Work Integrated Learning and Career Related Outcomes: A Person-Environment Fit Perspective

Daniel Robert Harrison
BSS (HONS)

School of Psychology
Griffith Health
Griffith University

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The aim of this research program was to investigate how a final work integrated learning (WIL) placement for nursing students influences three variations of person-environment fit (viz. professional fit, person-organisation, and person-job fit), and its relationship with career-related outcomes (viz. occupational commitment, job and organisational attraction, job and organisational choice intentions). While person-environment fit (viz. professional fit, person-organisation fit, person-job fit) is one of the most commonly investigated phenomena in organisational research, limited research has investigated its causes and consequences within the WIL context. Thus, this thesis was designed in response to as yet unanswered questions concerning the causes of person-environment fit and its consequence on career-related outcomes for the nursing profession. The focus of this thesis was Australian undergraduate nurses who completed a final WIL placement prior to their transition to practice in the workplace. Given that the nursing profession is currently experiencing a nationwide skills shortage, and high graduate turnover, this investigation was intended to offer additional understanding into graduate retention and job choice.

Three studies were designed to investigate the relationship between WIL, person-environment fit (viz. professional fit, person-organisation fit, and person-job fit) and career-related outcomes (viz. transition to practice self-efficacy, occupational commitment, job and organisational attraction, and job and organisational pursuit intentions). The first study was concerned with validating the measurement approach used for several constructs that have known conceptualisation and measurement limitations (i.e., professional fit, occupational commitment, transition to practice self-efficacy, social support, structured support, general self-efficacy, job and organisational attraction). The first study examined the discriminant
validity of each measure, and investigated the applicability of each person-environment fit construct on a sample of Australian undergraduate nursing students. A rigorous approach to measurement validation was conducted, which included exploratory factor analysis, confirmatory factor analysis, and paired construct and shared variance tests.

Results of the first study supported the measurement models to be used in studies two and three (i.e., professional fit, occupational commitment, transition to practice self-efficacy, social support, structured support, general self-efficacy, job and organisational attraction). One important implication from the first study was the finding that each dimension of person-environment fit (viz. person-job fit, person-organisation fit, and professional fit) was statistically distinct. This finding supported the propositions of person-environment fit theory by demonstrating the applicability of each construct within the WIL setting for Australian undergraduate nursing students.

The purpose of the second study was to investigate the causes and consequences of nursing students’ professional fit perceptions, occupational commitment and transition to practice self-efficacy. This study investigated the dual effects of individual (viz. positive framing, GSE, task negotiation) and environmental differences (viz. structured and social support) for their relationship with professional fit, and how changes in professional fit perceptions predict students’ transition to practice self-efficacy and occupational commitment. Structural equation modelling was used to examine the proposed relationships. The results demonstrated that both individual and environmental differences (i.e., task negotiation, social support, transition to practice self-efficacy) improved students’ professional fit perceptions. The results also demonstrated that professional fit improved students’ commitment to their occupation. The results of the mediation analysis revealed that professional fit has a central role to play in describing how WIL influences student’s
commitment to the nursing discipline. For example, a positive WIL experience (i.e., high levels of social support) improved students’ commitment to the occupation through changes in students’ professional fit perceptions.

The purpose of the third study was to investigate the causes and consequences of person-job fit (viz. demands-abilities fit and needs-supplies fit) and person-organisation fit within the WIL context. Additionally, the third study investigated how the WIL experience influences future job and organisational choice intentions for Australian undergraduate nursing students. This study investigated the dual effects of individual (i.e., positive framing, GSE, task negotiation) and environmental differences (i.e., social and structured support) on each dimension of perceived fit, and how changes in perceived fit (viz., person-job and person-organisation fit), predict higher levels of attraction (viz., job and organisational attraction), and future job and organisational choice intentions. Several models were compared using data collected from final year Australian undergraduate nursing students. Contrary to predictions, this study provided limited support for the prediction that individual differences influence students’ person-job (viz. needs-supplies, demands-abilities), and person-organisation fit perceptions. However, environmental differences in social and structured support were found to be important predictors of perceived fit (viz. person-job demands-abilities and person-organisation fit). Changes in students perceived fit (viz. person-job needs-supplies fit, and person-organisation fit) predicted higher levels of job and organisational attraction and choice intentions. One conclusion of this study was that WIL is an important experience that influences students’ future job and organisational choice through changes in student's perceived fit (viz. person-job needs-supplies fit, and person-organisation fit). Implications of the findings of the research program for organisational theory and WIL practice for nursing students are discussed.
STATEMENT OF ORIGINALITY

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Daniel Harrison
“Good, better, best. Never let it rest until your good is better and your better is best”
# TABLE OF CONTENTS

CHAPTER 1 ................................................................. 1
INTRODUCTION: THE CONTEXT AND OBJECTIVES OF THIS RESEARCH PROGRAM .......................................................... 1
  Overview ........................................................................................................ 1
  Work Integrated Learning .............................................................................. 2
  Person-Environment Fit ................................................................................. 3
  The Population of Analysis ........................................................................... 4
  Graduate Attrition ....................................................................................... 6
CHAPTER 2 .................................................................................. 11
LITERATURE REVIEW: MAJOR CONSTRUCTS, THERIOES, AND PROPOSED RESEARCH MODELS ............................................ 11
  Overview .................................................................................................. 11
  Person-Environment Fit .............................................................................. 11
  Background .............................................................................................. 11
  The Applicability of Person-Environment Fit in the WIL Context ............. 15
  Relevant Dimensions of Person Environment Fit ....................................... 17
  Causes of Person-Environment Fit ............................................................ 24
  Consequences of Person-Environment ....................................................... 32
  Proposed Research Models ........................................................................ 35
CHAPTER 3 .................................................................................. 38
METHODOLOGICAL ISSUES ...................................................................... 38
  Overview .................................................................................................. 38
  Goodness of Fit ....................................................................................... 43
  Model Interpretation ................................................................................. 46
  Conclusion ............................................................................................... 48
CHAPTER 4 .................................................................................. 49
RESEARCH PROGRAM METHODOLOGY .................................................. 49
  Overview .................................................................................................. 49
  Participants ............................................................................................... 49
  Measures .................................................................................................. 50
  Procedure ................................................................................................. 59
CHAPTER 5 .................................................................................. 61
LITERATURE REVIEW: APPROACHES TO CONSTRUCT MEASUREMENT .......................................................... 61
  Overview .................................................................................................. 61
  Professional Fit ........................................................................................ 61
  Occupational Commitment ........................................................................ 65
  General Self-Efficacy ................................................................................. 68
  Transition to Practice Self-Efficacy ............................................................. 72
  Social and Structured Support .................................................................. 76
  Organisation and Job Attraction ................................................................. 79
CHAPTER 6 .................................................................................. 83
STUDY ONE: VALIDATION OF MEASURES .................................................. 83
  Overview .................................................................................................. 83
LIST OF FIGURES

Figure 2.1. The dimensions of person-environment fit investigated within this research program.................................................................................................................................................. 19

Figure 2.2. Research model one: the causes and consequences of professional fit for WIL students........................................................................................................................................................................ 36

Figure 2.3. Research model two: the causes and consequences of person-job and person-organisation fit for WIL students.................................................................................................................................................................. 37

Figure 6.1. Multifactor CFA between the dimensions of person-environment fit.......................... 104

Figure 6.2. Discriminant validity between the NGSES, the transition to practice self-efficacy scale and the self-esteem scale........................................................................................................................................................................ 109

Figure 7.1. Hypothesised Research Model: The Causes and Consequences of Professional Fit..... 125

Figure 7.2. The Causes and Consequences of Transition to Practice Self-Efficacy ......................... 147

Figure 8.1. The hypothesised model reflecting the causes and consequences of professional fit within the WIL context........................................................................................................................................................................ 148

Figure 8.2. The alternative model reflecting the direct relationships between individual and environmental differences and professional fit. .................................................................................................................................................. 157

Figure 8.3. Overall model of the antecedents of career commitment, transition to practice self-efficacy and professional fit........................................................................................................................................................................ 165

Figure 9.1. The Causes and Consequences of Person-Organisation and Person-Job Fit ................. 168

Figure 9.2 The alternative research model representing the direct effects between person-environment fit and future behavioural intentions. .................................................................................................................................................. 187

Figure 10.1. The hypothesised model reflecting the causes and consequences of person-organisation and person-job fit within the WIL context.................................................................................................................................................. 192

Figure 10.2. The alternative research model reflecting the causes and consequences of person-organisation and person-job fit within the WIL context.................................................................................................................................................. 194

Figure 10.3. Supported model representing the cause and consequences of person-job and person-organisation fit within the WIL context.................................................................................................................................................. 204
LIST OF TABLES

Table 5.1. The Four Item Measure of Professional Fit .......................................................... 65
Table 5.3. The Eight Item New General Self-Efficacy Scale .............................................. 71
Table 5.4. The Six Item Transition to Practice Self-Efficacy Scale ..................................... 76
Table 5.5 The Nine Item Placement Experience Scale ..................................................... 79
Table 5.6. The Five Item Specialty and Organisational Attraction Scale ........................... 82
Table 6.1. Factor Loadings and Estimated Variance Explained by each Latent Construct ....... 92
Table 6.2. Descriptive Statistics for the Scale Items and Chronbach's Alpha Reliability Estimates .. 93
Table 6.3. Nested Model Comparison of Measurement Invariance across Time Points for the Repeated Measures Scales ................................................................................. 99
Table 6.4. Nested Model Comparisons for the Discriminant Validity of Person-Environment Fit ..... 101
Table 6.5. Nested Model Comparisons for the Discriminant Validity of Person-Environment Fit ..... 105
Table 6.6. Average Variance Extracted and Shared Variance Estimates for the Person-Environment Fit Scales ........................................................................................................... 106
Table 6.7. Nested Model Comparisons for the Discriminant Validity between Occupational Commitment and Professional Fit .......................................................... 106
Table 6.8. Nested Model Comparisons for the Discriminant Validity between General Self-Efficacy, Transition to Practice Self-Efficacy, and Self-Esteem ................................................... 107
Table 6.9. Average Variance Extracted and Shared Variance Estimates for General Self-Efficacy, Transition to Practice Self-Efficacy and Self-Esteem .................................................. 111
Table 6.10. Nested Model Comparisons for the Discriminant Validity of the Social Support and Structured Learning Scales ...................................................................................... 111
Table 6.11. Average Variance Extracted and Shared Variance Estimates for the Social Support and Structured Learning Scales ...................................................................................... 112
Table 6.12. Nested Model Comparison of Measurement Invariance and Discriminant Validity Between Datasets and Across Time for the Attraction Scale ......................................................... 113
Table 6.13. Average Variance Extracted and Shared Variance Estimates for the Attraction Scales.. 114
Table 8.1. Means, Standard Deviations and Composite Scale Parameters for the Constructs Examined in Study Two ........................................................................................................ 153
Table 8.2. Correlation Matrix for the Constructs of Task Negotiation, Positive Framing, General Self-Efficacy, Structured Support, Social Support, Transition to Practice Self-Efficacy, Occupational Commitment and Professional Fit ................................................................. 155
Table 8.3. Goodness of Fit Statistics for the Hypothesised and Alternative Models in Study Two ... 156
Table 10.1. Means, Standard Deviations and Composite Scale Parameters for the Constructs
Examined in Study Three.................................................................................................................. 199

Table 10.2. Study Two Correlation Matrix........................................................................................ 202

Table 10.3. Goodness of Fit Statistics for the Hypothesised and Alternative Models....................... 203
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CHAPTER 1
INTRODUCTION: THE CONTEXT AND OBJECTIVES OF THIS RESEARCH PROGRAM

Overview

The aim of this research program was to investigate how a final work integrated learning (WIL) placement for nursing students influences three variations of person-environment fit (viz. professional fit, person-organisation, and person-job fit), and its relationship with career-related outcomes (viz. occupational commitment, job and organisational attraction, job and organisational choice intentions). Person-environment fit (viz. professional fit, person-organisation fit, person-job fit) is one of the most commonly investigated phenomena in organisational research, yet despite its popularity, limited research has investigated its causes and consequences within the WIL context. Thus, this thesis was designed in response to many unanswered questions concerning the causes of person-environment fit and its consequence on career-related outcomes for the nursing profession. The focus of this thesis was Australian undergraduate nurses who completed a final WIL placement prior to their transition to practice in the workplace. Given that the nursing profession is currently experiencing a nationwide skills shortage, and high graduate turnover, this investigation was intended to offer additional understanding into graduate retention and job choice.

This first chapter provides an introduction to WIL, and argues that more research is needed to understand how WIL influences career-related outcomes. The chapter introduces the construct of person-environment fit, and describes the reasons that underpin the specific population of investigation. This chapter then articulates the need for more
research on WIL within the Australian undergraduate nursing context, and concludes with an overview of the research questions and the overall structure of this thesis.

**Work Integrated Learning**

WIL is a broad term describing educational strategies that incorporate *real-world* experience into more traditional classroom based learning to allow students to apply theory to practice (Allen & Peach, 2007; Calway & Murphy, 2007). The main goal of WIL is to provide experiences that are “intentional, organised and recognised by the institution, in order to secure learning outcomes for the student that are both transferable and applied” (Griffith University, 2006, p. 1). In order to achieve this goal, universities and organisations work collaboratively to help students develop specific competencies to prepare them for professional practice upon graduation (Coll & Eames, 2007; Groenewald, 2004). Research has demonstrated that WIL improves students’ confidence (Dressler & Keeling, 2004), knowledge of the discipline (Eames, 2000), and ability to apply skills to practice (Wilson, 1989). These benefits have contributed to a marked increase in its use within higher educational settings - WIL is currently viewed as a mainstream educational strategy designed to improve learning outcomes for students (Cullen, 2005).

In addition to improving learning outcomes, WIL also serves as an opportunity for students to identify career preferences, pathways, and goals. One line of argument is that through providing exposure to different roles and workplaces, WIL is influential in the career decision-making process (Lin, Ferguson, & Egart, 2004). For example, a favourable WIL experience may have positive effects on the student’s career identity, and may also affect intentions to pursue the speciality and/or workplace following graduation (Calway & Murphy, 2001; Lin et al., 2004). By contrast, intentions to pursue alternative specialties,
organisations, or career pathways may occur as a result of a negative WIL experience.

Consistent with this discourse, research conducted by Gruman, Saks, and Zweig (2006) found that a supportive WIL environment was positively related to person-job fit, commitment, and intentions to return to the organisation following graduation. Collectively, such findings suggest that the WIL experience is important for student’s career development and decision-making, yet limited research has attempted to investigate the specific relationships that may explain how WIL influences career-related outcomes.

**Person-Environment Fit**

In response to the current limitations, this research program proposes that the original construct of person-environment fit offers utility in explaining the relationship between WIL and career-related outcomes. Specifically, the construct of person-environment fit holds that attitudes and behaviours are caused by the compatibility between individual and environmental characteristics (Cable & Edwards, 2004; Dawis, 2005; Kristof, 1996; Kristof-Brown, Zimmerman & Johnson, 2005; Schneider, Goldstein, & Brent-Smith, 1995). There are numerous dimensions of person-environment fit that attempt to explain different sets of attitudes and behaviours. For example, person-organisation fit has been found to influence organisational attraction and organisational citizenship behaviours, while person-job fit has been found to influence job attraction, job satisfaction and intentions to pursue a job offer (Kristof-Brown et al., 2005). Empirical evidence also suggests that perceived fit with the profession may influence intentions to leave an occupation (Lai, Chan, Cheng, Peng & Chan 2008). Taken collectively, research findings on person-environment fit have consistently demonstrated its utility within an organisational setting, yet limited research has been conducted on the construct in the WIL context. Indeed, a
positive WIL experience may enhance levels of person-environment fit (viz. person-organisation fit, professional fit, person-job fit), thus influencing career-related attitudes and intentions following graduation (e.g., occupational commitment, job and organisational pursuit intentions). Nevertheless, the current body of literature within the industrial and organisational psychology field has placed limited attention on early career experiences within the WIL context (Lubbers, Loughlin & Zweig, 2005). Therefore, through a more fined-grained analysis, one contribution of this research program will be a more accurate understanding of causality concerning how the WIL experience influences career-related outcomes.

**The Population of Analysis**

Australian undergraduate nursing students were selected to be the population of interest for analysis given the current skills shortage and high levels of graduate turnover (Duchscher, 2008; Oulton, 2006; Cowin & Jacobsson, 2003; Shields, 2004). Specifically, the nursing profession is one of the hardest hit by a worldwide skills shortage within the health industry. Recent accounts of the future demand of nurses show that the numbers graduating university are disproportionate to the numbers needed (Duchscher, 2008; Oulton, 2006). As reported by Oulton (2006), Australian hospitals will experience a shortfall of 40,000 nurses by 2010. One of the major factors influencing workforce shortages is the ageing population. In particular, average age of nurses in 2002 was 40 years (Cowin & Jacobsson, 2003), and data released in 2008 demonstrated a continuing trend, with the average age reaching 45.1 years (45.0 years for registered and 45.5 years for enrolled nurses). Broadly, this trend identifies that the skills shortage will continue to impact on the workforce as more nurses approach retirement.
An increased demand on health services has also increased the need for more qualified nurses. For example, Shields (2004) argued that over the past several decades, health promotion campaigns have increased individuals’ responsiveness to health related issues, thus placing additional pressure on existing services. Furthermore, improvements in technology and medicine have made newer treatments available, thus increasing the range of medical conditions that can be treated. Collectively, this means that the nursing industry will become more reliant upon new graduates entering and remaining within the profession to help reduce the dual impact of the increased demand on services, and a workforce that is approaching retirement.

Recent analyses indicate that workforce shortages are higher depending on the location or speciality of nursing practice (Commonwealth of Australia, 2006; Department of Education, Science and Training, 2001). For example, the demand for new nursing graduates is higher in regional and remote areas of Australia, and data has revealed an acute shortage in aged care, operating theatre, and mental health specialties (Department of Education, Science and Training, 2001). Given the current demand for qualified workers, more research is needed to determine the factors that influence Australian undergraduate nursing students’ career-related attitudes and intentions. With research demonstrating the importance of WIL on career-related outcomes (Lin et al., 2004; Dressler & Keeling, 2004), future research along these lines is required within the nursing context. Certainly, a positive WIL experience may influence future job and organisational choice in those areas currently affected by the nursing skills shortage (Robinson, Andrews-Hall, Cubit, Fassett, Venter, Menzies & Jongeling, 2008). Indeed, such investigations may have considerable utility in identifying how new graduates make choices that affect workforce numbers in rural and remote areas, and for specialties experiencing a large skills deficit.
Graduate Attrition

The high level of graduate attrition also provides further justification for conducting this research with Australian undergraduate nursing students. Specifically, the expected increase in workforce numbers through new graduates has not transpired due to a high turnover rate of new professionals. For example, Williams (1999) reported that between 35% and 60% of newcomers leave their place of employment after the first year.

Graduate attrition can be understood as one of the broader set of challenges that confront newcomers upon their transition to practice. Adapting to the role of a nurse has been described as a stressful process (Nash, Lemcke, & Sacre, 2008), which is characterised by high levels of conflict (Kelly, 1998), intergenerational differences (Swearingen & Liberman, 2004), and burnout (Heuven, Bakker, Schaufel and Huisman, 2006). Furthermore, newcomers are often exposed to unfair work rosters, patriarchal management styles, and excessive work demands (Duchscher & Cowin, 2006; Greenwood, 2000; Swearingen & Liberman, 2004). In addition, a central feature of professional practice includes emotionally demanding interactions with patients, colleagues and other allied health staff around issues of life and death, which contribute to high levels of stress and burnout (Heuven et al., 2006).

