to be and what does it mean to them.
Focus	First order perspective – what is the phenomenon? There is a direct relationship between the researcher and the phenomenon and how the phenomenon is experienced by the individual.	Second order perspective – the researcher focuses on the relationship between the individual and the phenomenon. Emphasis is on the collective meaning obtained through exploring the similarities and variations in the way the phenomenon is perceived by the participants.
Data collection	In depth and semi structured interviews, focus groups, observation.	In depth and semi structured interviews, open ended questions.
Analysis of data	Simultaneous with data collection.	Conducted after all data has been collected.
Sample size	Will depend on phenomenological approach taken. Commonly until data saturation reached.	10 to 20 is considered sufficient to allow for all variations to be identified within categories of description.
Outcome of analysis	Descriptive interpretation of the meaning or essence of the phenomenon.	The qualitatively different ways in which the phenomenon is perceived by the participants determines the outcome space

Adapted from: Bamard et al.(1999), Bayou et al (2024),Ornek (2008)

Table 6.1: Categories of Description. Critical Aspects of the Range of Variation in the Ways Reflection is Perceived by Undergraduate Nursing Students

	Category 1:	Category 2:	Category 3:	Category 4:	Category 5:	Category 6:
	Reflection is important for nursing	Reflection is a process of meaning making	Reflection is essential for professional growth and development	Reflection requires interaction and engagement	Reflection is necessary for integration and consolidation	Reflection is integral for confidence building and empowerment
Perceptions of reflection	Is part of nursing practice	Involves looking back on what occurred	To become a better nurse	Exposure to a significant event	Theory to practice integration	Ability to predict future outcomes
Value of reflection	For patient care and patient safety	From making sense of experiences	For identifying areas for improvement	Through engaging with others	Recognition of good and bad practice	For building confidence and self-awareness
Outcomes of reflection	Providing best possible practice	Seeing different perspectives	Provides understanding of self and of reflection	Integrated into learning activities	Assists with thinking critically	Promotes self-improvement through empowerment

Table 6.2: Critical Aspects in the Variations Between Each Category of Description.

Category	Differences between categories
Category 1 ↓	A broad appreciation of reflection is evident. The need for best practice care is identified. Reflection is adopted in a very structured process driven way.
Category 2 ↓	A deeper appreciation of reflection is emerging. Reflective processes are becoming more critical.
Category 3 ↓	Developing a stronger sense of what reflection is as a process. Beginning to internalise the process of reflection. View of reflection is becoming wider and less structured due to exposure and experience. Reflection is beginning to be incorporated into daily life.
Category 4 ↓	The value of social interaction as part of reflection is recognised. Critical reflection allows for questioning of contexts. Reflective activities that assist with reflection are identified.
Category 5 ↓	Reflection has become an internally developed process that is less structured and process driven. Reflection is seen to assist with the integration and consolidation of theory and skills to professional clinical practice. Critical thinking skills are developing.
Category 6	Reflection is seen an actively internalised process allowing for a sense of professional identity to transpire. Thinks about and engages with reflection in a more critical and holistic ways.