Within the nursing context, WIL may contribute to improving the retention of new graduates, through providing opportunities to develop the skills and attitudes required to overcome the challenges of workforce entry. For example, Nash, Lemcke and Sacre (2008) found that nursing students learned to cope with workplace demands after their WIL experience, and Cantrell and Browne (2005) found that working closely with other professionals improved their transition to practice. Collectively, these results suggest that an investigation into how WIL influences career-related outcomes for Australian undergraduate
nursing students may provide additional insights into strategies to improve retention rates: however, the study of how WIL influences career-related outcomes for Australian undergraduate nursing students would benefit from a stronger focus on testing theoretically based models drawn from the discipline of organisational psychology that attempt to explain these relationships. To date, much of the published research has been qualitative, and those who have used quantitative research methods have employed basic data analysis procedures, thus limiting the conclusions that can be drawn from the findings (Nash, Lemke, Sacre, 2008; Lai et al., 2008). In response to the current limitations, the major aim of this research program was to use structural equation modelling to investigate how the WIL experience influences career-related outcomes (occupational commitment, transition to practice self-efficacy, and job and organisational choice intentions) for Australian undergraduate nursing students through its effect on person-environment fit.

**Structure and Organisation of this Thesis**

The current research program has been conceptualised in three sections. The first section of this thesis in chapters two and three addresses the broad question of “what are the most appropriate variables of analysis, methodology, and data analysis strategies for investigating how WIL contributes to career-related outcomes”. This question is explored through a review of the industrial–organisational psychology literature in chapter two, which considers the relevance of person-environment fit theory within the WIL setting, and discusses each dimension of fit to be investigated, namely, person-job fit, person-organisation fit, and professional fit. This review then identifies the factors that may influence fit perceptions within the WIL context, and provides a review of the career-related outcomes identified as important for this research program. Chapter two provides a brief
introduction to the proposed research models, then chapters three and four provide a review of the appropriate strategies for data analysis and the methodology used in this research program. The relevant research questions addressed in this first section are:

1.1 Why is person-environment fit theory relevant for the WIL setting?
1.2 What dimensions of person-environment fit are important for the current research program?
1.3 What factors may influence person-environment fit perceptions within the WIL context?
1.4 What is the most appropriate research methodology strategy to investigate the proposed relationships?

The second section in chapters five and six focus on the broad question of “what is the most appropriate measurement strategy for several constructs that have known conceptualisation and measurement limitations”. This question was formulated in response to the limitations identified in chapter two regarding the measurement of several important variables within this research program. This overall question is investigated in chapter five through a review of the industrial – organisational psychology literature, while chapter six provides an investigation into the reliability, construct and discriminant validity of the proposed measures using confirmatory factor analysis in study one. The relevant research questions addressed in this section are:

2.1 What are the optimal scales and items for measuring the constructs of professional fit, occupational commitment, transition to practice self-efficacy, general self-efficacy, social and structured support, and job and organisational attraction?
2.2 Does each scale represent the same construct across samples and measurement occasions?

2.3 Does each scale have sufficient convergent validity and discriminant validity for use within this research program?

The third section focuses on the broad question of “what are the causes and consequences of person-environment fit within the WIL setting?” This question is addressed via two dedicated literature reviews and related studies. Chapter seven contains a literature review of the causes and consequences of professional fit and identifies the specific relationships to be examined in chapter eight. Chapter nine presents a review of the causes and consequences of person-organisation and person-job fit and identifies the relationships to be examined in chapter ten. The relevant research questions addressed within this section are:

3.1 What does the current body of theory and empirical research suggest regarding the specific causes and consequences of person-environment fit (viz. professional fit, person-organisation fit, and person-job fit) within the WIL context?

3.2 What are the alternative models that can be identified from a review of the relevant literature?

3.3 What is the unique pattern of influences between the exogenous and endogenous variables included within this research program?

3.4 Does person-environment fit mediate the relationship between WIL and career-related outcomes?
Chapter eleven, the final chapter, presents an integrative discussion of the major findings within this research program. This chapter describes the implications for theory and practice, research limitations, and directions for future research.
CHAPTER 2
LITERATURE REVIEW: MAJOR CONSTRUCTS, THEORIES, AND PROPOSED RESEARCH MODELS

Overview

The purpose of this chapter is to introduce the major constructs, theories, and research models investigated within the current thesis. The first aim of this chapter is to provide an overview of person-environment fit, and to describe the relevant dimensions examined within this thesis, namely person-organisation fit, person-job fit and professional fit. The second aim of this chapter is to introduce the key constructs relevant to the causes of person-environment fit, the third is to describe the career-related outcomes examined within this research program, and the final aim is to introduce the research models investigated on data collected from final year Australian undergraduate nursing students.

Person-Environment Fit

Background

Person-environment fit is one of the most researched organisational phenomena within the industrial-organisational psychology literature, and is defined as “the compatibility between an individual and a particular work environment that occurs when their characteristics are well matched” (Kristof-Brown, Zimmerman, & Johnson, 2005, p. 281). The history of the study of person-environment fit dates back to the early writings of Kurt Lewin (1938; 1951), who argued that attitudes and behaviour are a function of both individual and environmental forces. Since the introduction of the theory, empirical research has demonstrated that “neither personal nor situational constraints determine the lion’s share of variance in behavioural and attitudinal variables. Rather, it is the interaction of personal and situational variables which account for the greatest amount of variance”
Collectively, person-environment fit theory is regarded as having considerable utility in describing the causes of attitudes and behaviours in a variety of settings (Holland, 1985; Tom, 1971; Carless, 2005; Cooper–Thomas et al., 2004; DeRue & Morgenson, 2007; Kristof, 1996; Kristof-Brown et al., 2005; Hoffman & Woehr, 2006; Cable & Parsons, 2001). Thus person-environment fit is considered a central construct within this research program.

Two theoretical frameworks explain the relationship between person-environment fit and career-related outcomes. The first is the attraction-selection-attrition (ASA) model introduced by Schneider (1987). The first component of the model is attraction, which describes that people are differentially attracted to an environment as a function of their level of congruence. Thus, for example, if someone experiences a high level of fit with the culture of a particular organisation, they will also find it to be an attractive place to work. The second component, referred to as selection, explains that people will choose an environment where they perceive the greatest level of fit. Again, using the same example, a high level of fit with the culture of an organisation is considered to be predictive of an individual’s decision to pursue employment with that particular organisation. The final component, attrition, explains that people will eventually leave an environment due to low levels of fit (Schneider, Goldstein, & Brent Smith, 1995), as evidenced by a nurse whose personal values and goals are incongruent with the culture of a particular workplace.

Based on a large-scale research project conducted by Dawis and Lofquist (1984), the second framework is referred to as the theory of work adjustment. These researchers argued that many of an individual’s needs can be met within the work environment, such as biological needs that relate to survival, and psychological needs that relate to the individual’s well being. One basic theoretical proposition is that individuals strive to find
environments that correspond to their needs and complement their personal attributes: subsequently, the congruence between the person and the environment, predicts job satisfaction, and satisfactory work performance. For example, a student nurse may have the skills and abilities to match the environmental demands of work within an operating theatre. Under the propositions of the theory of work adjustment, the student will experience a high level of satisfaction within this specialty given that they have the ability to complete the required tasks. The theoretical underpinnings of the attraction-selection-attrition model and the theory of work adjustment describe that person-environment fit predicts a range of career-related outcomes such as: job and organisational attraction (Carless, 2005; Cable & Parsons, 2001; Tom, 1971; Kristof, 1996; Kristof-Brown et al., 2005); commitment (Kristof, 1996); future job and organisational pursuit intentions (Cable & Parsons, 2001; Kristof-Brown et al., 2005); job satisfaction (Lauver & Kristof-Brown, 2001; Kristof-Brown et al., 2005); performance (Lauver & Kristof-Brown, 2001; DeRue & Morgenson, 2006; Kristof-Brown et al., 2005); and, turnover intentions (Lauver & Kristof-Brown, 2001; Cable & Parsons, 2001; Hoffman & Woehr, 2006; Kristof-Brown et al., 2005).

Subjective vs Objective Person-Environment Fit

One major distinction within person-environment fit theory is between subjective and objective conceptualisations. Subjective person-environment fit concerns the individual’s subjective experience, which acknowledges one’s unique interpretation of the environment and perceived level of congruence. The objective approach purports to measure individuals’ actual fit with their environment rather than directly assessing their subjective experience. The objective approach requires that information on the individual and the environment is collected independently, whereas the subjective approach requires
that the individual provides an assessment of their level of fit with the environment (Kristof, 1996; Cooper-Thomas et al., 2004; Schneider et al., 1995; Edwards, Cable, Williamson, Lambert & Shipp, 2006).

Recently, Edwards et al. (2006) argued that it is important for researchers to select the most appropriate conceptualisation of person-environment fit based on their particular research question (i.e., subjective or objective fit). Both approaches have been supported by empirical evidence. For example, research has demonstrated that both subjective and objective person-environment fit predict higher levels of attraction to the organisation, satisfaction, commitment, and turnover (Lauver & Kristof-Brown, 2001; Holland, 1985; Tom, 1971; Carless, 2005; Cooper–Thomas et al., 2004; DeRue & Morgenson, 2006; Cable & Parsons, 2001). However, a recently published meta-analysis has demonstrated that the subjective approach is more strongly related to career outcomes (Kristof-Brown et al., 2005). Specifically, Kristof-Brown et al. (2005) found that subjective measures of person-organisation fit evidenced a moderate relationship with job satisfaction ($r = .46$) and organisational commitment ($r = .44$). By contrast, objective measures showed a weaker relationship with organisational commitment and job satisfaction ($r = .29$ and $r = .27$ respectively). Collectively, empirical research demonstrates that one’s subjective experience of person-environment fit is a stronger predictor of career-related outcomes (Kristof-Brown et al., 2005). Therefore, given that one objective of this research program was to examine variables that account for the largest amount of variance, the subjective conceptualisation of person-environment fit was selected for investigating its relationship with career-related outcomes in the WIL context.
The Applicability of Person-Environment Fit in the WIL Context

Supers Career Stage Theory

Donald Super’s career development theory has utility in describing the importance of person-environment fit within the WIL context (Sverko, 2001; Super & Sverko, 1995; Super, 1965). According to Super (1965), individuals’ progress through nine major roles that occupy the life space at any particular point of time, which include: the child, student, leisureite, citizen, worker, spouse, homemaker, parent and pensioner. Super and Sverko (1995) argued that people differ in terms of the importance they place on each life role depending on their stage of development. For example, when approaching graduation, the importance of the ‘student’ role decreases, while the salience of the ‘worker’ role increases. Furthermore, Super described four main contexts for each role including the home, community, school, and the workplace. A student who is completing his or her final WIL placement is about to take on a new role within a new context, leaving the familiar educational setting and entering a relatively unknown workplace setting. According to Super, the anticipated change in roles and contexts is characterised by the next major decision point, which describes a period of anticipation and planning as one evaluates the suitability of different career options. Given that students are looking to find an environment that is congruent with their attributes, it can be argued that person-environment fit is a salient construct for WIL students through providing opportunities to test their perceptions within different work contexts.

Super’s (1965) theory also presents a series of life stages, each of which is named according to its principal task: growth, exploration, establishment, management, and disengagement. According to Supers’ theory, the student engaged in WIL is within the
exploration phase, whereby they narrow and confirm their career choice by reviewing career alternatives, such as appropriate jobs and workplaces, and begin to develop plans to fulfil career objectives following graduation. As described by Savikas (2005), “the tentative choices and trial periods of the exploration phase [such as those offered by WIL] clarify the situation so that the young adult is ready to stabilise in a certain occupation and maybe a particular job with one employer” (p. 49). Empirical research has provided support for Super’s career development theory. Therefore, one clear line of argument is that WIL provides opportunities for career exploration, so students can test out their fit with the profession, different occupational roles and workplaces. For this reason, person-environment fit can be argued to be a pertinent construct for the students engaged in WIL as they begin to assess future career options.

**Realistic Job Preview**

Theory on realistic job previews suggests that individuals’ perceptions of person-environment are influenced by the WIL experience (Phillips, 1998; Wanous, 1992). According to Phillips (1998), realistic job previews provide individuals with favourable and unfavourable job-related information in order to clarify expectations about different roles and organisations (Phillips, 1998; Wanous, 1992; Breaugh & Starke, 2000). One line of argument is that WIL provides students with a realistic job preview through opportunities for first-hand experience in different workplaces and occupational roles. The relationship between realistic job previews and career-related outcomes is explained through the self-selection hypothesis (Colarelli, 1984). The theory suggests that realistic job previews help individuals gain an accurate understanding of their fit with a particular environment, thus contributing to greater career decision-making accuracy. The fact that students obtain a
realistic job preview through WIL is important, as empirical research has demonstrated the utility of realistic job previews for improving career-related outcomes (e.g., Colarelli, 1984; Wanous, 1973; McEvoy & Cascio, 1985). For example, Wanous (1973) found that individuals had higher levels of job satisfaction, and McEvoy and Cascio (1985) identified that new employees were more committed to the organisation following a realistic job preview. Given that one line of argument is that WIL provides students with a realistic job preview, person-environment fit can be considered an important construct of investigation in the current research program.

Relevant Dimensions of Person Environment Fit

The literature presented thus far shows that person-environment fit is an important construct that influences career-related attitudes and behaviours. The preceding section also argued that WIL provides a realistic preview of different workplaces and occupational roles, which can be considered particularly important for students who are in the process of testing out their congruence with different environments. The remaining literature, which describes the specific dimensions of person-environment fit, was analysed to identify the most appropriate constructs for investigation. Three dimensions of person-environment fit were identified, which describe the student’s level of congruence with: the organisation (i.e., person-organisation fit), the specific occupational role (i.e., person-job fit), and the profession at large (i.e., professional fit). Each of these dimensions will be explored in more detail in the subsequent section, which commences with a conceptual overview of person-environment fit.

The literature has described person-environment fit as an elusive construct, that has multiple conceptual and measurement approaches, thus limiting its practical and theoretical implications (Rynes & Gerhart, 1990; Kristof, 1996). In response to this shortcoming, Kristof
(1996) made a major contribution to the literature through refining the conceptual underpinnings of each dimension of person-environment fit. Kristof, who was influenced by Muchinsky and Monahan’s (1987) early work, proposed that person-environment fit is an umbrella term which has two broad conceptualisations: complementary and supplementary fit. Complementary fit refers to a situation in which the “weaknesses or needs of the environment are offset by the strength of the individual, and vice-versa” (Muchinsky & Monahan, 1987, p. 271). For example, complementary fit occurs when an individual has the ability to meet the demands of a job, or when the position offers the rewards that one desires. The second conceptualisation of supplementary fit describes when a person “supplements, embellishes, or possesses characteristics which are similar to other individuals (Kristof, 1996, pp 3).” For example, supplementary fit is said to occur when the individual shares similar characteristics to others within a particular group (e.g., organisation, team), and is typically assessed according to values, goals or personality characteristics.

Kristof (1996) proposed that under each conceptualisation are several dimensions of person-environment fit. For example, person-group fit (Kristof-Brown et al., 2005), person-supervisor fit (Kristof, 1996), and person-organisation fit (Kristof, 1996; Saks & Ashforth, 1997) are three dimensions of complementary fit and person-job fit (Edwards, 1991) is a supplementary dimension of person-environment fit. Kristof argued that the selection of each person-environment fit dimension should be based on a priori justification drawn from the specific research question, theory, and empirical evidence. More recently, Kristof-Brown et al. (2005) also argued that future research should investigate multiple dimensions simultaneously in order to identify the unique set of causes and consequences of person-environment fit. Thus, based on these recommendations, three dimensions of person-
environment fit were identified for investigation within the current research program: person-job fit; person-organisation fit; and professional fit. Each of these dimensions are represented in figure 2.1 and will be explored in greater detail in the following section.

Figure 2.1. The dimensions of person-environment fit investigated within this research program.

*Person-Job Fit*

Person-job fit describes the congruence between individuals’ needs, knowledge, skills and abilities and the characteristics of the environment (Edwards, 1991; Kristof-Brown et al., 2005), and is comprised of a demands-abilities, and needs-supplies dimension (Cable & DeRue, 2003). The demands-abilities conceptualisation describes the match between the individuals knowledge, skills and abilities and the tasks within the job (Edwards, 1991; Dawis & Lofquist, 1984). The theory of work adjustment proposes that those with high levels of person-job demands-ability fit are able to meet the performance expectations of the role and experience higher levels of job satisfaction. The needs-supplies conceptualisation
describes the extent to which the job provides what the individual needs in terms of both intrinsic and extrinsic resources and rewards (e.g., social involvement, achievement, feedback and recognition; Cable & Edwards, 2004). Based on theories of psychological need fulfilment, needs-supplies fit is proposed to predict job satisfaction, turnover, and commitment (Cable & DeRue, 2002; Cable & Edwards, 2004). Collectively, under the propositions of the attraction-selection-attrition model, those who experience a high level of person-job fit (i.e., demands-abilities and needs-supplies fit) are more attracted to, will select into, and will remain in a particular job.

Indeed, empirical research has strongly supported the discriminant and predictive validity of person-job fit. For example, Cable and DeRue (2002) conducted a paired construct test and found that a two-factor model of person-job fit (viz. needs-supplies and demands-abilities fit) was superior to a single factor solution. In a recent meta-analysis conducted by Kristof-Brown et al. (2005), person-job demands-ability and needs-supplies fit were significantly related to job satisfaction ($r = .32$ and $r = .48$, respectively), organisational commitment, ($r = .25$ and $r = .31$, respectively), intentions to quit ($r = -.18$ and $r = -.40$, respectively), performance ($r = .10$ and $r = .16$, respectively) and strain ($r = -.25$ and $r = -.25$, respectively). Collectively, the current body of empirical research supports the validity of the construct, and demonstrates that person-job fit is an important predictor of career-related attitudes and behaviours. Yet, the current body of research has focused almost exclusively on employees who are established within their careers, rather than students exploring career options within the WIL context.

There are at least three reasons why person-job fit is important within the WIL context for final year Australian undergraduate nursing students. First, there are numerous jobs (viz. specialties) within the nursing profession (e.g., mental health, midwifery, geriatric
nursing, theatre), thus understanding how WIL influences person-job fit may be of considerable benefit for those specialities affected by the skills shortage. Certainly, understanding how WIL influences person-job fit may inform strategies that aim to attract graduates to those areas. Second, one of the central goals of WIL is to help students develop the abilities to meet occupational demands. Thus, person-job demands-abilities fit can be argued to be an important learning outcome. For example, a student’s perceived ability to meet the demands of managing a patient caseload could be improved through hands-on experience and access to mentoring within the WIL context. Thus, researchers would expect higher levels of demands-abilities fit following the WIL placement, and is an important variable of analysis. Finally, as the WIL experience provides students with a realistic preview of the rewards and resources supplied within the job, person-job needs-supplies fit is argued to be an important construct for helping students determine a suitable occupational role following graduation.

**Person-Organisation Fit**

Person-organisation fit, as the name indicates, represents the compatibility between the individual and the organisation, which can be conceptualised under a variety of dimensions (e.g., organisational cultural fit, organisational climate fit). Despite the original wide variety of conceptualisations, researchers now agree that person-organisation fit describes the extent to which individual’s values and goals match those within the organisation (Riketta & Van Dick, 2005; Kirstof-Brown et al., 2005; Ng & Burke, 2005). The attraction-selection-attrition model proposes that individuals who perceive a high level of fit with the values and goals of the organisation will strive to obtain a job within the workplace and will have higher levels of commitment upon entry (Schneider, 1985). Researchers have
also proposed that as person-organisation fit improves job satisfaction and organisational citizenship behaviours, a high level of person-organisation fit is often valued by organisations and individuals alike (Chatman, 1991; Kristof-Brown et al., 2005).

Empirical research has supported both the construct and predictive validity of person-organisation fit. For example, Cable and DeRue (2002) recently found that person-organisation fit was statistically distinct from person-job fit, and demonstrated that it was a valuable construct in predicting a variety of career-related outcomes (i.e., organizational identification, perceived organisational support, organisational citizenship behaviours, and turnover decisions). This research was consistent with Kristof-Brown et al.’s (2005) meta analytic findings that person-organisation fit predicts organisational commitment ($r = .42$), intentions to quit the organisation ($r = -.29$), organisational attraction ($r = .38$), and job acceptance intentions ($r = .22$). In a similar vein, Cable and Judge (1996) demonstrated that person-organisation fit predicted actual job choice ($r = .32$), and Hoffman and Woehr (2006) demonstrated that it predicted higher levels of performance ($r = .16$). Collectively, the current body of empirical evidence has confirmed the theoretical linkages between person-organisation fit and outcomes, thus supporting the utility of the dimension within the current research program.

The construct of person-organisation fit appears to have some relevance for understanding how WIL influences future workplace choice for Australian undergraduate nursing students. As described earlier, the WIL experience provides a realistic preview into different workplaces for students within the exploration and consolidation phase of career development. During the WIL placement, students are able to identify how their values and goals align with the organisation (viz. person-organisation fit), which may contribute to subsequent career-related attitudes and behavioural intentions (e.g., intentions to pursue a
Consistent with the propositions of the ASA model, the investigation into how the WIL experience influences person-organisation fit may assist efforts to attract graduates to workplaces affected by the skills shortage (e.g., rural and remote locations). Thus, it is an important construct within this research program.

Professional Fit

The construct of professional fit describes the extent to which an individual perceives match or congruence with the values and goals of the profession, and can be seen as an important outcome of WIL (Judge & Bertz, 1992; Super, 1965; Sverko & Super, 1995; Sverko, 2001; Sagie, Elizur & Koslowsky, 1996). Broadly, “culture is the collective programming of mind which distinguishes members of one category of people from another” (Hofstede, 1984, pp. 51). This ‘programming of mind’ is governed by its own, unique set of norms, values, and goals, which guide day-to-day interactions, attitudes, and behaviours within the profession (Schien, 1971; Hall, 1971; Cochran, 1986; Fagerberg, 2004; Fagermoen, 1997; OeHlean & Sgesten, 1998). These guiding principles typically reside under the surface of observable behaviour. Thus, one of the challenges for students is to uncover these principles, so that they can behave consistently and become accepted by the professional group. Researchers have argued that uncovering the values and goals associated with a particular group of individuals occurs through social and symbolic interactions with others (Crant, 2000; Reichers, 1987). Given that WIL provides access to these social exchanges, professional fit can be argued to be an important outcome within this research program.

Empirical research has supported the importance of cultural fit across several contexts. A recent meta-analysis conducted by Kristof-Brown et al. (2005) found that
newcomers’ identification with the culture of the organisation (viz. person-organisation fit) resulted in an increased level of attraction, commitment, and intentions to remain with the organisation. These results have been extended to the professional setting. For example, Lai et al. (2008) demonstrated the importance of fit with the culture of the profession. Lai et al. compared groups of nursing professionals who intended staying with the profession with those who did not one year after graduation, and found a significant difference based upon the degree to which the individuals identified with the values of the profession. Although professional fit was not studied directly, Lai et al. findings demonstrated the importance of identifying with the culture of the profession, and its relationship to commitment and turnover. Although empirical evidence remains limited, this literature review suggests that professional fit is an important outcome for the longer-term retention and commitment of students’ to their occupation.

This review of the literature addressed the research question of “what dimensions of person-environment fit are important for the WIL context?” The implication of this review is that three variations of person-environment fit are important for the WIL experience for Australian undergraduate nursing students. Based on a review of theory and empirical research, person-job (viz. demands-ability and needs-supplies), person-organisation fit, and professional fit were selected as key variables for further investigation, given their association with career-related outcomes, and relevance for the population of analysis.

Causes of Person-Environment Fit

The preceding section provided an overview of the major construct of investigation within this research program. The next step is to identify the relevant causes of person-environment fit within the WIL context. This section commences with a review of the
literature on workplace entry, and concludes with a brief introduction to the relevant variables of analysis.

*Workplace Entry and Socialisation*

There are distinct differences between the learning environments of the university and workplace settings. When students enter the workplace, they move from a structured university setting characterised by established routines to one that is ambiguous and unpredictable (Van Maanen & Schien, 1979; Louis, 1980; Chan, 2002). As described by Chan (2002), nursing students often find themselves in an unfamiliar environment conducting unfamiliar activities with patients and other health care providers. Thus, the transition to the WIL environment presents a challenge for the student, whereby they are required to learn about the culture of the profession and the organisation, and develop the competencies required to perform the tasks associated with the role. One central argument of this thesis is that a closer investigation into factors that influence the quality of this experience may help to identify how WIL influences person-environment fit and career-related outcomes. A critique of the relevant literature revealed that socialisation theory (Feldman, 1988; Feldman & Weitz, 1990, Van Maanen & Schein, 1979; Cable & Parsons, 2001; Crant, 2000) may have utility in describing challenges for newcomers entering unfamiliar environments, and identify how WIL influences person-environment fit. The following section provides a brief overview of socialisation theory, and identifies the relevant variables to be investigated within this research program.

As described by Van Maanen and Schein (1979), organisational socialisation is the process in which newcomers learn the skills, behaviours, attitudes, and knowledge to meet the performance requirements of the role and to integrate socially within the organisation.
Socialisation theory argues that this process can be a challenge, and proposes that when newcomers enter a new workplace they experience a ‘reality shock’, which describes the process of testing out initial perceptions and coming to terms with “the way things are done” (Louis, 1980, p. 13). The entry process has also been described as a stressful process associated with “the feelings of loneliness and isolation that are associated initially with a new location in an organization as well as the performance anxieties a person may have when assuming new duties” (Van Maanen & Schein, 1979, p. 8). Such propositions are consistent with research findings showing that students experience high levels of stress and anxiety during the WIL placement (Kushnir, 1996; Nash, Lemcke & Sacre, 2008). Thus socialisation theory was considered an important construct for investigation in the current research program.

One central feature of socialisation theory is the notion of individual adaptation, which describes the process of overcoming the initial ambiguity, uncertainty, shock and stress of organisational entry. Individual adaptation is “seen as critical to the development of attitudes and behaviours that enable the newcomer to function effectively during the transition period and adjust to the new work environment” (Chan & Schmitt, 2000, p. 190). One of the indicators of a successful adaptation process is person-environment fit. According to Coopers-Thomas, van Vianen and Anderson (2004), newcomers’ periods of adaptation to a new workplace are times of consolidating and improving their fit with the environment. One common thread that binds socialisation theory with the WIL literature (e.g., Billett, 2007) is that they both suggest that workplaces can improve person-environment fit perceptions through strategies that shape newcomers’ early experiences, and place importance on individual differences in newcomers’ responses to these experiences. Thus, both the person and the environment are viewed in this research
program as important contributing factors to newcomer adaptation and fit perceptions within the WIL context.

**Environmental Factors**

Early socialisation research identified the importance of the environment in shaping individuals’ experiences and person-environment fit perceptions. One of the most commonly referenced models of socialisation was proposed by Van Maanen and Schein (1979), who presented six tactics initiated by organisations to facilitate the adaptation process, and improve newcomers fit with the environment (Ashforth & Saks, 1996). Jones (1986) later refined the theory through representing each tactic under one polarity of individualised versus institutionalised socialisation tactics. Broadly, individualised tactics are informal, and little attention is directed towards helping the newcomer adjust to the role and workplace. In this situation, newcomers are left on their own to discover how they are to perform the duties of the job, and to understand the culture that guides day-to-day interactions, commonly shared perceptions, and behavioural norms.

Individualised tactics contrast with institutionalised socialisation, in which newcomers are exposed to formalised workplace training and structured experiences to reduce stress and ambiguity, and improve person-environment fit perceptions (Saks, Uggerslev, Fassina, 2007; Cooper-Thomas et al., 2002; Jones, 1986). These outcomes are achieved through the implementation of a structured sequence of learning experiences, and the provision of social support to facilitate the adjustment process. Compared to individualised socialisation tactics, institutionalised socialisation tactics have been found to reduce stress and ambiguity while improving perceptions of person-environment fit, job satisfaction and commitment (Saks et al., 2007; Jones, 1986). Collectively, these results
suggest that institutionalised socialisation practices play an important role in facilitating students’ learning and adaptation within the WIL context. However, Jones’ (1986) model of socialisation was developed to provide strategies that facilitate newcomer adjustment for those who are established within their career. Thus while the theoretical propositions are important, the construct has not been operationalised within the WIL context. Therefore, a review of the literature was conducted to identify the most relevant facets of socialisation that may influence Australian undergraduate nursing students’ learning and adjustment.

**Social Support**

The first construct identified was social support, which refers to the workplace’s attempt to affirm the identity of the newcomers (Van Maanen & Schien, 1979), and to provide them with help, guidance, and encouragement via access to established organisational insiders (Davey, 2003; Henderson, Heel, Twentyman & Lloyd, 2006; Fisher, 1985). A plethora of empirical research has demonstrated that social support is beneficial for newcomers. For example, early research conducted by Fisher (1985) found that social support helped to reduce stress. More recently, Dixon, Turner, Cunningham, Sagas and Kent (2005) found a significant relationship between social support and organisational commitment ($r = .53$) for a group of interns, and Lubbers, Loughlin and Zweig (2005) found that workplace conflict had an adverse impact on self-efficacy for students within the WIL context. Collectively, this pattern of results suggests that social support may improve students’ adjustment, and thus it was considered an important construct for the current research program.
Structured Support

Structured support was the second construct identified: it refers to a systematic, planned set of activities that are designed to facilitate learning through exposing students to meaningful work practices (Kim et al., 2005; Kyndt et al., 2009; Billett, 2004; Jones, 1986). Again, a wide range of empirical evidence has supported the utility of structuring WIL student’s early work experiences to facilitate learning. For example, Allen and Peach (2007) found that one of the main frustrations for WIL students was a lack of direction and task clarity. Similarly, Dixon et al. (2007) found that providing students with challenging tasks to build skills improved their level of commitment ($r = .65$). In addition, Gruman, Saks and Zweig (2006) found that a structured WIL placement was significantly correlated with self-efficacy ($r = .19$), role clarity ($r = .61$), social integration ($r = .35$), and person-job fit ($r = .42$). Taken together, these findings support the role of structured support within the WIL context, which was viewed as an important factor that may influence a student’s WIL placement experience.

Individual Differences

The exclusive focus on the role of the environment within the socialisation process is limited, as it represents individuals as passive within the adjustment process (Morrison, 1993). More recent literature has addressed this limitation through examining the role of individual differences within the socialisation process (Wanberg & Kammeyer-Mueller, 2000; Crant, 2000; Ashford & Black, 1996). This was an important development in the literature, as it identified that people are not malleable to situational influences, but are active agents within the learning and adaptation process. Indeed, empirical research has identified that proactive behaviours help to improve adjustment to the workplace. For
example, positive framing, which refers to an individual’s ability to appraise the entry process as an opportunity, has been found to produce a positive effect on person-organisation fit (Kim, et al., 2005). Therefore, although efforts on the part of the workplace are considered important, individual differences also has utility in the adaptation process. Thus, individual differences were considered to be an important factor within this research program. The three individual difference variables identified in the literature include: general self-efficacy (GSE), positive framing, and task negotiation.

*General Self-Efficacy*

In the industrial and organisational psychology literature, GSE is defined as a self-evaluation trait that influences the way in which individuals respond to their environment (Gist & Mitchell, 1992; Judge & Bono, 2001). Specifically, GSE refers to an individual’s general expectation concerning their ability to respond to various environmental pressures irrespective of the situation or task. Judge, Thoresen, Pucik and Welbourne (1999) proposed that general self-efficacy “allows for the adaptation of performance to complement the circumstance” (p. 109). Thus, those with high GSE deal more effectively with ambiguity, overcome difficulties and persist in the face of failure. One line of argument, therefore, is that GSE may influence WIL students’ success in new and novel situations, such as student’s adaptation and performance within the WIL context. Indeed, empirical research has demonstrated the utility of GSE in predicting a range of career-related attitudes and behavioural outcomes (Judge et al., 1999; Judge, Locke, Durham & Kluger, 1998; Chen, Gully & Eden, 2001). Thus GSE was considered an important variable of analysis within this research program.
**Positive Framing**

The construct of positive framing has utility in describing how WIL influences learning and adjustment. A central feature of positive framing, as the name indicates, is that individuals differ in terms of the cognitive frame they place on events (Ashford & Black, 1996; Kim, et al., 2005). Ashford and Black (1996) suggested that positive framing occurs when individuals explicitly attempt to alter their understanding of a situation, through changing the way that they interpret it. Kim et al. (2005) argued that people who engage in positive framing see challenges in a favourable light, and interpret the environment as supportive rather than antagonistic. In contrast, those who may interpret events in a more negative fashion may experience greater levels of stress and anxiety, and may have trouble overcoming the initial reality shock that occurs upon entry into a new work environment. While empirical research is limited, research has supported the basic propositions of the theory (Kim et al., 2005; Gruman et al., 2006; Ashford & Black, 1996). Taken together, this theory has considerable implications for the study of the WIL experience, as it identifies that students are not passive within the workplace, but can choose to interpret events in way that influences their overall experience. Thus, positive framing was proposed to be an important construct within the current research program.

**Task Negotiation**

The construct of task negotiation describes the extent to which individuals attempt to shape their own learning experiences through seeking out projects or activities within the workplace that match their needs. In this regard, task negotiation is a behavioural self-management strategy through which individuals explicitly attempt to alter their environments. One basic proposition underlying task negotiation is desire for control.
(Ashforth & Black, 1996). Theoretically, those with a higher desire for control will attempt to negotiate WIL activities that create opportunities congruent with their needs (Dawis & Lofquist, 1978; Ashforth & Black, 1996). Through establishing these activities, this process helps the student to overcome stress and ambiguity during the entry process. Overall, the theory maintains that students do not passively accept tasks but are active agents in shaping their learning experiences: this position has received empirical support within the WIL literature (Beard, Coll & Harris, 2001; Wong & Coll, 2001). Therefore, task negotiation may offer additional insights into the effectiveness of WIL, through demonstrating that students who shape their experience can also shape the outcomes. Thus, it was considered to be an important variable for this research program.

This review of the literature addressed the research question: What factors may influence the WIL experience for placement students? The implications of the preceding discussion were that environmental (viz. social and structured support) and individual (viz. GSE, positive framing, task negotiation) differences are important variables for analysis. Thus, this research program investigated the dual impacts of individual and environment differences on person-environment fit perceptions (viz. person-organisation, person-job and professional fit) with final year nursing students.

Consequences of Person-Environment

Based on a critique of the relevant literature, this section introduces the final set of variables which constitute the career-related outcomes that will be investigated within this research program: occupational commitment, transition to practice self-efficacy, job and organisational attraction, and job and organisational pursuit intentions.
**Occupational Commitment**

The first variable identified was occupational commitment, which refers to an individual’s affective attachment to their occupation and motivation to remain within the field. Given the increasing trend for new nursing graduates to leave their occupation during the graduate year (Lai et al., 2008), occupational commitment was an important outcome variable for measurement in this research program. Indeed, empirical evidence shows that occupational commitment increases individuals motivation to engage in skill development, is linked with higher job satisfaction and reduced burnout, and is associated with behaviours consistent with advancing the profession (Meyer et al., 1993; Aryee & Tan, 1992; Blau, 1985; Hackett, Lapierre, & Hausdorf, 2001). For example, Blau (1985) found that occupational commitment held strong negative relationships both career withdrawal cognitions ($r = -0.41$) and job withdrawal ($r = -0.21$). Therefore, identifying how the WIL experience and person-environment influences occupational commitment may provide additional means to improve the retention of new graduate nurses. Indeed, the theoretical propositions of the attraction-selection-attrition model propose that those who experience a greater fit with the environment will be more committed and less likely to leave (Schneider, 1987). Collectively, this pattern of research supports the inclusion of the variable of occupational commitment within this research program.

**Transition to Practice Self-Efficacy**

Based on a review of the relevant literature (Solberg, Good, Fischer, Brown, & Nord, 1995; Super, 1980; Wenrich, Curtis & Shannon, 2001; Yang & Gysbers 2007; Chan, 2002; Cowin & Hengstberger-Sims, 2006; Duchscher & Cowin, 2006; Ng & Feldman, 2007), transition to practice self-efficacy is defined as an individual’s perceived confidence
concerning the application of skills and abilities important throughout the transition from student to nurse. Within the context of the transition, self-efficacy concerns the judgment of what individuals think they can do with the skills that they possess rather than the actual skills they hold (Bandura, 1978). Thus, transition to practice self-efficacy concerns an individual’s subjective evaluation of competence across a range of skill sets that are required during the transition to practice.

Transition to practice self-efficacy is an important construct within the nursing and WIL contexts. At the most fundamental level, if students experience a greater level of transition to practice self-efficacy, they are able to meet the demands of professional practice. Indeed, this has been supported by empirical evidence that demonstrates a perceived lack of competence during the transition period is related to prolonged graduate adjustment and increased turnover intentions (Clare & van Loon, 2003). Furthermore, WIL can be argued to improve efficacy beliefs through providing opportunities for enactive mastery and vicarious learning (Bandura, 1997; Nash, Lemcke, & Sacre, 2008). Specifically, enactive mastery occurs through the opportunities to apply skills to practice, and vicarious learning occurs through chances to observe other professionals responding to day-to-day challenges. Given that WIL provides access to these experiences, transition to practice self-efficacy was identified as an important outcome variable for inclusion in this research program.

**Job and Organisational Attraction**

In the industrial and organisational psychology literature, attraction and behavioural intentions are frequently examined as predictors of job and organisational choice. Specifically, under the propositions of the theory of reasoned action (Ajzen & Fishbein,
1977), individuals who have positive attitudes towards a job (e.g., job attraction), will be more inclined to engage in behaviours associated with obtaining the job. In a similar vein, those who have positive attitudes towards the workplace (e.g., organisational attraction), will be more inclined to engage with behaviours associated with getting a job at the workplace.

The attraction-selection-attrition model and the theory of reasoned action both have relevance in describing the relationship between person-environment fit, attraction and behavioural intentions. Collectively, the theoretical linkages propose that those who experience high levels of fit are more attracted to the environment, which in turn influences their intentions to enter the environment (Chapman et al., 2005; Carless, 2005; Schneider, 1987; Dawis, 2005). Empirical research has supported these theoretical linkages. For example, Carless (2005) found that attraction mediated the relationship between person-job fit and future behavioural intentions to accept a job offer for graduate applicants of a telecommunications company. Due to the current nurse skills shortage, understanding how the WIL influences future choices may provide additional means to attract new graduates to those areas of highest need. Thus attraction (viz. organisational and job attraction) and behavioural intentions (viz. organisational pursuit and job pursuit intentions) were identified as important outcome variables for inclusion within this research program.

Proposed Research Models

This section summarises the two models to be investigated within this research program and the proposed studies to be conducted. Each of the models presents the broad propositions of this thesis and the hypothesised relationships between each construct. These specific relationships are described in greater detail in chapters 7 and 8.
The first research model depicted in figure 2.2 provides a schematic representation of the causes and consequences of professional fit. The model demonstrates that the impact of the WIL experience (viz. environmental and individual differences) on occupational commitment is explained by professional fit perceptions. Collectively, the model presented in figure 2.2 reflects the broad proposition that the WIL experience influences occupational commitment through its effect on professional fit perceptions. It was predicted that the dual effect of environmental and individual differences on career-related outcomes will be explained by changes in students’ professional fit perceptions.

Figure 2.2. Research model one: the causes and consequences of professional fit for WIL students.

The second research model depicted in figure 2.4 provides a schematic representation of the causes and consequences of person-organisation and person-job fit (viz. needs-supplies and demands-abilities fit). It was predicted that the dual effect of environmental and individual differences on career-related outcomes will be explained by changes in students’ person-job and person-organisation fit perceptions.
Figure 2.3. Research model two: the causes and consequences of person-job and person-organisation fit for WIL students.

It was proposed to conduct three studies to investigate the propositions of each research model. Specifically, a critique of the relevant literature was conducted in chapter five and identified shortcomings regarding the conceptualisation and measurement of several key constructs investigated within this research program. The first study in chapter six investigated the reliability and validity based on a review of the measurement scales to be used within this research program in an Australian context. Chapter seven provides a review of the literature regarding the causes and consequences of professional fit, and the second study in chapter eight investigated the proposed relationships (viz. research model one, see figure 2.2). Similarly, chapter nine provides a review of the literature regarding the causes and consequences of person-job and person-organisation fit, and the third study in chapter describes the investigation of the proposed relationships (viz. research model two, see figure 2.3).
CHAPTER 3

METHODOLOGICAL ISSUES

Overview

This chapter provides an overview of the methodological approach to data analysis proposed for this research program. It details the appropriate strategies for dealing with missing data, outliers and departures from normality. This chapter outlines a strategy for validating the proposed measurement instruments. Finally, the proposed approach to model testing and investigating the direct and indirect relationships between the variables is described.