Figures

Figure 2.1: Identification and Selection of Articles October 2023

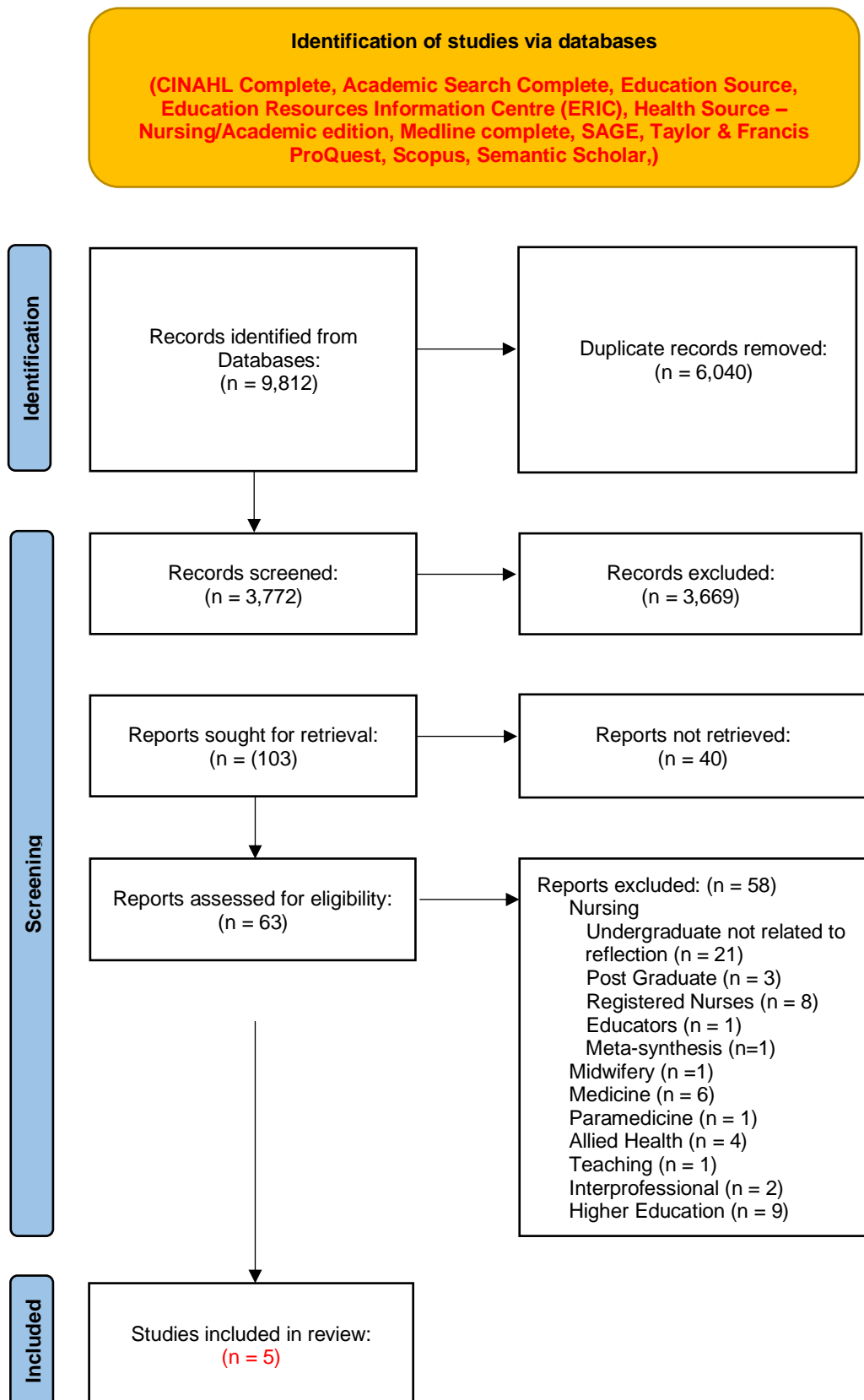