Missing Data, Outliers and Normality

The first component of analysis was an examination of the dataset for missing data, outliers and departures from normality. As indicated by Rubin (1976) missing data can be replaced with unbiased estimates if they are either missing at random (MAR) or missing completely at random (MCAR). As discussed by Kline (2004), MAR refers to the presence or absence of a score on a variable that is unrelated to its true score on that variable, and MCAR describes missing data that is not dependent on other variables in the dataset. Little's MCAR test is recommended to investigate missing data, and is used within the research program. Regarding the longitudinal data, one-way analysis of variance (ANOVA) is typically conducted to understand if the completion of the follow-up survey is dependent on any of the variables in the dataset. In particular, through understanding whether participant attrition is dependent on variables measured at time one, it is possible to determine whether the follow up sample represents the same population as the initial sample. Thus,
this procedure enabled an investigation of external validity, and was completed on all datasets within this research program (Brown et al., 2006).

The estimation maximisation (EM) procedure is typically used to estimate missing data, as it produces the most accurate estimation of the missing values (Enders & Bandalos, 2001). In this thesis, only data with less than 10% missing were subjected to the EM replacement procedure: data missing due to participant attrition were not replaced (Holmes-Smith, 2008; Enders & Bandalos, 2001).

Univariate outliers are typically examined using a standard score distribution of all variables within the dataset, and those responses that are 4.75 standard deviations above the mean are defined as extreme cases (Tabachnick & Fidell, 2007). Multivariate outliers are typically examined using the Mahalanobis distance, with a conservative probability estimate ($p < 0.01$) to detect offending cases. Both of these procedures were conducted on each dataset, and offending cases was censored. However, if multiple variables were considered ‘extreme’ outliers, then the entire case was deleted from the dataset.

Normality checks are typically conducted using skewness and kurtosis values, and extreme departures are modified using either square root, logarithm or power transformation methods (Tabachnick & Fidell, 2007). Thus, the appropriate transformations were made to account for departures from normality. Most SEM software provides a bootstrapping option with a Bollen-Stein adjustment of chi-square which can correct for non-normal data (Yung & Bentler, 1994; Bollen & Stein 1993), and this was used within the research program.

Demographic variables were analysed using a series of one-way ANOVAs and zero-order correlations. If a more accurate estimate of effect size was required, these variables
were included within the path model to account for any unexplained variance (Hair, Black, Babin, Anderson, and Tatham, 2006; Kline, 2004; Tabachnick & Fidell, 2006).

**Measurement Model Investigation**

Chapter Two identified concerns with some of the instruments to be used in the current research program. The research methodology literature revealed an approach to the validation of measurement instruments and development of measurement models utilising exploratory factor analysis (EFA) following by confirmatory factor analysis (CFA; Mulaik & Millsap, 2000). This approach was applied to scales measuring the following constructs: GSE, professional fit, occupational commitment, transition to practice self-efficacy, social and structured support, and job and organisational attraction.

**Exploratory Factor Analysis**

Consistent with Mulaik and Millsap’s (2000) recommendation, EFA preceded CFA when investigating the structure of the measurement models. This initial analysis was completed to explore the hypothesis that a specific number of factors reflected the covariance matrix among the observed items. If an EFA reveals unacceptable goodness-of-fit statistics, then a model will also fail the CFA. Therefore, one benefit of EFA is that it provides an analysis of the unconstrained measurement model, and can identify areas of misspecification prior to CFA (Mulaik & Milsap, 2000; Holmes-Smith, 2005). In order to ensure that the measurement models were not based on sample characteristics, the EFA was conducted on an exploratory sample, and the CFA was conducted on a holdout sample (Hair et al., 2006). As recommended by Ford, MacCallum and Tait (1986), maximum likelihood estimation was used to avoid problems associated with principal components analysis. Furthermore, the structure of the data was examined using the Kaiser-Meyer-Olkin
measure of sampling adequacy (KMO), and Bartlett’s test of sphericity was also used to compare the correlation matrix to an identity matrix to identify the presence of a factor structure ($p < 0.05$; Tabachnick & Fidell, 2006). An elbow within the scree plot was interpreted to identify the correct number of factors for extraction (Hair et al., 2006). Finally, the oblique rotation method was used, given its assumption of correlations between the variables, and only those items with factor loadings greater than four were retained within the analysis as recommended by Tabachnick and Fidell (2006). Overall, the goal of EFA was to provide a review and diagnostic check of the hypothesised measurement models prior to CFA.

**Confirmatory Factor Analysis**

CFA followed the initial investigation completed within EFA enabling the calculation of the unique contribution of each item while controlling for measurement error (Joreskog, 1971). Although many scholars argue against error correlation, a review of the literature confirmed that error correlation is an appropriate technique in the presence of substantive theory (Holmes-Smith, 2008; Joreskog, 1993); thus, it was decided to allow error correlation where it made theoretical sense to do so (e.g., similar item characteristics).

Two forms of CFA were used within this research program: single factor congeneric CFA and multi factor CFA. Single-factor CFA’s were conducted on all scales to provide an initial test of convergent validity. Appropriate modifications to the model were made through investigating the modification indices and standardised residual matrix (Byrne, 2009; Holmes-Smith, 2005). In order to confirm the measurement parameters, invariance testing were conducted on the regression weights (Byrne, 2009). In order to achieve this, measurement parameters were estimated on the exploratory sample, then confirmed on
the holdout sample. Factor loading invariance was also tested across time for the longitudinal scales. Collectively, this approach provided evidence on the goodness of fit for the scale, and the measurement model’s ability to represent the same construct across samples.

Multifactor CFA was used to test the discriminant validity by examining the theoretically related scales simultaneously. A rigorous investigation of discriminant validity was conducted using the three-step procedure recommended by Farrell (2009). First, each construct was examined for the presence of misspecification (e.g., cross loadings) using the standardised residuals and modification indices. The baseline model was developed by making the necessary modifications to achieve model fit. Secondly, each construct was paired by setting their correlation to one, and a nested model comparison was conducted based on each possible combination. Chi-square tests provided evidence on the degree to which each construct was unique or better represented by a single-factor solution. Finally, as recommended by Fornell and Larcker (1981) and Farrell (2009), shared variance tests provided a rigorous examination of discriminant validity. The shared variance test provides data on the average variance extracted by a latent construct (e.g., person-organisation fit), and the shared variance between two constructs (e.g., person-organisation fit and professional fit). When the average variance extracted within the construct is greater than the shared variance, discriminant validity is supported.

Composite Variables

Composite variables were created based on results from the CFAs. The predominant theme in psychological research is the calculation of a composite score through the use of a simple, unit weight addition: however, this method fails to take into consideration the
relative strength of each indicator for measuring the construct (Rowe, 2006). Therefore, this research program adopted a contemporary approach to the calculation of the latent variables (Rowe, 2006; Holmes-Smith, 2005), which captured the relative importance of each indicator through the use of factor score weights. Compared to the unit weight approach, proportionally weighted composite measures improve construct validity. Furthermore, using composite variables reduces the sample size to parameter ratio, as this ratio impacts the standard errors and stability of the estimates (Brown et al., 2006; Rowe, 2006; Holmes-Smith, 2005). Calculation of the composite variables also helped to increase parsimony and decrease the chance of convergence problems during model estimation. This research program will use calculations described by Rowe (2006) to determine the error and composite variance, as well as composite scale reliability. These estimates were used as fixed parameters within the model.

Goodness of Fit

Goodness of fit indices were examined to determine if the sample variance and covariance matrix converged on the implied matrix. The chi-squared estimate of model fit provides evidence on whether there is a good fit between the parameters estimated and the underlying data. This informative test statistic is often used in research (see Kline, 2004; Byrne, 2009) as it is easily interpreted against a known statistical distribution (i.e., the chi-square distribution). Specifically, the test examines the null hypothesis that the identity and implied matrix are equivalent, and model fit is accepted at probability levels greater than 0.05.

Chi-square is the only fit statistic that is examined against a known probability distribution, thus can be considered a superior measure of model fit. Specifically, the remaining indices, known as approximate fit statistics, do not have a known distribution for
comparison. Recent work has cast doubt on the continued utility of approximate fit indices, and even the work of Hu and Bentler (1999) has been criticised as their criteria cannot be applied under all measurement and data conditions (e.g., Marsh, Hau & Wen, 2004).

Nevertheless, chi square is sensitive to both sample size and violations of normality (Gulliksen & Tukey, 1958; Kline, 2005), thus the use of approximate fit indices remains a sound approach to assessing model fit. Specifically, as reported by Gulliksen and Tukey (1958), as sample size increases so does the chance of rejecting a suitable model when it is true (i.e., type 1 error). Therefore, as many of the models examined have \( N > 200 \), this research program plans to incorporate several other fit indices including the Satorra–Bentler adjustment, root mean-square error of approximation (RMSEA), Tucker-Lewis index (TLI), and the Adjusted Goodness of Fit Index (AGFI). The following section summarises these indices.

The Satorra–Bentler adjusted chi-square statistic compensates for departures from normality within the data, and thus provides a more accurate estimation of model fit. The adjusted chi-square statistic is examined against a known probability distribution, and values greater than 0.05 are interpreted as representing acceptable model fit. Similarly, through taking into consideration the error in approximation, RMSEA accounts for the stringent requirements of chi square. As reported by Browne and Cudeck (1993), RMSEA values less than 0.05 are interpreted to indicate excellent model fit, but values below 0.08 are also considered reasonable. In this thesis, TLI was examined as an incremental fit index where values greater than 0.95 indicate reasonable model fit, and threats to parsimony are identified within structural models where TLI is greater than 1. AGFI were also examined, with values greater than 0.95 indicative of good model fit (Hu & Bentler, 1999). Collectively,
the range of fit indices used within this research program provided a comprehensive assessment of model fit.

Model Testing

Structural Equation Modelling

Structural equation modelling was used to test the hypothesised relationships between environmental and individual differences (viz. positive framing, GSE, task negotiation, social support, and structured support), person-environment fit (person-job, person-organisation, and professional fit), and career-related outcomes (viz. job and organisational attraction, job and organisational pursuit intentions, occupational commitment, and transition to practice self-efficacy). As recommended by Kline (1998) and Byrne (2009), it is beneficial to examine several theoretically derived models, rather than to make ad hoc adjustments following the initial estimation. The benefits of this process include avoiding the misleading and easily abused method of data-driven model development. Studies have shown that such data-driven model modifications may lack validity (MacCallum, 1986) and are highly susceptible to capitalisation on chance. Therefore, it was planned to investigate several nested models and conduct a chi square difference test to determine the superior fitting model. The chi square difference test takes into account the degrees of freedom change across nested models (Kline, 1998), and identifies the model that best represents the data. Several parsimony measures were used when a nested model design was not utilised: specifically, both Akaike's information criterion (AIC) and consistent Akaike information criterion (CAIC) were used to provide evidence on model parsimony. No cut points were defined for both AIC and CAIC, and lower values denote model parsimony.
**Model Interpretation**

When goodness of fit indices supported the model, a range of statistics - factor loadings, path coefficients, squared multiple correlations, standardised residuals and modification indices - were examined and interpreted according to the hypothesised relationships. Path coefficients were analysed in the structural component of the model under a range of criteria indicative of the strength of each relationship. Specifically, as Kline (1998, p.118) stated, "standardized path coefficients with absolute values less than .10 may indicate a ‘small’ effect; values around .30, a ‘medium’ effect; and those greater than .50, a ‘large’ effect". Next, squared multiple correlations (SMCs) were investigated to determine the amount of explained variance accounted for by the predictor variables.

Both the standardised residuals and modification indices were used to identify areas of model misspecification; large standardised residuals (greater than 1.96) would indicate that the model does not represent the data well. Furthermore, modification indices were used to identify areas to improve model fit. To minimise the possibility of ‘chance’ findings and erroneous model interpretation, post hoc modifications were only conducted where it made theoretical sense to do so (see Holmes-Smith, 2007; Kline, 1998; and Byrne, 2004 for a full review of model interpretation).

**Mediation Analysis**

From a general perspective, mediation occurs when the effects of the predictor on the criterion are accounted for by a third intervening variable (see Baron & Kenny, 1986 for a full review). While multiple regression analysis is the most popular method for testing mediation (Frazier, Tix & Baron, 2004), many researchers are now turning to SEM. Popular SEM software packages such as AMOS provides percentile and bias-corrected confidence
intervals which can be used to investigate mediation. Specifically, as reported by Preacher and Hayes (2008), this method is superior as it allows for the examination of multiple mediators. This was supported by Cheung and Lau (2008), who compared eight different strategies for investigating mediation and found the confidence interval approach was superior due to its ability to control for measurement error, thus recommended that it should be used over multiple regression. Furthermore, the researchers found evidence to suggest that the Sobel test (commonly used to test the significance of the mediated effect) is biased when effect size is small or medium. By contrast, the researchers found that bootstrapped confidence intervals performed well even with small samples (e.g., 100). In summary, as SEM software allows for the examination of mediation with greater precision, this was the approach taken within the current research program.

**Longitudinal Data Analysis**

The following research program incorporated cross-lagged longitudinal design to control for pre-WIL placement perceptions and attitudes (as described in chapters eight and ten). This approach to data analysis controlled for the autoregressive and cross-lagged relationships, thus allowing for greater accuracy when estimating the hypothesised relationships (Burkholder & Harlow, 2003). Specifically, the autoregressive paths account for the relationship between X1 and X2, Y1 and Y2, and the cross lagged effects account for the impact of X1 on Y2. An example of this approach is applicable was used to look at the relationship between post entry person-environment fit perceptions and attitudes (e.g., attraction or intentions). The true effect of post-entry person-environment fit perceptions can be accounted for once pre-entry person-environment fit perceptions are controlled. As reported by Gollob and Reichart (1991), failure to represent these paths will lead to biased
estimation of the effect of post-entry fit perceptions on post-entry outcomes. Examples of autoregressive models in repeated measures designs include a study of drug abuse by Aiken, Stein & Bentler (1994) and a study of anxiety in children by Lopez and Little (1996). Further examples of modelling data with more than two waves can be found in McArdle (2009) and Curran, Stice, and Chassin (1997).

Conclusion

The preceding material described the analytical methodology for the current research program. This chapter outlined a two-step procedure of conducting EFA and CFA to confirm the measurement model, followed by the calculation of composite variables for the structural equation analyses. The chapter also identified the approach to testing mediation, and discussed the most appropriate strategy for investigating longitudinal data within this research program.
CHAPTER 4
RESEARCH PROGRAM METHODOLOGY

Overview

The purpose of this chapter is to provide an overview of the methodology applied in the three studies conducted within the current research program. The first aim is to describe the participants used within this research program. The second aim is to describe the measures used to examine each construct. The final aim is to describe the procedure used to collect the data from final year Australian undergraduate nursing students.

Participants

Participants comprised third year Bachelor of Nursing undergraduate students from nine Australian universities. Data were collected from students prior to, and following their final placement: this resulted in three datasets for use within the research program. The first dataset consists of the data collected from students prior to their final placement. The second dataset includes data collected from students following their final placement. The final dataset comprises the matched, longitudinal data. The following section provides an overview of the participants according to each of the three samples.

The total size for the first sample (pre-placement) was 386 which comprised 34 men (8.8%) and 349 women (91.2%). Two hundred and six participants (53.4%) were aged 18-25 and eighty two participants (21.2%) were aged 26-34. Seventy eight participants (20.2%) were aged 35-50, and seventeen participants (4.4%) were aged 50+. In the second sample (post-placement), included 475 participants - 44 males (9.3%) and 430 females (90.7%). Age for the respondents ranged from two hundred and fifty eight participants (54.3%) in the 18-25 group, one hundred and one participants (21.3%) for the 26-34 group, ninety six
participants (20.2%) for the 35-50 group, and nineteen participants (4.0%) for the 50+ group. The higher response rate for the post-placement sample when compared to pre-placement was due to the recruitment method. All students were invited to participate at both occasions, irrespective of whether they completed the initial survey, so some students completed the post-placement survey without providing data prior to commencing placement.

The pre-and post-sample data sets were matched using a unique identification code producing a longitudinal data set of 242 participants which comprised fifteen (6.2%) males, and two hundred and twenty six (93.8%) females. Age for the respondents ranged from one hundred and thirty participants (53.7%) in the 18-25 group, forty six participants (19.0%) for the 26-34 group, fifty three participants (21.9%) for the 35-50 group, and twelve participants (5.0%) for the 50+ group. Participant attrition across the two time points produced a 62.5% response rate for the final study.

Measures

Demographics

Demographic questions were included within the surveys and used to examine group differences in the outcome variables. Respondents were asked to indicate their age, gender, placement specialty, location (rural or city), and the duration of the placement: to indicate whether their clinical placement was their first preference; and describe their previous experience in nursing and past experience with the team and workplace.
**Person-organisation fit**

Person-organisation fit was measured using the modified three item scale developed by Cable and Judge (1996). Several changes to the scale were made. Firstly, the word ‘organisation’ within the original scale was replaced by ‘workplace’ for use within this research program. Although a hospital can be viewed as an organisation, workplace was deemed a more suitable descriptor of the environment. Secondly, the wording of the items used within the questionnaire prior to placement was changes to reflect students’ expectations of person-organisation fit. An example of the original item includes, “Do you think the values and personality of this organisation reflect your own values and personality.” An example of a modified item includes, “Do you expect the values and personality of this workplace reflect your own values and personality?” Each item was calibrated over a six-point scale ranging from (1) (not at all) to (6) (completely). Past accounts of the scale’s reliability and predictive validity support the measure. For instance, Judge and Cable (1997) reported excellent scale reliability (α = .80), and found that the measure was strongly related to measures of objective person-organisation fit. In a similar vein, Cable and Judge (1996) found that the scale had excellent internal consistency (α = .87). For the current research program, alpha reliability estimates for the scale were acceptable (α = .68) and adjusted reliability based on maximally weighted factor score weights were also supportive of the items used (r_c = .64). Detailed information concerning the person-organisation fit scale can be found in chapter five, and information concerning the convergent and discriminant validity of the measure is in chapter six.
Person-job fit

Person-job fit was measured with six items developed by Cable and DeRue (2002) calibrated over a six-point ranging from strongly disagree (1) to strongly agree (6). One modification was required in order to ensure the appropriateness of the measure. Within the nursing context, job is a broad term that can refer to a variety of specialties. Thus, the term ‘job’ within the scale was changed to ‘specialty’ in the scale to ensure that participants understood the dimension of the environment of interest. An example of the original item includes “there is a good fit between what my job offers me and what I am looking for in a job.” An example of a modified scale item is “there is a good fit between what this specialty will offer me and what I am looking for in a specialty.” This scale is multidimensional and constitutes both person-job needs-supplies fit and person-job demands-abilities fit. Reliability and validity for these dimensions are supported in the literature. Regarding the needs-supplies dimension, Cable and DeRue reported excellent alpha reliability estimates ranging from .89 to .93. Similarly, regarding the demands-abilities dimension, the researchers reported excellent reliability estimates ranging from .84 to .89. The researchers showed that the scale held good convergent and discriminant validity through confirmatory factor analysis; goodness-of-fit estimates showed that the items converged onto the hypothesised factors without cross loadings. Predictive validity was also supported by Cable and DeRue’s research. Both demands-abilities and needs-supplies fit were significantly correlated with job satisfaction (r=.33 and r=.61, respectively).

Data collected in the current research program also provides evidence for reliability and validity. Regarding needs-supplies fit, the alpha reliability estimate was excellent (α = .92) and adjusted reliability based on maximally weighted factor scores was high (rc=.83). Regarding demands-abilities fit, the alpha reliability estimates for the scale was excellent (α
Detailed information concerning the person-job fit (viz. needs-supplies and demands-abilities) scale can be found in chapter five, and information concerning the convergent and discriminant validity of the measure is in chapter six.

**General self-efficacy**

General self-efficacy was measured using the scale developed by Chen et al’s (2001) new general self-efficacy (NGSE) scale. A sample item from the NGSE is “I believe I can succeed at most any endeavour to which I set my mind.” The NGSE scale is calibrated over a six point scale from (1) strongly disagree to (2) strongly agree. For the current research program, the alpha reliability estimates for the scale were acceptable (α = .92) and adjusted reliability based on maximally weighted factor scores was high ($r_c = .85$). These results are consistent with Chen et al., who found the NGSE had a strong reliability estimate (α = .86) and a high level of discriminant validity. Detailed information concerning the general self-efficacy scale can be found in chapter five, and information concerning the convergent and discriminant validity of the measure is in chapter six.

**Transition to practice self-efficacy**

A scale focusing on the transition to practice self-efficacy could not be located in the literature so a scale was developed for use within this research program. The six item measure was calibrated over a six point scale ranging from (1) strongly disagree to (6) strongly agree. Sample items include, “I am confident in my ability to locate a graduate program / employment opportunity that suits me,” “I am confident in my ability to enter a new workplace and become part of the team,” and “I am confident in my ability to put my knowledge, skills and abilities to practice after I graduate.” For the current study, the alpha
reliability estimate for the scale where acceptable ($\alpha = .94$) and adjusted reliability based on maximally weighted factor scores was high ($r_c=.88$). Results presented in chapter five show strong support for the convergent and discriminant validity of the scale. Detailed information concerning the development of the transition to practice self-efficacy scale can be found in chapter five, and information concerning the convergent and discriminant validity of the measure is in chapter six.

**Self Esteem**

Self esteem was measured using Rosenberg’s (1965) ten-item scale. A sample item for the scale is “I feel that I have a number of good qualities.” The ten-item measure was calibrated over a six point scale ranging from (1) strongly disagree to (6) strongly agree. For the current research program, alpha reliability acceptable ($\alpha = .89$) and adjusted reliability based on maximally weighted factor scores was high ($r_c=.76$). This is consistent with previous research in which alpha reliabilities estimates have ranged from .74 to .91 (Silbert & Tippett, 1965; Shahani, Dipboye, & Phillips, 1990; McCarthy & Hodge, 1982). Chen et al., (2001) demonstrated that the scale has acceptable convergent and discriminant validity.

**Professional Fit**

A four-item measure of professional fit was designed for this research program. Each item reflected subjective fit with values or goals of the profession. These items include “to what extent do you feel like you fit with the nursing profession at large”, “to what extent do you identify with the values of the nursing profession”, “to what extent do your career goals and ambitions fit within the nursing profession,” “to what extent do you feel that the nursing profession represents your own personal values.” The four-item measure was calibrated over a six point scale ranging from (1) strongly disagree to (6) strongly agree.
Strong support for the reliability of the scale was found; specifically, alpha reliability estimate was acceptable ($\alpha = .90$) and adjusted reliability based on maximally weighted factor scores were high ($r_c = .89$). Detailed information surrounding the professional fit scale can be found in chapter five, and information concerning the convergent and discriminant validity of the measure is in chapter six.

**Occupational Commitment**

Commitment to the occupation is measured using a modified version of Meyer and Allen’s (1991) affective commitment measure calibrated across a 6-point scale ranging from strongly disagree (1) to strongly agree (6). Specifically, four items from the affective commitment scale were modified to measure occupational commitment. These modified items include, “I would be very happy to spend the rest of my career within the nursing profession”, “I think that I could easily become as attached to another profession as to this one”, “I do not feel emotionally attached to the nursing profession,” and “The nursing profession has a great deal of personal meaning for me”. For the full scale, internal consistency was above 0.70 (see Allen & Meyer, 1996). The modified scale was reliable; specifically, reliability estimates were sound ($\alpha = .75$) and adjusted reliability based on maximally weighted factor scores was acceptable ($r_c = .50$). Detailed information surrounding the occupational commitment scale can be found in chapter five, and information concerning the convergent and discriminant validity of the measure is in chapter six.

**Social and Structured Support**

A valid and reliable measure of structured support could not be located in the literature. Thus, a review of the industrial-organisational psychology and WIL literature was conducted to develop scale items measuring structured support (see chapter five for a
review of the literature). The scale was calibrated across a 6-point scale ranging from
strongly disagree (1) to strongly agree (6). Sample items of the revised scale include “This
placement was structured so that I had the opportunity to discuss experiences and ask
questions with experienced staff members,” and “Activities and work experiences on the
ward were planned for me to watch and apply skills”. Reliability estimates for the original
scale were sound (α=.68; Jones, 1986), and the validity of the scale was confirmed through a
meta-analysis conducted by Saks et al., (2007). For the current research program, alpha
reliability estimate was high (α = .83) and adjusted reliability based on maximally weighted
factor scores was sound (rc =.73). Furthermore, a one factor confirmatory factor analysis
supported the convergent validity of the items.

Social support was examined using items adapted from Jones’ (1986) investiture /
divestiture scale of organisational socialisation and was calibrated across a 6-point scale
ranging from strongly disagree (1) to strongly agree (6). Sample items for the social scale
include, “almost all of the staff on this placement were supportive of me personally”, and
“staff went out of their way to help me fit in within the workplace.” The reliability estimate
for the original scale was good (α=.79; Jones, 1986) and the validity of the scale was
supported through a meta-analysis conducted by Chapman et al. (2007) who found that the
investiture / divestiture scale was significantly correlated with organisational commitment
(r= . 38; p < 0.05). Data from the current research program produced an excellent alpha
reliability estimate (α = .93) and adjusted reliability based on maximally weighted factor
score was high (rc =.91). Detailed information surrounding the development of the
structured and social support scale can be found in chapter five, and information concerning
the convergent and discriminant validity of the measure is in chapter six.
Speciality and Organisational Attraction

For the current research program, a scale reflecting specialty and organisational attraction was designed using the recommendations made by Highhouse (2003). The items used for the speciality attraction measure include “next year, working in this speciality / area of nursing is a very attractive job option for me”, and “this speciality / area of nursing is one of the best speciality / area of nursing to work in”. The alpha reliability estimate from the current study was excellent (α = .93) and adjusted reliability based on maximally weighted factor scores was high (rc =.93). The items used for the organisational attraction scale included, “next year, working within this hospital/workplace is a very attractive option for me”, “this hospital/workplace will be one the best hospital/workplace to work for”, and “this hospital/workplace will offer me everything I am looking for in a hospital/workplace to work with.” The alpha reliability estimate was excellent (α = .92) and adjusted reliability based on maximally weighted factor scores was high (rc =.87). Both scales were calibrated across a 6-point scale ranging from strongly disagree (1) to strongly agree (6). A multifactor confirmatory factor analysis supported the convergent and discriminant validity of the scale. Detailed information surrounding the development of the scale can be found in chapter five, and information concerning the validation of the measure is in chapter six.

Positive Framing

Positive framing was measured using a four-item scale developed by Ashford and Black (1996) and was calibrated across a 6-point scale ranging from ‘to a very little extent’ (1) to ‘to a very large extent’ (6). Sample items for the scale include “on placement to what extent did you try to see your situation as a challenge rather than a problem?”, and “on placement to what extend did you try to look on the bright side of things?”. Ashford and
Black (1996) found their scale to be reliable ($\alpha = .84$) and reported evidence for its convergent and discriminant validity. For the current study, the alpha reliability estimate was acceptable ($\alpha = .88$) and the adjusted reliability estimate based on maximally weighted factor scores was also supportive of the scales consistency ($r_c = .82$).

**Task Negotiation**

Task negotiation was measured using a four-item scale developed by Ashford and Black (1996) and was calibrated across a 6-point scale ranging from ‘to a very little extent’ (1) to ‘to a very large extent’ (6). Sample items for the scale include, “on placement to what extend did you negotiate with others (including your supervisor and/or coworkers) about your task assignments?”, and “on placement to what extend did you negotiate with others (including your supervisor and/or coworkers) about their expectations of you?” Ashford and Black (1996) reported a strong reliability estimate for the scale ($\alpha = .90$) and produced evidence for the scales convergent and discriminant validity. For the current study, the alpha reliability estimate was acceptable ($\alpha = .91$) and the adjusted reliability estimate based on maximally weighted factor scores was also supportive of the scales consistency ($r_c = .94$).

**Organisational and Job Pursuit Intentions**

Consistent with past research (Cable & Judge, 1996), a single item measuring organisational and job pursuit intentions was specifically designed for this research program. Organisational pursuit intentions were assessed using the item, “after graduation, I am going to pursue a job within this hospital/workplace”. Job pursuit intentions were assessed using the item, “after graduation, I am going to pursue a job within this specialty
area.” Participants were asked to respond to the items using a six point scale ranging from strongly disagree to strongly agree.

Procedure

The research project was granted full approval by the Griffith University Research and Ethics Committee. Participation within this research was voluntary. Data were collected prior to and following the student’s final placement, and participants were recruited from a cross section of nine Australian universities. Participants were invited by email from their third year course coordinator to participate in the study. Students were informed that the research program was investigating the transition to practice, and how WIL influences career-related outcomes.

Data collection was completed both online and via pen and paper. Only third year students completing their final placement were included in the study. Online and pen-and-paper surveys were opened one week prior to the final placement. Post WIL surveys were distributed by email and post at the duration of students’ final placement.

A self-administered and standardised questionnaire was used at both time points. Administration time totalled approximately 20-25 minutes. Consent to participate anonymously in this study was sought from all participants.

Responses to the following scales were collected prior to the commencement of the placement (time 1). These scales included: proactive personality; self esteem; general self-efficacy; job attraction; specialty attraction; pre entry fit perceptions (viz. person-job needs-supplies, person-job demands-abilities, and person-organisation fit); transition to practice self-efficacy; and job and organisational pursuit intentions. Responses to the following scales were collected at the duration of the placement: occupational commitment;
transition to practice self-efficacy; post entry fit perceptions (viz. person-job needs-supplies, person-job demands-abilities, and person-organisation fit); social and structured support; job attraction; specialty attraction; and job and organisational pursuit intentions.
CHAPTER 5

LITERATURE REVIEW: APPROACHES TO CONSTRUCT MEASUREMENT

Overview

The purpose of this chapter is to critically review the literature on the measurement of GSE, occupational commitment, professional fit, transition to practice self-efficacy, social and structured support, and job and organisational attraction, to either develop or refine scale items for use in the current research program. The first aim of this chapter is to provide a short critique of the relevant literature to clearly define the construct of interest and to provide the necessary direction for measurement. The second aim of this chapter is to identify the most appropriate approach to measurement for Australian undergraduate nursing students within the WIL context. The final aim of this chapter is to identify the methodologies to be used to refine existing measures (i.e., GSE, occupational commitment, social support), or create new measures for each construct (i.e., professional fit, transition to practice self-efficacy, and job and organisational attraction).

Professional Fit

Professional fit is defined as the congruence between an individual’s values and goals and those that are common to the profession (Schien, 1971; Hall, 1979; Shaf, 2002; Fagermoen, 1997), and is distinct from each of the current forms of person-environment fit (i.e., person-vocation fit, person-organisation fit, person-job fit). Firstly, it is conceptually distinct from vocational fit (Holland, 1985), which concerns the degree to which the work activities within the vocation are consistent with an individual’s interests. Rather than interests, professional fit concerns the degree to which those activities are consistent with the individual’s values and goals. For example, sharing the values and goals corresponding
to patient care may direct them towards a career in nursing (professional fit), while an individual’s interests may influence their pursuit of a job within a particular specialty (vocational fit). Secondly, the construct is distinct from person-job fit (Munchinsky & Monahan, 1987; Edwards, 1991), which concerns the match between the abilities and needs of the individual, and the demands and rewards of the job. Professional values transcend each job within the vocation; for example, values centring on the care and well-being of others are important within surgical nursing just as they are within midwifery (Fagermoen, 1997). Thus, while an individual may not have the skills to perform a delivery within midwifery (low person-job demands-abilities fit), they may share common perspectives on patient care (high professional fit). Finally, while person-organisation fit captures the similarity between values and goals of those within an organisation (Kristof-Brown et al., 2005), professional fit links people through the communality of values and goals shared by those within the profession. The constructs are conceptually distinct, thus the inclusion of professional fit under the person-environment fit rubric represents a valuable theoretical extension. The proposition that person-job, person-organisation, and professional fit are distinct constructs is investigated in chapter six using a rigorous discriminant validity procedure outlined by Farrell (2009).

Professional fit is regarded as an important construct within the nursing field (Chan, 2002; Fagerberg, 2004; Nash, Lemcke, & Sacre, 2008). Qualitative research has provided evidence for a unique set of values and goals associated with the profession (see Fagermoen, 1997). These common values and goals guide day-to-day interactions with staff, influence job-related attitudes, policies and procedures, and provide the professional with an underlying frame of reference for clinical practice (Vann Mannen & Schein, 1979; Chan, 2002; Fagerberg, 2004; Fagermoen, 1997; Nash, Lemcke, & Sacre, 2008). Values also provide
a framework for what constitutes ethical professional conduct (DeRue & Morgeson, 2007).Researchers argue that interactions with staff within a placement help the student learn about the values and goals associated with the profession. Furthermore, when professional fit is high, individuals are more committed to the occupation (Chan, 2002; Fagerberg, 2004; Nash, Lemcke, & Sacre, 2008). Thus, research demonstrates that professional fit is an important factor for the graduate nurse. However, while these studies highlight the role of value and goal congruence, the measures used are qualitative in nature; a current shortcoming is the absence of an established quantitative measure of professional fit. Therefore, one of the aims of this research program was to develop a quantitative measure of professional fit suitable for the nursing profession. This involved conducting a review of the literature on approaches to person-environment fit measurement.

This critique revealed two approaches towards the measurement of person-environment fit. Firstly, the subjective approach emphasises the individual’s unique assessment of person-environment fit. With this approach, an item pertaining to measurement of professional fit would be, “to what extent do you identify with the values of the nursing profession?” Importantly, the item does not contain reference to a specific value or goal dimension, but refers to the entire content area. In contrast, under the objective approach, each scale item reflects a specific value or goal identified shared within the profession (e.g., humanity, integrity, trust, autonomy; Fagermoen, 1997), for which respondents rates their level of congruence. In summary, professional fit can be measured using either a subjective or an objective approach; each approach offers advantages and limitations, which are discussed below.

One advantage of the objective approach is that it provides data on the specific domains of fit or misfit. For example, the results may reveal stronger areas of fit (e.g.,
teamwork) compared to areas of misfit (e.g., autonomy) for each respondent. Furthermore, the objective approach requires that respondents evaluate their level of fit across each specific dimension, ensuring the construct is represented in the same manner across respondents. In contrast, the subjective approach does not constrain measurement to predetermined domains. Thus, one advantage of this approach is that the respondent provides a gestalt or holistic assessment of professional fit according to factors that mean the most to them. Therefore, researchers argue that subjective measurement provides a better representation of an individual’s actual professional fit with the environment (Kristof, 1996; Cooper-Thomas et al., 2004; Schneider et al., 1995). Indeed, as discussed in chapter 2, empirical research demonstrates that the subjective approach is a stronger predictor of outcomes than objective measurement (Kristof-Brown et al., 2005). Thus, while both types of measurement are important for investigating person-environment fit, the subjective approach is a stronger predictor of the theoretically proposed outcomes. Therefore, given that one of the aims of this research program was to investigate the antecedents and consequences of fit with the greatest effect size, a subjective measure of professional fit was developed. The recent work of Edwards, Cable, Williamson, Lambert and Shipp (2006) was used to guide scale development. The researchers detailed a supplementary-molar approach to person-environment fit measurement which suggests that each item of professional fit should assess the similarity between the individual’s goals and values and those of the referent group (i.e., the profession). The researchers provided examples of specific items that measure individuals’ subjective fit (e.g., Saks & Ashforth, 1997, Judge & Cable, 1997; Cable & Judge, 1996), which were adapted to suit the professional fit scale (see table 5.1, below). A similar recent approach surrounds a scale developed to measure
individual’s fit with the team (see Cable & Morgenson, 2006 and Edwards et al., 2006 for a full review of person-environment fit measurement).

Table 5.1.

*The Four Item Measure of Professional Fit*

<table>
<thead>
<tr>
<th>Items</th>
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</thead>
<tbody>
<tr>
<td>1. To what extent do you identify with the values of the nursing profession?</td>
</tr>
<tr>
<td>2. To what extent do your goals fit within the nursing profession?</td>
</tr>
<tr>
<td>3. To what extent do you feel that the nursing profession represents your own personal values?</td>
</tr>
<tr>
<td>4. To what extent do you feel like you fit with the nursing profession at large?</td>
</tr>
</tbody>
</table>

Several approaches towards measurement validation were used in this study. Firstly, the convergent validity of the items representing the professional fit construct was tested using a confirmatory factor analysis (CFA). Secondly, the discriminant validity of professional fit from person-organisation and person-job fit (viz. needs-supplies and demands-abilities fit) was examined using a multifactor CFA. It was predicted that person-organisation, person-job and professional fit would be statistically distinct yet correlated constructs (Kristof-Brown et al., 2005). It was also predicted that the construct would be invariant across time, which would provide evidence that items represent the same construct across measurement occasions.

*Occupational Commitment*

The second construct examined within this chapter is occupational commitment. Compared to other variations of commitment (e.g., commitment to the job or organisation), occupational commitment has received little attention in the literature (Carless, 2005). While empirical research shows that occupational commitment is an important variable of analysis (see Meyer et al., 1993; Aryee & Tan, 1992; Blau, 1985), researchers have defined
the construct in several ways. Thus, a current limitation within the research is the inconsistent approach to the conceptualisation and measurement of occupational commitment. In order to address this limitation, a review of the research was conducted to identify the most appropriate approach to measurement within this research program.

Hall (1971) originally described occupational commitment as a motivational construct concerning the degree to which individuals are motivated to work in their careers. This approach captures an individual’s intention to remain within the occupation. Somewhat similar to Hall, Meyer et al. (1993) defined occupational commitment as the level of affective attachment one has to an occupation. This approach emphasises individuals’ ongoing emotional attachment, as opposed to the motivation to remain within the occupation (as described by Hall). In addition, occupational commitment has been defined as an individual’s identification with the goals and values associated with the occupation (Goulet & Singh, 2002); this approach emphasises an individual’s perceived match with the values of the profession.

One of the key distinctions is that researchers approach the construct as either active or passive, in terms of an individual’s future orientation toward their occupation. Both Hall’s (1971) and Meyer et al.’s (1993) conceptualisations are active in the sense that their definitions capture individuals’ ongoing attachment to the occupation. In contrast, defining the construct in terms of value and goal congruence can be regarded as passive as this fails to capture individuals’ motivation to remain within the occupation. For example, a registered nurse may identify with goals and values of multiple professions (e.g., occupational therapist, psychologist and general practitioner), yet because of the time she has invested in her occupation is primarily attached and motivated to remain within the nursing field. Thus, within the broader nomological network, value and goal congruence
may represent an antecedent to occupational commitment (Hall, 1971). Hence, while professional value and goal congruence is conceptually related to occupational commitment, it can be viewed as one of several predictors. Therefore, it is important that measurement clearly distinguishes between domains as misrepresentation may lead to inaccurate results. Consistent with Hall (1971) and Meyer et al. (1993), occupational commitment was defined as individuals’ affective attachment to their occupation and motivation to remain within the occupation.

Stemming from the multiple conceptual approaches are numerous approaches to measurement. For instance, researchers have modified Meyer and Allen’s (1993) affective and normative commitment scale (e.g., Meyer et al., 2003; Chang & Huang, 2006), developed their own scales to suit the research question (Arnold, 1990), or used a combination of items from differing scales (e.g., Hackett, Lapierre, & Hausdorf, 2001) to measure occupational commitment. For established measures used across multiple studies, researchers have reported lower than acceptable measurement reliability (e.g., Blau’s 1985 career commitment measure; see Carson & Bedeian, 1994). Thus, a lack of consistent measurement is a limitation of the literature, and a critique of the literature was conducted to identify a measure that reflects an individual’s affective attachment to an occupation and motivation to remain within the field.