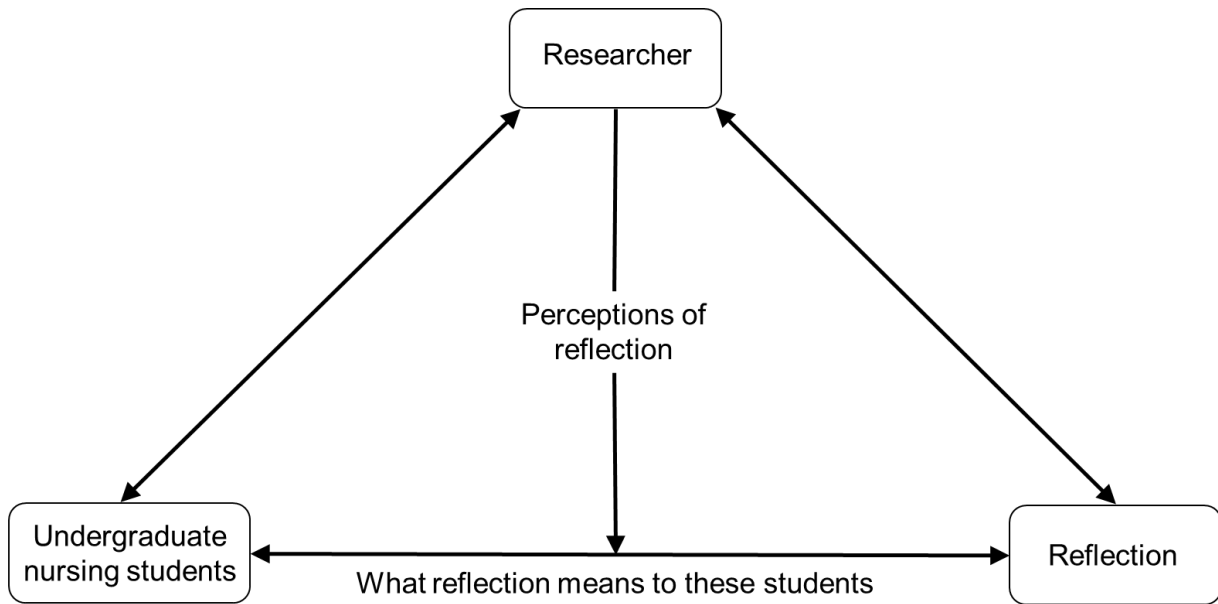
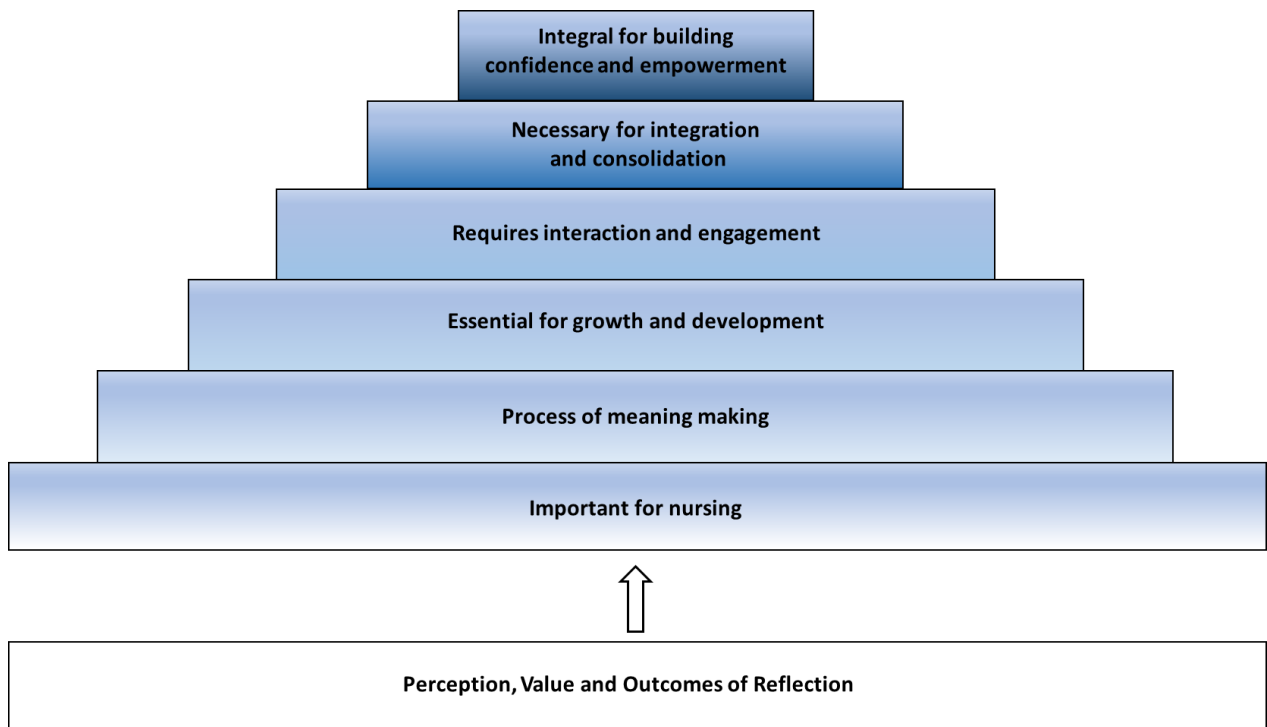