Based on a critique of the literature, the Meyer and Allen (1991) organisational affective commitment scale was modified to measure occupational commitment. The scale items were selected given the strong body of empirical research supporting their dimensionality and reliability (see Allen & Meyer, 1996 for a full review), and past research has successfully adapted the scale to measure occupational commitment (Meyer et al., 1993). The items, ‘I think that I could easily become as attached to another profession as to
this one’, and ‘I would be very happy to spend the rest of my career within the nursing profession’ were selected to represent an individual’s motivation to remain within the nursing profession. The items ‘I do not feel emotionally attached to the nursing profession’ and ‘the nursing profession has a great deal of personal meaning for me’ were selected to represent an individual’s affective attachment to the occupation.

Both the construct and convergent validity of the modified items measuring occupational commitment were examined via the goodness-of-fit statistics and significance tests of the items in a one-factor confirmatory factor analysis. It was predicted that the items used would reflect a one-factor construct of occupational commitment. In order to explore the conceptual distinction between values and goals congruence (i.e., professional fit) and occupational commitment, it was predicted that a two-factor solution would emerge when professional fit was examined simultaneously with occupational commitment. Demonstrating that the constructs are statistically distinct would provide evidence for their conceptual difference.

**General Self-Efficacy**

Researchers have proposed two variations of self-efficacy - general self-efficacy and task specific self-efficacy. From a general perspective, both task specific self-efficacy (Bandura, 1997) and general self-efficacy are concerned with an individual’s perceived ability, but the concepts differ in terms of the scope of the performance criterion. Bandura (1997) argued that task-specific self-efficacy is a state-like phenomenon that refers to an individual’s subjective evaluation of competence across specific tasks associated with the performance domain. In contrast, general self-efficacy refers to an individual’s general sense of competence, irrespective of the performance domain. While the distinctions between general self-efficacy and task specific self-efficacy have been identified at a conceptual level,
researchers have debated the presence of the construct (e.g., Stanley & Murphy, 1997; Bandura, 1997). Stanley and Murphy (1997) argued that general self-efficacy is neither conceptually or statistically distinct from self-esteem. Thus, the literature was reviewed with the goal of determining the applicability of the construct and identifying the most appropriate approach to measurement within this research program.

Empirical support for general self-efficacy is mixed (Stanley & Murphy, 1997; Bandura, 1997). For instance, Bandura (1997) claimed that general self-efficacy measures “bear little or no relation either to efficacy beliefs related to particular activity domain or to behaviour” (p. 42). Moreover, Stanley and Murphy (1997) compared results of multiple scales of general self-efficacy with self-esteem and found that the measures were highly correlated. The researchers argued that the high correlation between the constructs demonstrates poor discriminant validity; they concluded that the construct of general self-efficacy offers little value to research, and argued that researchers should abandon future research on general self-efficacy.

The conclusions drawn from Stanley and Murphy’s (1997) research attracted three main criticisms within the literature. Firstly, Chen et al. (2001) argued that high correlations between the constructs are consistent with the theoretical propositions of general self-efficacy. The researchers argued that perceived self worth (i.e., self-esteem) and perceived competence (i.e., general self-efficacy) are highly interrelated constructs as they share similar causes. General self-efficacy and self-esteem have been argued to emerge over the life span because of the cumulative effects of individuals’ experiences of success and failure (Shelton, 1990). Hence, the results provided by Stanley and Murphy are consistent with the theoretical relatedness of the constructs (Shelton, 1990; Judge, Locke & Durham, 1997) and explain the high correlation between general self-efficacy and self esteem.
The second criticism of the research conducted by Stanley and Murphy (1997) concerns their approach to testing convergent and discriminant validity. Specifically, based on a zero-order correlation analysis, the scholars argued that the construct is redundant; however, zero-order correlation analysis is a weak test of discriminant validity. Farrell (2009) suggested that tests of discriminant validity should include both paired construct and shared variance tests. Thus, it can be argued that the procedure used by Stanley and Murphy limits the implications of the results. Judge and Bono (2001) went part way towards addressing this shortcoming by examining the discriminant validity of multiple individual difference constructs using CFA. The researchers proposed that general self-efficacy was a distinct construct from self-esteem, locus of control and neuroticism, and argued that the constructs relate through a second order factor identified as core self-evaluations. Using second order confirmatory factor analysis, Judge and Bono (2001) found support for the notion that self-esteem and general self-efficacy are distinct, albeit related, through the second order construct of core self evaluations. The literature suggests that when more advanced statistical procedures are applied, empirical research supports the discriminant validity of general self-efficacy.

The final criticism relates to the measurement of general self-efficacy. Chen et al. (2001) argued that Stanley and Murphy’s (1997) results were confounded by measurement problems inherent within the original general self-efficacy scale (GSES; Sherer, 1982). Chen et al. (2001) found two problems with the original measure - that it held low test-retest reliability and that the scale was multidimensional. Using CFA, Chen et al. found a three-factor solution, rather than the hypothesised single-factor solution of general self-efficacy. Because of evidence demonstrating poor reliability and validity, Chen et al. (2001) developed a new general self-efficacy scale (NGSE). Using CFA, the scholar compared the
NGSE to the original measure and Rosenberg’s (1965) self-esteem scale. While the correlation between the NGSE scale and self-esteem was high \((r = .87)\), general self-efficacy was found to be a distinct construct from self-esteem, as demonstrated by a significantly better fit for the three-factor solution than a constrained single-factor model \((p < .05; \text{GFI} = .93, \text{RMSEA} = .075, \text{CFI} = .97)\). Furthermore, consistent with theoretical propositions, Chen et al. (2001) found that the NGSE scale was a stronger predictor of occupational task specific self-efficacy than self-esteem. Taken together, the evidence supports the convergent and discriminant validity of the NGSE scale (Chen et al., 2001; Judge & Bono, 2001), and justifies the current research program’s use of the NGSE scale to examine general self-efficacy. The eight item scale is presented in Table 5.3 below.

Table 5.3.

The Eight Item New General Self-Efficacy Scale

<table>
<thead>
<tr>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I will be able to achieve most of the goals that I have set for myself.</td>
</tr>
<tr>
<td>2. When facing difficult tasks, I am certain that I will accomplish them.</td>
</tr>
<tr>
<td>3. In general, I think that I can obtain outcomes that are important to me.</td>
</tr>
<tr>
<td>4. I believe I can succeed at most any endeavour to which I set my mind.</td>
</tr>
<tr>
<td>5. I will be able to successfully overcome many challenges.</td>
</tr>
<tr>
<td>6. I am confident that I can perform effectively on many different tasks.</td>
</tr>
<tr>
<td>7. Compared to other people, I can do most tasks very well.</td>
</tr>
<tr>
<td>8. Even when things are tough, I can perform quite well.</td>
</tr>
</tbody>
</table>

A goal of this research program was to investigate whether the measurement model proposed by Chen et al. (2001) was supported by data obtained from a nationwide undergraduate cohort of final year Australian nursing students. Consistent with the evidence offered by Chen et al., it was predicted that the items representing the NGSE would load onto a single factor representing general self-efficacy. To examine the
discriminant validity of the measure, a multifactor CFA was conducted and included the Rosenberg (1965) self-esteem scale and a measure of transition to practice self-efficacy. To test if the factors were unique within an undergraduate nursing sample, several models were examined. Firstly, the initial model representing a three-factor solution of general self-efficacy, self-esteem and task specific self-efficacy was examined against a constrained one-factor solution. It was predicted that the three-factor solution representing the multidimensional nature of general self-efficacy, task specific self-efficacy, and self-esteem would be supported by the data.

Transition to Practice Self-Efficacy

Lack of confidence is one of the major challenges faced by nurses making the transition to practice (Cowin & Hengstberger-Sims, 2006). Therefore, assessing task specific self-efficacy beliefs associated with their transition is important for students embarking on the journey from university to work. However, despite of the importance of transition to practice self-efficacy, a review of the research found no measures of the construct for nursing students. Thus, the lack of construct definition and measurement development with transition to practice self-efficacy is a limitation in the current body of research. Therefore, a review of the self-efficacy and transition to practice literature was conducted with a view towards developing a measure to assess the construct. From this review, a definition was proposed along with a summary of the key content areas guided by the current body of research on the transition to practice.

Bandura (1986) originally developed task specific self-efficacy within the context of work and social cognitive theory. Task specific self-efficacy is defined as the “belief in one’s capabilities to mobilise the motivation, cognitive resources, and courses of action needed to meet given situational demands” (Wood & Bandura, 1989, p. 408). While general self-
efficacy is a generalised construct, task specific self-efficacy concerns individuals’ perceived competence for completing tasks unique to a performance domain; for instance, just as writing a novel has its own set of tasks calling on different skills and abilities, so does working in an operating theatre (Bandura, 1986; 1997). Self-Efficacy is relevant within both performance domains as it refers to individuals’ subjective assessments of confidence regarding their abilities to perform each task. Therefore, the first step within this section is to provide a definition of the performance domain, which then guides the selection of items.

Transition to practice self-efficacy is defined as an individual’s perceived confidence surrounding the application of skills and abilities important throughout the transition from student to nurse. This definition is based on a review of the literature from nursing and vocational psychology disciplines (Solberg, Good, Fischer, Brown, & Nord, 1995; Super, 1980; Wenrich, Curtis & Shannon, 2001; Yang & Gysbers, 2007; Chan, 2002; Cowin & Hengstberger-Sims, 2006; Duchscher & Cowin, 2006; Ng & Feldman, 2007). Within the context of the transition, self-efficacy concerns the judgment of what individuals can do with the skills that they possess (Bandura, 1978). More specifically, transition to practice self-efficacy concerns an individual’s subjective evaluation of competence across a range of skill sets that characterise the transition to practice. Therefore, a key consideration for measurement in the current research program involved indentifying the skill sets important to that transition. This consideration raised questions about what should be measured, and at what degree of specificity, and how might the complex abilities, skills, and tasks that influence job choice, stress management, time management, patient interaction, and a successful integration into clinical practice be specified and measured. At one extreme, a single item assessing the individual’s overall level of confidence could be used; at the other,
a scale could be developed which captures all of the skills and abilities needed to make the transition to practice. The single-item and scale-based approaches were evaluated and are discussed below.

One benefit of single item measures is a reduction in the time taken to complete a questionnaire, minimising participant fatigue and lessening attrition. Nevertheless, the benefits of using single items to measure self-efficacy are outweighed by the drawbacks. A typical example of a single item measures is ‘how confident are you in your abilities to make the transition to practice?’ Single items are broad, and fail to capture all of the tasks and abilities required within the performance domain. Researchers argue that the use of a single item scale is a critical error as it provides inadequate representation of the construct; furthermore, researchers warn that single item scales have lower reliability and validity than full-scale measures (Wanous, 1997).

Indeed, this is the case for the measurement of transition to practice self-efficacy. The respondent may not be fully aware of the variety of skills and abilities required to make the transition to practice (Osipow, 1991) so respondents could interpret a single item scale differently. The problems associated with single item measurement have been confirmed by empirical research. Lee and Bobko (1994) examined the convergent validity of single item self-efficacy scales upon full measures. The results showed that while single items correlated strongly with full scales, they suffered from reduced statistical power. Due to these problems, the single item approach was not adopted for the current research program.

The next consideration involved the degree of specificity of the scale. Several skill domains, each comprising a range of skills, have been identified as important for the graduate nurse within the transition to practice. For instance, communicating with patients
(Wenrich, Curtis & Shannon, 2001), adjusting to the role of a worker (Super, 1980), and locating a suitable employment opportunity (Solberg, Good, Fischer, Brown & Nord, 1995) are but a few of the performance domains identified for the graduate nurse making the transition to practice. Underlying each of these domains is a pool of skills and abilities; for instance, the performance domain of communicating with patients may include items such as rapport building, reflective listening, non-verbal body language, paraphrasing, and summarising (Hargie, 2006). An examination of self-efficacy at a specific level across all domains would require a measure that captures each skill and ability associated with the task. A measure of this magnitude would be very lengthy and would increase the probability of respondent attrition; furthermore, a measure with a high degree of specificity may result in generalisability problems within a context of student nurses’ transitioning into different speciality areas. For instance, a specific subset of skills appropriate for transition within a surgical role differs in both content and importance compared to a role within geriatric nursing. Thus, a highly specific measure may result in lower validity through variability of the relevance in scale items across participant groups.

In order to meet the dual aims of measurement and minimising participant fatigue, transition to practice self-efficacy was operationalised at a moderate level of specificity. The items to be included in the new measure were determined by the range of skill and ability areas identified as important for the transition to practice in the nursing literature (see Yang & Gysbers 2007; Chan, 2002; Cowin & Hengstberger-Sims, 2006; Duchscher & Cowin, 2006; Ng & Feldman, 2007). The items include: dealing with stress at work; locating a place of employment; patient liaison; integration with the team; seeking feedback, and the application of theory to practice (see table 5.4). Consistent with the research findings on
general self-efficacy, it was predicted that this new task specific self-efficacy scale would be statistically distinct from general self-efficacy.

Table 5.4.

The Six Item Transition to Practice Self-Efficacy Scale

<table>
<thead>
<tr>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am confident in my ability to locate a graduate program / employment opportunity that suits me</td>
</tr>
<tr>
<td>2. I am confident in my ability to enter a new workplace and become part of the team</td>
</tr>
<tr>
<td>3. I am confident in my ability to put my knowledge, skills and abilities to practice after I graduate</td>
</tr>
<tr>
<td>4. I am confident in my ability to seek help and feedback from staff after I graduate</td>
</tr>
<tr>
<td>5. I believe in my abilities to deal with stress and challenges in the ward or the team when I graduate</td>
</tr>
<tr>
<td>6. I am confident in my abilities to communicate effectively with patients when I graduate</td>
</tr>
</tbody>
</table>

As the operationalisation of self-efficacy was at a moderate level, it was possible that interpretation of the scale items could differ. In order to determine whether the items represent the same construct over time, factor loadings generated at time one (pre placement), were constrained to be equal for data generated at time two (post placement). It was predicted that the parameter estimates would be invariant across time as reflected by a non-significant chi-square difference test.

Social and Structured Support

The purpose of this section is to identify measures for the examination of social and structured support within the WIL context for Australian undergraduate nurses. As described in chapter 2, social support refers to the workplace’s attempt to affirm the identity of the newcomer (Van Maanen & Schien, 1979), and provide them with help, guidance, and encouragement via access to established organisational insiders (Davey,
Structured support refers to a systematic, planned set of activities designed to facilitate learning through exposing students to meaningful work practices (Kim, et al., 2005; Kyndt et al., 2009; Billett, 2004; Jones, 1986). While researchers argue that these factors contribute to a successful WIL placement experience (Tynjala, 2008), little empirical research has been conducted; the literature review showed that the WIL experience is one of the most neglected areas of measurement within the industrial / organisational psychology literature. Therefore, the goal of the following section is to provide an overview of the measurement approach adopted within this research program regarding social and structured support.

Social support was operationalised using Vann Mann and Schien’s (1979) investiture (vs. divestiture) socialisation tactic. According to Vann Mannen and Schein (1979), this tactic affirms the identity of the student, rather than stripping it away. Furthermore, through having staff available for help and support, this strategy helps the student learn about the factors that guide day-to-day interactions and operations (Jones, 1986; Cooper-Thomas et al., 2004). Accordingly, a modified version of Jones’ (1986) investiture (vs. divestiture) scale was used within this research program. This scale is content valid, and has been successfully adapted and modified across numerous contexts (Chapman et al., 2005). The scale is presented in table 5.5.

The second construct to be examined is structured support. A review of the literature revealed limited conceptualisation and measurement development for this construct. Furthermore, the remaining socialisation tactics presented by Vann Mann and Schien (1979) were deemed inappropriate as they were designed for newcomers established within their careers, rather than students within the WIL context. For example, the fixed (vs. random) dimension of socialisation refers to the presence of a structured
pathway leading to the achievement of particular goals or promotions within the organisation. The utility of this dimension within the WIL context was considered limited, as students typically complete one role during a set period (e.g., four weeks). In order to address the limited applicability of the scale, a review of qualitative research from the WIL and nursing literature was conducted to determine the most appropriate approach to measurement.

Table 5.5.

*The Nine Item Placement Experience Scale*

<table>
<thead>
<tr>
<th>Items:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Support</strong></td>
</tr>
<tr>
<td>1. I have been made to feel that my skills and abilities will be a very important asset to this workplace.</td>
</tr>
<tr>
<td>2. Almost all of the staff on this placement were supportive of me personally.</td>
</tr>
<tr>
<td>3. Staff went out of their way to help me fit in within the workplace.</td>
</tr>
<tr>
<td>4. I was made to feel an important part of the team on placement.</td>
</tr>
<tr>
<td>5. During this placement, I always had someone to turn to for help and support.</td>
</tr>
<tr>
<td><strong>Structured Learning</strong></td>
</tr>
<tr>
<td>6. This placement was structured so that I had the opportunity to discuss experiences and ask questions with experienced staff members.</td>
</tr>
<tr>
<td>7. Activities and work experiences on the ward were planned for me to watch and apply skills.</td>
</tr>
<tr>
<td>8. This placement was structured so that I could develop my knowledge and skills.</td>
</tr>
<tr>
<td>9. Learning goals were clearly defined throughout the placement.</td>
</tr>
</tbody>
</table>

Given the number of constructs examined within this research program, it was important that the structured support scale represented the construct of interest while minimising participant fatigue effects. Furthermore, a highly specific scale may not generalise across all types of work experience activities within different specialties. For instance, while one-on-one mentoring that facilitates reflective practice may be an important strategy, this would be difficult to achieve in a busy theatre environment in
situations of life or death. Therefore, in order to meet these dual aims, the items selected are based on the key themes drawn from the literature from WIL (Collin, 2002; Kydnt et al., 2009; Tynjala, 2008; Dunn & Hansford, 1997). These include providing opportunities for students to: watch and apply skills; discuss experiences and ask questions; increase their knowledge and skills; and engage in goal-directed activities to facilitate learning. A four-item scale is presented in table 5.6.

Several steps were taken to ensure the validity of the measures used. In order to examine the convergent and discriminant validity of the measures, a multifactor CFA was tested on the data. It was predicted that two-factors would emerge representing the structured and social domains of socialisation. This model was examined against a constrained model representing a one-factor solution of socialisation. Just as the two domains are conceptually different, it was predicted that the two-factor solution would provide a significantly better fit than the one-factor model.

*Organisation and Job Attraction*

Given that one of the objectives for this research program was to understand future job choice intentions, factors such as job and organisational attraction are important variables of analysis. While empirical research supports the relationship between attraction and intentions (e.g., Turban & Keon, 1993; Carless, 2005; Kristof-Brown et al., 2005), attraction is measured inconsistently within the research (Highhouse et al., 2003). The literature was reviewed with the goal of determining the most appropriate approach to measurement. The following section describes the three components of the review. The first component was a brief overview of the theory of reasoned action, which is central for understanding the conceptual distinctions between attraction and behavioural intentions. The second component was a description of the current limitations concerning the
measurement of attraction (measurement operationalisations often include behavioural intentions, which is inconsistent with the theory of reasoned action; see Ajzen & Fishbein, 1977). Finally, the approach to measurement and validation of job and organisational attraction scales is discussed.

According to the theory of reasoned action (Ajzen & Fishbein, 1977; Ajzen, 1991), human behaviour is a product of individuals’ attitudes within a particular domain (e.g., job attraction) and their intention to engage in behaviour (e.g., job pursuit intentions). However, the measurement associated with the theory of reasoned action does not always reflect the conceptual differences between attraction and intentions. There are two principal measurement shortcomings: the inappropriate selection of items, and the representation of job and organisational attraction as a one-dimensional construct (Highhouse et al., 2003). Inappropriate item selection is characterised within studies that examine behavioural intentions and individuals’ attraction to the organisation (e.g., Turban, 2001). According to Highhouse et al. (2003), these measures are problematic as they assess attitudes and intentions simultaneously. Highhouse explained that under the propositions of the theory of reasoned action, items relating to attraction are “...passive in nature because it [attraction] does not necessarily imply that any actual behaviours will be taken toward the company (p. 989)”. By contrast, items relating to intentions “...refer to thoughts about a company that specifically imply further action. As such, intentions move beyond the passivity of company attractiveness to involve active pursuit of a job (p. 989)”.

Highhouse et al. argued that corresponding with the passivity of the construct, individuals can be attracted to multiple organisations, whereas behavioural intentions typically refer to a particular job or organisation. Thus, combining items measuring both intentions and attraction within a single construct leads to problems in analysis and interpretation. This
finding was supported by empirical research conducted by Highhouse et al. (2003), who found that measures representing behavioural intentions are statistically distinct from those representing attraction towards the job and organisation. Consistent with both theory and empirical evidence, the measurement approach to organisational and job attraction adopted within this research program views attraction and intentions as separate constructs.

The second limitation within the research is that researchers have combined measures of job and organisational attraction to represent one unified construct (e.g., Chapman et al., 2005). This approach is problematic as individuals may be differentially attracted to jobs irrespective of the organisational context. Similarly, individuals may also be differentially attracted to organisations irrespective of the jobs available within the workplace. To combine both measures, such as in the meta-analysis conducted by Chapman et al. (2005), may lead to problems in analysis and interpretation. For example, a student may be particularly attracted to work as a scrub-scout nurse, yet due to a poor cultural fit, may prefer to work in a rural setting rather than a metropolitan hospital. As identified within this example, it is difficult to examine the antecedents and consequences of job and organisational attraction independently when they are combined in a single construct. Therefore, the measurement approach adopted within this research program will differentiate between each dimension of attraction, and measure each separately.

Table 5.6 contains the items used to measure job and organisational attraction. Consistent with recommendations provided by Highhouse et al. (2003), the measurement items used within the job and organisational attraction scales request both affective (e.g., ‘working within this hospital/workplace is a very attractive option for me’), and attitudinal thoughts (e.g., ‘this hospital/workplace will offer me everything I am looking for in a
hospital/workplace to work with’). It was predicted that these measures would reflect the two-dimensional construct of job and organisational attraction. A multifactor CFA was conducted to examine the convergent and discriminant validity of the measures; it was predicted that goodness of fit estimates would support a two-factor solution of job and organisational attraction when compared to a constrained one-factor solution.

Table 5.6

**The Five Item Specialty and Organisational Attraction Scale**

<table>
<thead>
<tr>
<th>Items:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specialty Attraction</strong></td>
</tr>
<tr>
<td>1. Next year, working in this speciality / area of nursing is a very attractive job option for me.</td>
</tr>
<tr>
<td>2. This speciality / area of nursing is one of the best speciality / area of nursing to work in.</td>
</tr>
<tr>
<td><strong>Organisational Attraction</strong></td>
</tr>
<tr>
<td>1. Next year, working within this hospital/workplace is a very attractive option for me.</td>
</tr>
<tr>
<td>2. This hospital/workplace will be one the best hospital/workplace to work for.</td>
</tr>
<tr>
<td>3. This hospital/workplace will offer me everything I am looking for in a hospital/workplace to work with.</td>
</tr>
</tbody>
</table>
CHAPTER 6

STUDY ONE: VALIDATION OF MEASURES

Overview

The purpose of this chapter is to investigate the reliability and validity of several key constructs examined in this research program (viz. professional fit, occupational commitment, transition to practice self-efficacy, general self-efficacy, social and structured support, and job and organisational attraction). The first aim of this chapter is to provide a summary of the initial screening conducted on the datasets used within this research program. The second aim of this chapter is to conduct an exploratory factor analysis on each construct. The third aim is to examine each measurement model using single-factor congeneric analysis. The final aim of this chapter is to investigate the discriminant validity between measurement models that have been proposed to be theoretically similar, yet empirically distinct. It was proposed to use multifactor confirmatory factor analyses to determine whether the theoretically proposed relationships are consistent with the empirical data. These analyses were conducted to investigate the following research questions:

1.1 Does each scale represent the same construct across samples and measurement occasions?

1.2 Does each scale have sufficient convergent validity and discriminant validity for use within this research program?
Method

Participants

Participants comprised third year bachelor of nursing undergraduate students from nine Australian universities. Data were collected from students prior to, and following their final placement, producing three sample subsets for use within the research program. The first sample comprised data collected from Australian undergraduate nursing students prior to their final placement ($N = 399$). The second sample comprised data collected from students following their final placement ($N = 538$). The final sample represents the matched, longitudinal data set ($N = 264$). The participants have been described in detail in chapter 4.

Measures

Person-organisation fit

Person-organisation fit was measured using the modified three-item scale developed by Cable and Judge (1996). An example of a modified item is, “Do you expect the values and personality of this workplace reflect your own values and personality?” Each item used was calibrated over a six-point scale ranging from (1) not at all to (6) completely. Detailed information on the scale is in chapter 4.

Person-job fit

Person-job fit was measured with six items developed by Cable and DeRue (2002), which was calibrated over a six-point scale ranging from strongly disagree (1) to strongly agree (6). An example of a modified scale item is “there is a good fit between what this speciality will offer me and what I am looking for in a speciality”. The multidimensional
scale constitutes both person-job needs-supplies fit and person-job demands-abilities fit. Detailed information on the scale is presented in chapter four.

**General self-efficacy**

General self-efficacy was measured using the new general self-efficacy scale (NGSE; Chen et al., 2001). A sample item from the NGSE scale is “I believe I can succeed at most any endeavour to which I set my mind”. The scale was calibrated over a six point scale ranging from (1) strongly disagree to (2) strongly agree. Detailed information on the scale is presented in chapter four.

**Transition to practice self-efficacy**

The 10 item measure of transition to practice self-efficacy was calibrated over a six point scale ranging from (1) strongly disagree to (6) strongly agree. Sample items are, “I am confident in my ability to locate a graduate program / employment that suits me,” “I am confident in my abilities to communicate effectively with patients when I graduate,” and “I believe in my abilities to deal with stress and challenges in the ward or the team when I graduate.” Detailed information on the scale is presented in chapter four.

**Self-esteem**

Self-esteem was measured using Rosenberg’s (1965) 10-item scale. A sample item for the scale is “I feel that I have a number of good qualities.” The 10-item measure was calibrated over a six point scale ranging from (1) strongly disagree to (6) strongly agree. Detailed information on the scale is presented in chapter four.
Professional fit

A four-item measure of professional fit was designed for this research program. Each item reflected subjective fit with values or goals of the profession. A sample item is, “to what extent do you feel like you fit with the nursing profession at large.” The four-item measure was calibrated over a six point scale ranging from (1) strongly disagree to (6) strongly agree. Detailed information on the scale is presented in chapter four.

Occupational commitment

Occupational commitment was measured using a modified version of Meyer and Allen’s (1991) affective commitment measure, which was calibrated across a 6-point scale ranging from strongly disagree (1) to strongly agree (6). Four items from the affective commitment scale were modified to measure occupational commitment: these were, “I would be very happy to spend the rest of my career within the nursing profession”, “I think that I could easily become as attached to another profession as to this one”, “I do not feel emotionally attached to the nursing profession,” and, “The nursing profession has a great deal of personal meaning for me.” Detailed information on the scale is presented in chapter four.

Structured and Social Support

The structured support offered within placement was assessed using a measure designed for this research program. A sample item of the newly developed scale is, “This placement was structured so that I had the opportunity to discuss experiences and ask questions with experienced staff members”. A modified version of Jones’ (1986) scale of investiture / divestiture socialisation was used to capture social support. Sample items for the social scale are, “almost all of the staff on this placement were supportive of me
personally,” and “staff went out of their way to help me fit in within the workplace”. Both scales were calibrated across a 6-point scale ranging from strongly disagree (1) to strongly agree (6). Detailed information on the scale is presented in chapter four.

**Specialty and organisational attraction**

Scale items for organisational attraction included “next year, working within this hospital/workplace is a very attractive option for me”, “this hospital/workplace will be one the best hospital/workplace to work for,” and “this hospital/workplace will offer me everything I am looking for in a hospital/workplace to work with.” Scale items for specialty attraction included “next year, working in this speciality / area of nursing is a very attractive job option for me” and “this speciality / area of nursing is one of the best speciality / area of nursing to work in.” Both scales were calibrated across a 6-point scale ranging from strongly disagree (1) to strongly agree (6). Detailed information on the scale is presented in chapter four.

**Procedure**

This section presents information on the procedures specific to study one. In addition to the general procedure discussed in chapter four, the pre- and post-placement datasets were split to facilitate the analyses of each scale. This is a commonly used procedure to validate measurement models (Byrne, 2009, O’Friborg, 2009; Rhodes, 2004), which involved randomly splitting data into an exploratory and holdout sample. Exploratory factor analysis (EFA) of the proposed measurement models was conducted on the exploratory sample, and confirmatory factor analysis (CFA) was conducted by using the variance–covariance matrices from both the exploratory and holdout datasets simultaneously. In order to validate each measurement model, a nested model comparison
was conducted in which the factor loadings and correlations estimated on the exploratory dataset were validated on the holdout dataset.

Results

Preliminary Analysis

Missing Data, Outliers and Normality

Eighty cases with more than 50% of the data missing were found across the pre-placement, post-placement and matched datasets. Analysis of variance showed that the missing data were not dependent on any of the demographic variables ($p > .05$), and Little’s MCAR test showed that the data was missing completely at random ($p > .05$). Given that data imputation is problematic for cases with a large amount of missing values, these cases were listwise deleted (Tabachnick & Fidell, 2007). For the remaining samples, a maximum of 2.8% of data was missing for each variable, thus, the estimation maximisation (EM) procedure was used to impute missing data (Enders & Bandalos, 2001). Each dataset was then investigated for the presence of outliers using standardised scores and box plots (Tabachnick & Fidell, 2007). No extreme outliers were detected within the unit weighed totals of each scale. Next, Mahalanobis distances were calculated for each variable and examined to determine presence of multivariate outliers, and the results were assessed against a chi-square distribution using a conservative probability level ($p < 0.001$; Tabachnick & Fidell, 2007). While the results revealed that univariate outliers would not affect the analysis, multivariate outliers were detected in 34 cases, and these were deleted from each dataset. Following this, multicollinearity was examined using the tolerance and variance inflation factor (VIF) values and was shown to present no threat to data analysis and interpretation. Normality statistics and distribution graphs revealed no major departures...
from normality for each of the unit weighed scale totals. Overall, following data screening, the pre-placement dataset (time 1) contained 386 cases, the post-placement dataset (time 2) contained 476 cases, and the matched dataset contained 242 cases.

The pre- and post-placement samples were randomly split into an exploratory and holdout dataset. The pre-placement sample (time one; \( N = 386 \)) was split into two data sets representing a exploratory \( (N = 199) \) and holdout \( (N = 187) \) group. Likewise, the post-placement sample (time two; \( N = 476 \)), was split into two datasets representing a exploratory \( (N = 239) \) and holdout \( (N = 287) \) group.
Single Factor Measurement Analysis

The following hypotheses were tested using the single factor measurement models for each of the eight scales proposed in chapter 5:

**H3.1.** Each of the scales (viz. professional fit, occupational commitment, transition to practice self-efficacy, general self-efficacy, social and structured support, and job and organisational attraction) is represented by a single factor solution.

**H3.2.** The factor loadings for each item within the identified scales (viz. professional fit, occupational commitment, transition to practice self-efficacy, general self-efficacy, social and structured support, and job and organisational attraction) are invariant across samples and measurement occasions.

The results of the initial investigation of the hypothesised measurement structure using EFA and scale reliability are presented first. This is followed by the results of the CFA, including the convergent and construct validity for each construct. Detailed information on the approach to model testing can be found in chapter 3.

*Exploratory Factor Analysis*

Five independent EFA’s were conducted using the exploratory datasets. In the first EFA, professional fit was examined along with the remaining person-environment fit constructs (i.e., person-job needs-supplies, person-job demands-abilities, and person-organisation fit). In the second EFA, both transition to practice self-efficacy and GSE were examined simultaneously. In the fourth EFA, both social and structured support were examined simultaneously. Finally, both job and organisational attraction were investigated
concurrently in the final EFA. This procedure provided an initial test to determine whether
the hypothesised number of latent constructs were identified within the data. A single
factor EFA was conducted on the occupational commitment scale. For each of the five
analyses, the KMO test of sampling adequacy ranged from 0.68 to 0.86 and indicated that
the dataset was structured and suitable for EFA. Furthermore, Bartlett’s test of sphericity
identified to the presence of an underlying factor structure, and the scree plot identified the
correct number of latent constructs for each scale.

Each scale was investigated using maximum likelihood estimation, with oblimin
rotation. The factor loadings and variance estimates presented in table 6.1 provide
preliminary evidence supporting H1.1 that each scale is represented by a single factor
solution. With the exception of the person-organisation fit scale, all factor loadings were
greater than 0.52, which provided initial support for the convergent validity of each scale.
Furthermore, the rotated factor solutions showed no substantial cross loadings between the
items, and each model accounted for more than 40% of the variance within the indicators.
### Table 6.1

*Factor Loadings and Estimated Variance Explained by each Latent Construct*

<table>
<thead>
<tr>
<th>Factor Loadings</th>
<th>Percentage Variance Extracted</th>
<th>Total Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Person-Environment Fit</strong></td>
<td></td>
<td>72.18%</td>
</tr>
<tr>
<td>Person-Organisation Fit</td>
<td>.55 - .67</td>
<td>31.15%</td>
</tr>
<tr>
<td>Person-Job Demands-Abilities Fit</td>
<td>.78 – .97</td>
<td>8.07%</td>
</tr>
<tr>
<td>Person-Job Needs-Supplies Fit</td>
<td>.78 – .94</td>
<td>18.32%</td>
</tr>
<tr>
<td>Professional Fit</td>
<td>.66 – .92</td>
<td>14.01%</td>
</tr>
<tr>
<td><strong>Occupational Commitment</strong></td>
<td></td>
<td>43.19%</td>
</tr>
<tr>
<td>General Self-Efficacy</td>
<td>.45 - .91</td>
<td>56.71%</td>
</tr>
<tr>
<td>Transition to Practice Self-Efficacy</td>
<td>.52 - .95</td>
<td>8.69%</td>
</tr>
<tr>
<td><strong>Social and Structured Support</strong></td>
<td></td>
<td>66.24%</td>
</tr>
<tr>
<td>Social Support</td>
<td>.52 – .98</td>
<td>52.53%</td>
</tr>
<tr>
<td>Structured Support</td>
<td>.61 – .78</td>
<td>13.71%</td>
</tr>
<tr>
<td><strong>Attraction</strong></td>
<td></td>
<td>80.26%</td>
</tr>
<tr>
<td>Job Attraction</td>
<td>.92 – .94</td>
<td>38.94%</td>
</tr>
<tr>
<td>Organisational Attraction</td>
<td>.92 – .96</td>
<td>41.35%</td>
</tr>
</tbody>
</table>

Regarding the person-organisation fit scale, the item “to what degree did your values and personality prevent you from fitting in the workplace because they are different from most of the other employees’ values and personality” was problematic as determined by a lower than acceptable factor loading. Cronbach’s alpha for this scale was also lower than expected (α = .68) which reflected the problematic item. When this item was removed from the scale, the reliability estimate improved greatly (α = .78), thus, this item was deemed to be a poor indicator of person-organisation fit. Overall, mixed support for the convergent validity of the person-organisation fit scale was found within the analysis.
Table 6.2

*Descriptive Statistics for the Scale Items and Chronbach’s Alpha Reliability Estimates*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>Corrected Item Total Correlation</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Person-Environment Fit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person-Organisation Fit</td>
<td>4.54 – 4.60</td>
<td>0.98 – 1.31</td>
<td>.55 – .61</td>
<td>.78</td>
</tr>
<tr>
<td>Person-Job Demands-Abilities Fit</td>
<td>4.21 – 4.40</td>
<td>0.62 – 0.69</td>
<td>.78 – .97</td>
<td>.90</td>
</tr>
<tr>
<td>Person-Job Needs-Supplies Fit</td>
<td>3.92 – 4.35</td>
<td>1.29 – 1.42</td>
<td>.78 – .94</td>
<td>.92</td>
</tr>
<tr>
<td>Professional Fit</td>
<td>4.80 – 4.99</td>
<td>0.74 – 0.82</td>
<td>.66 – .92</td>
<td>.90</td>
</tr>
<tr>
<td><strong>Occupational Commitment</strong></td>
<td>3.87 – 4.62</td>
<td>1.20 – 1.42</td>
<td>.58 – .73</td>
<td>.75</td>
</tr>
<tr>
<td><strong>Self-Efficacy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Self-Efficacy</td>
<td>4.60 – 5.02</td>
<td>0.68 – 0.98</td>
<td>.61 – .80</td>
<td>.92</td>
</tr>
<tr>
<td>Transition to Practice Self-Efficacy</td>
<td>4.52 – 5.09</td>
<td>0.84 – 1.08</td>
<td>.63 – .83</td>
<td>.92</td>
</tr>
<tr>
<td><strong>Social and Structured Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Support</td>
<td>4.43 – 4.94</td>
<td>1.15 – 1.41</td>
<td>.69 – .83</td>
<td>.89</td>
</tr>
<tr>
<td>Structured Support</td>
<td>3.74 – 4.72</td>
<td>1.12 – 1.50</td>
<td>.79 – .80</td>
<td>.83</td>
</tr>
<tr>
<td><strong>Attraction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Attraction</td>
<td>4.47 – 4.33</td>
<td>1.51 – 1.56</td>
<td>.78</td>
<td>.88</td>
</tr>
<tr>
<td>Organisational Attraction</td>
<td>4.10 – 4.46</td>
<td>1.52 – 1.62</td>
<td>.86 – .88</td>
<td>.93</td>
</tr>
</tbody>
</table>

As shown in table 6.2, Cronbach’s alpha was acceptable for each of the scales, and corrected item correlations ranged from .61 to .80, which supported the items used to measure each construct. In addition, each item mean fell slightly above the midpoint on a six point scale, and the standard deviation suggested that the items had a moderate degree of variability. Collectively, this pattern of results provided initial support for H1 that each scale would be represented by a one-factor solution: consequently, each scale was investigated using CFA in order to test H1.1 stringently.

*Single Factor Congeneric Analysis*

This section describes the second step in investigating the construct validity of the measurement models. To test for a single-factor solution, all of the indicator variables were forced to load on the hypothesised latent construct. In the initial analysis, no error
covariance paths were freed between the items, which represented a highly constrained version of each measurement model. Goodness of fit supported three highly constrained single factor models which included: person-job needs-supplies fit ($\chi^2_{(1)} = 0.20, p > 0.05$, RMSEA = .00; TLI = 1.00, AGFI = 1.00); person-job demands-abilities fit ($\chi^2_{(1)} = 1.40, p > 0.05$, RMSEA = .04; TLI = 0.99, AGFI = 0.98); and structured support ($\chi^2_{(1)} = 1.40, p > 0.05$, RMSEA = .04; TLI = 0.99, AGFI = 0.98). Each model had sufficient convergent validity as shown by the high factor loadings for each item ($\lambda > 0.7, p < 0.01$). Post hoc modifications were required on the remaining models to achieve acceptable goodness of fit statistics.

The first model to fail the goodness of fit test was professional fit, and was investigated for areas of misspecification. The modification indices showed that to improve model fit, the error path between the item “to what extent do you feel that the nursing profession represents your own personal values?” and the item, “to what extent do you feel like you fit with the nursing profession at large?” should be freed. Both items were phrased according to the extent the respondent ‘feels’ like they fit with the nursing profession. In particular, the item requests the respondent’s affective, rather than evaluative, response to their profession. Under this rationale, the error correlation was set as a freed parameter. Goodness of fit indices supported the modified model ($\chi^2_{(1)} = 0.49, p > .05$, RMSEA = .00; TLI = 1.00, AGFI = 1.00), and factor loadings were greater than 0.06 supporting its construct validity.

The second construct to fail the goodness of fit test was person-organisation fit. The modification indices identified that the latent construct accounted for little variance in the item, “to what degree did your values and personality prevent you from fitting in the workplace because they are different from most of the other employees' values and personality?” This was consistent with the results of the EFA in which the factor loading was
less than .3. One possible explanation is that the reverse coded item represents a multidimensional component of person-organisation fit within this sample, or a reverse wording effect. The convergent validity of item three was considered questionable, thus, the item was deleted from the model. Goodness of fit supported the modified model ($\chi^2_{(1)} = 0.55$, $p > .05$, RMSEA = .00; TLI = 1.00, AGFI = 1.00), and factor loadings exceeded 0.55 and were significant at the 0.01 level, which provided evidence of convergent validity.