Figure 5.1: Theoretical Framework



Adapted from Bowden & Walsh (2005)

Figure 6.1: Outcome Space. The Hierarchy Occurring Between the six Categories of Description.



Appendices

Appendix A: Ethics Approval

From: [Nina Robinson](#)
To: [Jo Ryan](#)
Cc: [Theda Thomas](#); [Lyn Taylor](#); [Res Ethics](#)
Subject: Ethics application approved!
Date: Thursday, 28 February 2019 17:31:39

Dear Applicant,

Principal Investigator: Dr Josephine Ryan
Co-Investigator: Assoc. Prof. Theda Thomas
Student Researcher: Lynette Taylor
Ethics Register Number: 2019-5E
Project Title: Developing reflective practitioners: Exploring the perceptions of professional reflective processes among undergraduate nursing students.
Date Approved: 28/02/2019
End Date: 29/02/2020

This is to certify that the above application has been reviewed by the Australian Catholic University Human Research Ethics Committee (ACU HREC). The application has been approved for the period given above.

Researchers are responsible for ensuring that all conditions of approval are adhered to, that prior approval is obtained for all modifications and that HREC is notified of any reportable matters, incidents or unexpected issues impacting on participants that arise in the course of the research. Researchers must ensure compliance with the National Statement on Ethical Conduct in Human Research, the Australian Code for the Responsible Conduct of Research and the University's Research Code of Conduct.

Any queries relating to this application should be directed to the Ethics Secretariat (res.ethics@acu.edu.au). Please quote your ethics approval number in all communications with us.

If you require a formal approval certificate in addition to this email, please respond via reply email and one will be issued.

We wish you every success with your research.

Kind regards,

Nina Robinson
on behalf of ACU HREC Chair, Assoc Prof. Michael Baker

Research Ethics and Integrity Officer | Office of the Deputy Vice Chancellor (Research) Australian Catholic University
T: +61 2 9739 2646 E: res.ethics@acu.edu.au

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Appendix B: Ethics extension approval

From: [Jo Ryan](#)
To: [Lyn Taylor](#)
Cc: [Sara BAYES](#)
Subject: Fw: [2019-5E] - Ethics Extension Request Approved
Date: Wednesday, 3 April 2024 12:48:42

Best wishes
Jo

Dr Josephine Ryan
Honorary Fellow at
Australian Catholic University
email: jo.ryan@acu.edu.au

From: Res Ethics <Res.Ethics@acu.edu.au>
Sent: Tuesday, April 2, 2024 1:22 PM
To: Jo Ryan <Jo.Ryan@acu.edu.au>
Subject: [2019-5E] - Ethics Extension Request Approved

Dear Josephine,

Ethics Register Number : 2019-5E
Project Title : Developing reflective practitioners: Exploring the perceptions of professional reflective processes among undergraduate nursing students.
Data Collection Date Extended : 31/12/2024

Thank you for returning the Ethics Progress Report for your project.

The Chair of the Human Research Ethics Committee has approved your request to extend the project. The new expiry date for the project is the 31/12/2024.

We wish you well in this ongoing project.

Kind regards,
Res Ethics EMAIL

Research Ethics & Integrity Officer | Research Services | Office of the Deputy Vice-Chancellor (Research)
on behalf of the ACU HREC Chair, Assoc. Prof Erin Conway
Australian Catholic University
T: 02 9739 2646 E: res.ethics@acu.edu.au

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Appendix C: Participant Information

PARTICIPANT INFORMATION LETTER

PROJECT TITLE: Developing reflective practitioners: Exploring the perceptions of professional reflective practice among undergraduate students
APPLICATION NUMBER: (2019- 5E)
PRINCIPAL INVESTIGATOR: Dr Josephine Ryan
STUDENT RESEARCHER: Lyn Taylor
STUDENT'S DEGREE: Doctor of Education

Dear Participant,

You are invited to participate in the research project described below.

What is the project about?

The research project investigates the reflective processes used by third year undergraduate nursing students. How valuable you perceive reflection to be, as well as explore the learning opportunities you have been exposed to that have assisted with your reflective journey.

Who is undertaking the project?

This project is being conducted by Lyn Taylor and will form the basis for the degree of Doctor of Education at Australian Catholic University under the supervision of Dr Josephine Ryan and Associate Professor Alicia Evans.

Are there any risks associated with participating in this project?

It is anticipated that this project will present negligible risk to participants. In the event that any questions asked during interviews illicit an emotional response from you as part of reflecting on issues or events that you may have been exposed to, counsellors will be available should you feel that you need to discuss anything with them. Counsellors are available on each campus of ACU. Counsellors may be contacted through:

- Ballarat: Counselling.Ballarat@acu.edu.au
- Brisbane: Counselling.Brisbane@acu.edu.au
- Canberra: Counselling.Canberra@acu.edu.au
- North Sydney: Counselling.NorthSydney@acu.edu.au

What will I be asked to do?

Your participation in this study will involve an interview which will take approximately 30 minutes of your time. This interview will be audio recorded. During the interview you will be asked questions to describe your experiences of reflection and the learning opportunities to which you have been exposed, which assisted with your reflective processes. For example: *“Based on your experiences so far, what does reflection mean to you?”*, *“What practical experiences help or assist you with reflection”*.

The study will take place in a private meeting room on Campus at a time of mutual convenience or via Skype or Zoom.

How much time will the project take?

The face to face interview should take approximately 30 minutes of your time. The interview will be scheduled at a mutually convenient time in a private meeting room on campus or via Skype or Zoom.

What are the benefits of the research project?

While there are no specific benefits to you as the participant, there is a greater benefit in the contribution to the professional education of future undergraduate nursing students and other professional groups such as teachers.

Can I withdraw from the study?

Participation in this study is completely voluntary. You are not under any obligation to participate. If you agree to participate, you can withdraw from the study at any time prior to analysis of the deidentified

data without adverse consequences. Your contribution will not be included in the thesis or any other publications.

Will anyone else know the results of the project?

Total anonymity is not possible for this study as you will engage in a face to face interview with the researcher. To preserve as much anonymity as possible, knowledge of the identity of participants will be confined to the researcher only. All data collected will be de-identified. No identification of any individual participating in the study will be included in any data published that results from this project.

Will I be able to find out the results of the project?

The completed thesis and any publications that result from the study will be made available to you if you so choose.

Who do I contact if I have questions about the project?

Any questions you have regarding this project should be directed to me as the student researcher:

Lyn Taylor
lynette.taylor@myacu.edu.au
03 9953 3362

What if I have a complaint or any concerns?

The study has been reviewed by the Human Research Ethics Committee at Australian Catholic University (review number 2019-5E). If you have any complaints or concerns about the conduct of the project, you may write to the Manager of the Human Research Ethics and Integrity Committee care of the Office of the Deputy Vice Chancellor (Research).

Manager, Ethics and Integrity
c/o Office of the Deputy Vice Chancellor (Research)
Australian Catholic University
North Sydney Campus
PO Box 968
NORTH SYDNEY, NSW 2059
Ph.: 02 9739 2519
Fax: 02 9739 2870
Email: resethics.manager@acu.edu.au

Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

I want to participate! How do I sign up?

If you are interested in participating in this project, please respond by contacting me at:

lynette.taylor@myacu.edu.au .

I will then contact you either by phone or email to answer any questions you may have and to arrange a mutually convenient date and time to meet.

Yours sincerely,

Lyn Taylor

Appendix D: Information Emailed to Students

Information emailed to students requesting participation in the study.

Title: Developing reflective practitioners: Exploring the perceptions of professional reflective processes among undergraduate nursing students.

Dear Student,

My name is Lyn Taylor and I am conducting a research project under the supervision of Dr Josephine Ryan and Associate Professor Theda Thomas in the Faculty of Education and Arts at ACU towards a degree of Doctor of Education.

Your assistance is requested to participate in a face to face interview that will contribute to my research as I am interested in finding out *What undergraduate nursing students perceive reflection to be, how important or valuable they see reflection, their ability to reflect on past, present and future professional practice and which learning activities or experiences helped to facilitate reflection as part of their nursing course.*

Participants will benefit from the opportunity to consider their own relationship to reflective practice which is a key professional attribute for nurses.

This study will involve you participating in a face to face interview that should take approximately 30 minutes of your time. The interview will take place on campus at a mutually convenient day and time. A participant information letter has been attached to this email

To participate, please contact me at:

Lyn Taylor (Researcher) lynette.taylor@myacu.edu.au

Dr Jo Ryan (Supervisor) jo.ryan@acu.edu.au

Thank you for your assistance with this project.

Appendix E: Consent Form

CONSENT FORM

TITLE OF PROJECT: Developing reflective practitioners: Exploring the perceptions of professional reflective processes among undergraduate nursing students

APPLICATION NUMBER:(2019-5E).....

PRINCIPAL INVESTIGATOR Dr Josephine Ryan

STUDENT RESEARCHER: Lyn Taylor

I *(the participant)* have read *(or, where appropriate, have had read to me)* and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this audio taped interview which will take approximately 30 minutes, realising that I can withdraw my consent at any time during the interview or prior to analysis of the de identified data without any adverse consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT:

SIGNATURE:

DATE:

.....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR):

DATE:

.....

(and, if applicable)

SIGNATURE OF STUDENT RESEARCHER:.....

DATE:

Appendix F: Interview Guide

PROJECT TITLE: Developing reflective practitioners: Exploring the perceptions of professional reflective practice among undergraduate nursing students.

This research project investigates the reflective processes used by third year undergraduate nursing students. How valuable you perceive reflection to be, as well as explore the learning opportunities you have been exposed to that have assisted with your reflective journey. It will form the basis for the degree of Doctor of Education at Australian Catholic University under the supervision of Dr Josephine Ryan and Associate Professor Alicia Evans.

It is anticipated that this project will present negligible risk to participants. In the event that any questions asked during interviews illicit an emotional response from you as part of reflecting on issues or events that you may have been exposed to, counsellors will be available should you feel that you need to discuss anything with them. Counsellors are available. Information on contacting them has been included in your Participant Information letter.

While there are no specific benefits to you as the participant, there is a greater benefit in the contribution to the professional education of future undergraduate nursing students and other professional groups such as teachers.

Your participation in this study will involve an interview which will take approximately 30 minutes of your time. This interview will be audio recorded. During the interview you will be asked questions to describe your experiences of reflection and the learning opportunities to which you have been exposed, which assisted with your reflective processes. The interview should take approximately 30 minutes of your time.

Participation in this study is completely voluntary. You can withdraw from the study at any time prior to analysis of the deidentified data without adverse consequences. Your contribution will not be included in the thesis or any other publications.

Total anonymity is not possible for this study due to the face to face interview with the researcher. To preserve as much anonymity as possible, knowledge of the identity of participants will be confined to the researcher only. All data collected will be de-identified. No identification of any individual participating in the study will be included in any data published that results from this project. The completed thesis and any publications that result from the study will be made available to you if you so choose.

The study has been reviewed by the Human Research Ethics Committee at Australian Catholic University (review number 2019-5E). If you have any complaints or

concerns about the conduct of the project, please refer to the information letter. Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

Appendix G: Interview Questions

Questions which to be used in the project title 'Developing reflective practitioners: Exploring the perceptions of professional reflective processes among undergraduate nursing students.

- 1) Based on your experiences so far, what does reflection mean to you?
- 2) As part of your nursing course, have you been taught to reflect? How useful did you find this?
- 3) What different ways are there to reflect and which one or ones do you use?
- 4) What types of learning experiences tutorials, lectures or practical labs help or assist with reflection?
- 5) What types of practical placement experiences help or assist with reflection?
- 6) Please tell me about any experiences of reflecting with others and how useful these were?
- 7) Tell me about the structures that you use to reflect and what worked well with these?
- 8) Please tell me about a specific learning experience, event or person that has assisted in you with your reflective ability?
- 9) What is it about them or that situation that was useful?
- 10) How valuable do you see reflection? In the present and for your future nursing practice?
- 11) Before we finish, is there anything else that you would like to add or mention?

Thank you for your time today and for assisting me with my study.

Probes:

Neutral questions aimed at getting the participant to say more.

Example: Can you tell me more about that? Could you explain that again using different words? Why did you say that?

Specific questions that ask for **more information** about issues raised earlier in the interview.

Example: You have talked about A and also about B, but what do A and B mean to you?

Specific questions that **invite reflection** about what the participant has said.

Example: You said A, and then you said B; how do those two perspectives relate to each other? How did you go about that? Why did you do it that way? What did you gain or hope to gain from it? Do you have an example from other areas of your work or personal life?