The third construct to fail the goodness of fit test was occupational commitment. Inspection of the residual covariance matrix showed that the error correlation between the item “I think that I could easily become as attached to another profession as to this one,” and “I do not feel emotionally attached to the nursing profession,” should be freed to improve model fit. Furthermore, the modification indices identified that an error correlation path should be freed between the item, “I do not feel emotionally attached to the nursing profession” and “the nursing profession has a great deal of personal meaning for me”. It was considered that the relationships between the items were potentially influenced by the affective nature of their wording. Therefore, the error paths were set as free parameters, and the single-factor solution produced excellent fit statistics ($\chi^2_{(1)} = 1.21$, $p > 0.05$, RMSEA = 0.01, TLI = 1.00, AGFI = 0.99). Furthermore, factor loadings exceeded .50 and were significant at the 0.01 level, which provided evidence of convergent validity.

The fourth construct to fail the goodness of fit test was GSE. Model diagnostic checks were conducted to identify the source of misspecification. Assessment of multivariate outliers between the scale items identified seven cases presenting as potentially influencing the chi square estimate, and these cases were deleted from the dataset. Univariate checks for normality showed that all eight items were negatively skewed ($t > 1.96$), so each item was subjected to a square root transformation to correct for non-normality. Inspection of
the standardised residuals highlighted additional areas of model misspecification: the items, “I am confident that I can perform effectively on many different tasks,” and, “compared to other people, I can do most tasks very well” and, “even when things are tough, I can perform quite well” were found to be highly related. These items were considered to be related through their reference to performing well on a variety of tasks. Therefore, given the relationship between the items, the error correlations paths were freed. Goodness of fit for the eight item solution was excellent ($\chi^2_{(34)} = 44.61, p > 0.05$, RMSEA = .03; TLI = .99, AGFI = .95). Factor loadings exceeded 0.70 and were significant at the 0.01 level, supporting the convergent and construct validity of the single-factor model.

The fifth model to fail the goodness of fit test was the transition to practice self-efficacy scale. The standardised residual covariance matrix and modification indices were examined to determine areas of misspecification: this showed that the single-factor model failed to account for residual variance between several items, and suggested the addition of four error correlation paths to improve model fit. The first set of covariance paths was added between “I am confident in my ability to seek help and feedback from staff after I graduate”, “I believe in my abilities to deal with stress and challenges in the ward or the team when I graduate” and “I am confident in my abilities to communicate effectively with patients when I graduate”. These modifications were considered to represent a smaller construct reflecting the role of communication skills and dealing with work related stress and pressure. The second set of modifications reflected a smaller construct surrounding the application of skills to practice: covariance paths were added between “I am confident in my ability to put my knowledge, skills and abilities to practice after I graduate” and “I am confident in my abilities to communicate effectively with patients when I graduate”. The modified single-factor model of transition to practice self-efficacy produced excellent fit
statistics ($\chi^2_{10} = 14.50, p > 0.05, \text{RMSEA} = .04; \text{TLI} = .99, \text{AGFI} = .95$). In addition, squared multiple correlations showed that more than 50% of the variance within the items was explained by the single-factor solution. Finally, factor loadings were all greater than .65, and were significant at the 0.001 level, which confirming the convergent and construct validity of the single-factor model.

The sixth model to fail the goodness of fit test was social support. The item “during this placement, I always had someone to turn to for help and support” had a low squared multiple correlation (SMC= .04) and a small factor loading, and was deleted from the model. Furthermore, the standardised residual covariance matrix and the modification indices showed that an error correlation path should be freed between “I have been made to feel that my skills and abilities will be a very important asset to this workplace” and “staff went out of their way to help me fit in within the workplace”. These items were considered to represent a smaller construct reflecting the reassurance provided to students to help them feel a part of the team. Goodness-of-fit estimates supported the single-factor model of social support ($\chi^2_{1} = .01; p = 0.92, \text{RMSEA} = .00; \text{TLI} = 1, \text{AGFI} = .98$). All factor loadings were greater than 0.6 ($p <0.001$), which confirmed the convergent validity of the single-factor model.

A single factor CFA could not be conducted on the job attraction scale as it only has two items, thus in order to achieve identification, a multifactor CFA was conducted by investigating both scales simultaneously (viz. job and organisation attraction). For the two-factor model, the modification indices showed that to improve model fit, a correlation path should be freed between “next year, working in this speciality / area of nursing is a very attractive job option for me” and “next year, working within this hospital/workplace is a very attractive option for me”. Inspection of the item content revealed similarities based on
their reference to ‘next year’. Therefore, the error terms were specified as free parameters, and goodness of fit supported the single-factor solution ($\chi^2(8) = 19.05; p = 0.30$, RMSEA = .05, AGFI = .95, TLI = .99). Furthermore, all factor loadings were over 0.60 ($p < 0.001$), which provided support for the convergent validity of the scale items.

Although several modifications were applied to each hypothesised measurement model, the results supported H1.1 - that each scale would be represented by a single factor solution. The next step investigated factor loading invariance between the exploratory and holdout datasets. Within this analysis, a baseline model (model one) was developed that used both the exploratory and holdout samples to freely estimate the parameters for each measurement model. This model was compared to a constrained model (model two), where the factor loading estimates from the exploratory sample were specified as fixed parameters on the holdout sample. The models were compared using the chi-square difference test, and a non-significant chi-square estimate supported factor loading invariance. For the constructs representing person-environment fit (viz. person-organisation fit, person-job fit, professional fit), GSE, transition to practice self-efficacy, and attraction, the pre-placement exploratory ($N = 199$) and holdout ($N = 187$) datasets were used. For those constructs collected at time 2 only (viz. occupational commitment, social and structured support), the post placement exploratory ($N = 239$) and holdout samples ($N = 287$) were used to estimate the factor loadings and test model invariance.
As shown in table 6.3, goodness-of-fit statistics were excellent for all of the constrained models: however, the chi-square difference test identified that the unconstrained model representing GSE was a better fit than the fully constrained model. In order to determine the source of measurement invariance, equality constraints were removed from all factor loadings except for item one. This was followed by a step-by-step process to identify the source of model invariance, by gradually adding invariance constraints on each of the factor loadings. This process demonstrated that all factor loadings were invariant until reaching the item “even when things are tough, I can perform quite well.” When the parameter for this item was unconstrained, measurement invariance for

Table 6.3.

*Goodness of Fit Estimates for the Single-Factor Models and Comparison between Exploratory and Holdout Samples*

<table>
<thead>
<tr>
<th>Model One</th>
<th>Model Two</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unconstrained Factor Loadings</strong></td>
<td><strong>Constrained Factor Loadings</strong></td>
</tr>
<tr>
<td>$\chi^2$ (df)</td>
<td>AGFI</td>
</tr>
<tr>
<td>PJ DA Fit</td>
<td>0.90 (1)</td>
</tr>
<tr>
<td>PJ NS Fit</td>
<td>0.18 (1)</td>
</tr>
<tr>
<td>PO Fit</td>
<td>0.02 (1)</td>
</tr>
<tr>
<td>Prof Fit</td>
<td>5.48 (2)</td>
</tr>
<tr>
<td>COM</td>
<td>1.20 (2)</td>
</tr>
<tr>
<td>GSE</td>
<td>44.61 (34)</td>
</tr>
<tr>
<td>TSE</td>
<td>14.50 (10)</td>
</tr>
<tr>
<td>Struc Supp</td>
<td>4.98 (4)</td>
</tr>
<tr>
<td>Soc Supp</td>
<td>2.05 (2)</td>
</tr>
<tr>
<td>Attraction</td>
<td>19.05 (8)</td>
</tr>
</tbody>
</table>

N.B. * denotes $p < .05$; $\chi^2$ denotes chi squared; df denotes degrees of freedom; RMSEA denotes Root Mean Square Error of Approximation; TLI denotes the Tucker Lewis Index; AGFI denotes Adjusted Goodness of Fit Index; PO denotes person-organisation; PJ DA denotes person-job demands-abilities; PJ NS denotes person-job needs-supplies; Prof denotes professional fit; COM denotes occupational commitment; GSE denotes general self-efficacy; TSE denotes transition to practice self-efficacy; struct supp denotes structured support; soc supp denotes social support; attraction denotes job and organisational attraction. 

* Denotes pre WIL exploratory ($N = 199$) and holdout ($N = 187$) datasets. 

† Denotes post WIL exploratory ($N = 239$) and holdout ($N = 287$) datasets.
the remaining seven items was supported ($\Delta \chi^2 = 7.17; p = .30$) but when the invariance constraint was placed on this item, invariance was no longer supported ($\Delta \chi^2 = 15.06; p = .04$). The results indicated that this item did not reflect the latent construct of general self-efficacy in the same manner across the exploratory and holdout datasets. However, while full invariance of the model was not supported, the chi square test was close to the 0.05 critical value (i.e., $\Delta \chi^2 = 15.06; p = .04$). Thus, when invariance was assessed at a conservative alpha level (i.e., 0.01), measurement invariance was supported across all eight items between both datasets. Additionally, the difference between the factor loadings of item eight was small. Specifically, for the exploratory sample, the factor loading was 0.62 and for the holdout sample, the loading was 0.75. Therefore, while measurement invariance was unsupported, the full scale was retained for the subsequent analyses.

With the exception of the GSE scale, the results of the measurement invariance test provided strong support for H1.2 - that each scale is invariant across samples. In order to test measurement invariance for the repeated measures scales, a second series of analyses was conducted on the person-environment fit (viz. person-organisation fit, person-job demands-abilities fit, person-job needs-supplies fit), transition to practice self-efficacy and attraction (viz. job and organisational attraction) scales using the matched pre- and post-data-set ($N = 233$).
Table 6.4.

*Nested Model Comparison of Measurement Invariance across Time Points for the Repeated Measures Scales*

<table>
<thead>
<tr>
<th></th>
<th>Model One</th>
<th>Model Two</th>
<th>Δχ²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unconstrained Factor Loadings</td>
<td>Constrained Factor Loadings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>χ² (df)</td>
<td>AGFI</td>
<td>RMSEA</td>
</tr>
<tr>
<td>PJ DA Fit</td>
<td>1.40 (1)</td>
<td>1.00</td>
<td>.04</td>
</tr>
<tr>
<td>PJ NS Fit</td>
<td>0.20 (1)</td>
<td>0.99</td>
<td>.00</td>
</tr>
<tr>
<td>PO Fit</td>
<td>0.55(1)</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>Prof Fit</td>
<td>0.49 (1)</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>TSE</td>
<td>13.18 (10)</td>
<td>0.96</td>
<td>.03</td>
</tr>
<tr>
<td>Attraction</td>
<td>21.97 (8)</td>
<td>0.95</td>
<td>.05</td>
</tr>
</tbody>
</table>

N.B. * denotes p > .05; χ² denotes chi squared; df denotes degrees of freedom; RMSEA denotes Root Mean Square Error of Approximation; TLI denotes the Tucker Lewis Index; AGFI denotes Adjusted Goodness of Fit Index; PO denotes person-organisation; PJ DA denotes person-job demands-abilities; PJ NS denotes person-job needs-supplies; Prof denotes professional fit; COM denotes occupational commitment; GSE denotes general self-efficacy; TSE denotes transition to practice self-efficacy; struct supp denotes structured support; soc supp denotes social support; attraction denotes job and organisational attraction.

As presented in table 6.4, each of the repeated measures scales (viz. person-environment fit, transition to practice self-efficacy and attraction) produced excellent fit statistics for both the unconstrained and constrained models. Furthermore, the chi-square difference test identified that each measurement model produced statistically equivalent factor loadings across time. Collectively, with the exception of the GSE scale, the results supported H1.2 - that the items used to measure each construct represent the same construct across samples and measurement occasions.

**Discriminant Validity Analysis**

This section investigates the following hypotheses designed to test the multi-factor measurement models for each scale that were proposed to be theoretically similar, yet empirically distinct:

**H3.3.** The four-factor solution of person-environment fit is distinct, but related, within a CFA. Each construct is discriminant valid.
H3.4. The theoretical distinctions between professional fit and occupational commitment are represented by a two-factor CFA. Both constructs are discriminant valid.

H3.5. The conceptual distinctions between general self-efficacy, self-esteem and transition to practice self-efficacy are represented by a three-factor model within a CFA. Each construct are discriminant valid.

H3.6. The theoretically established two-factor solution of social and structured support are discriminant valid. Both constructs are related, albeit, statistically distinct.

H3.7. The theoretically established two-factor solution of attraction is distinct, albeit statistically related, within a CFA. Each construct is discriminant valid.

The following section presents the results of the paired construct tests first, then the results of the shared variance tests. Detailed information on the approach to model testing and investigating discriminant validity can be found in chapter 3.

**Person-Environment Fit**

The discriminant validity between each dimension of person-environment fit (i.e., person-organisation, person-job demands-abilities fit, person-job needs-supplied fit, and professional fit) was investigated using the post-placement exploratory (\(N = 239\)) and holdout (\(N = 287\)) datasets simultaneously. Goodness of fit failed to support the four-factor solution so the standardised residual covariance matrix was examined to identify areas of model misspecification. The results showed high residual covariance between the item “to what extent do you identify with the values of the nursing profession?” with several items within the measures of person-environment fit. While this item showed a strong factor loading with professional fit (\(\lambda = .75\)), the residual variance was identified to be a potential threat to model fit. Upon examination of the item wording, it was identified that values
congruence was also captured by the item “to what extent do you feel that the nursing profession represents your own personal values?” thus the item was dropped from the analysis.

In addition, the modification indices suggested that to improve model fit, a path should be freed between the item “the attributes that I look for in a speciality / area of nursing will be fulfilled very well by this speciality / area of nursing when I graduate,” to the latent construct representing person-job demands-abilities fit. As the item was from the scale of person-job needs-supplies fit, it was anticipated that cross loadings might occur, as researchers have suggested that the constructs are similar (Cable & Edwards, 2004). Moreover, while some scholars argue that cross loadings are a sign of poor discriminant validity (Farrell, 2009), researchers have proposed that highly restrictive models are problematic (Marsh, Muthen, Asparouhov, Ludtke, Robitzsch, Morin & Trautwein, 2009). As proposed by Marsh et al. (2009), the use of highly restrictive CFA models can lead to distorted factors and overestimated correlations, through failing to account for small cross loadings. Therefore, including cross loading paths may improve discriminant validity tests through increasing the accuracy of structural relationships. The results demonstrated that the variance explained by the cross loading path was low (SMC = .29) when compared with the relationship with the hypothesised factor (SMC = .76). Therefore, the path was freed and the minor cross loading was allowed. Goodness of fit statistics supported the modified baseline four-factor model of person-environment fit ($\chi^2_{(74)} = 117.11, p > 0.05$, RMSEA = .03, AGFI = .93, TLI = .99).

In the next step, six, paired construct tests were compared to the baseline model (model one; see figure 6.1). Within the baseline model, all correlation paths were freely estimated, which tested the proposition that the constructs were related but empirically
distinct. Models two through seven represented the six possible combinations of single-factor paired constructs (see table 6.5). These models were compared to the baseline model (model one), to assess discriminant validity. Model eight represents a confirmatory test of the hypothesised four-factor model, through specifying invariant correlations between the constructs for both the exploratory and holdout datasets.

**Figure 6.1. Multifactor CFA between the dimensions of person-environment fit.**

N.B. PJ-NS represents person-job needs-supplies fit; PJ-DA represents person-job demands-abilities fit; PF represents professional fit; and, PO represents person-organisation fit. Indicator variables not represented in this figure. Indicator variables not represented here.

Goodness of fit and chi-square difference tests were used to compare each model to the baseline model (see table 6.6). The hypothesised four-factor model produced a significantly better chi-square estimate (model one through seven; $p < 0.05$), and excellent fit statistics. Thus, the results supported the discriminant validity of each construct. Subsequently, the four-factor solution was validated by placing equality constraints between each sample on the correlation paths (model eight). Goodness-of-fit estimates for
model eight were excellent, and the difference in chi-square was non-significant compared to model one. Therefore, the results are further evidence to support the notion that each construct is related, yet, statistically distinct.

Table 6.5

*Nested Model Comparisons for the Discriminant Validity of Person-Environment Fit*

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model One</td>
<td>Unconstrained four-factor baseline model</td>
<td>All paths in figure 6.1 freely estimated</td>
</tr>
<tr>
<td>Model Two</td>
<td>PJ-NS and PJ-DA fit as one dimension</td>
<td>Path a in figure 6.1 constrained to 1</td>
</tr>
<tr>
<td>Model Three</td>
<td>PJ-DA fit and Professional Fit as one dimension</td>
<td>Path b in figure 6.1 constrained to 1</td>
</tr>
<tr>
<td>Model Four</td>
<td>Professional Fit and PO fit as one dimension</td>
<td>Path c in figure 6.1 constrained to 1</td>
</tr>
<tr>
<td>Model Five</td>
<td>PJ-DA fit and professional fit as one dimension</td>
<td>Path d in figure 6.1 constrained to 1</td>
</tr>
<tr>
<td>Model Six</td>
<td>PJ-DA and PO fit as one dimension</td>
<td>Path e in figure 6.1 constrained to 1</td>
</tr>
<tr>
<td>Model Seven</td>
<td>PJ-NS and PO fit as one dimension</td>
<td>Path f in figure 6.1 constrained to 1</td>
</tr>
<tr>
<td>Model Eight</td>
<td>Correlation invariance across groups</td>
<td>Equal correlations between the four constructs†</td>
</tr>
</tbody>
</table>

† denotes equal correlations between the parameters between the post-placement exploratory and holdout subgroups. PO denotes person-organisation fit; PJ-DA denotes person-job demands-abilities fit; PJ-NS denotes person-job demands-abilities fit.

In the final step, the average variance extracted was compared to the variance shared between each of the constructs. The average variance extracted ranged from 0.77 to 0.85, which was greater than the shared variance that ranged from 0.07 to 0.36 (see table 6.7). Therefore, the results demonstrated strong discriminant validity for each of the constructs.
Table 6.6

Nested Model Comparisons for the Discriminant Validity of Person-Environment Fit

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df)</th>
<th>$P$</th>
<th>AGFI</th>
<th>RMSEA</th>
<th>TLI</th>
<th>$\Delta \chi^2$</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model One (Unconstrained)</td>
<td>117.10 (74)</td>
<td>.19</td>
<td>.93</td>
<td>.03*</td>
<td>.99</td>
<td>.99</td>
<td></td>
</tr>
<tr>
<td>Model Two</td>
<td>919.37 (76)</td>
<td>.01</td>
<td>.55</td>
<td>.15</td>
<td>.66</td>
<td>802.26</td>
<td>.00</td>
</tr>
<tr>
<td>Model Three</td>
<td>706.93 (76)</td>
<td>.01</td>
<td>.61</td>
<td>.13</td>
<td>.75</td>
<td>589.82</td>
<td>.00</td>
</tr>
<tr>
<td>Model Four</td>
<td>359.17 (76)</td>
<td>.01</td>
<td>.82</td>
<td>.09</td>
<td>.89</td>
<td>252.06</td>
<td>.00</td>
</tr>
<tr>
<td>Model Five</td>
<td>719.77 (76)</td>
<td>.01</td>
<td>.62</td>
<td>.14</td>
<td>.75</td>
<td>606.66</td>
<td>.00</td>
</tr>
<tr>
<td>Model Six</td>
<td>330.64 (76)</td>
<td>.01</td>
<td>.83</td>
<td>.09</td>
<td>.90</td>
<td>213.52</td>
<td>.00</td>
</tr>
<tr>
<td>Model Seven</td>
<td>322.64 (76)</td>
<td>.01</td>
<td>.83</td>
<td>.08</td>
<td>.90</td>
<td>205.52</td>
<td>.00</td>
</tr>
<tr>
<td>Model Eight</td>
<td>124.81 (80)</td>
<td>.21</td>
<td>.93</td>
<td>.03*</td>
<td>.98</td>
<td>7.70</td>
<td>NS</td>
</tr>
</tbody>
</table>

N.B. * denotes RMSEA PCLOSE level > .05; $\chi^2$ denotes chi squared; df denotes degrees of freedom; $p$ denotes probability level associated with chi squared; AGFI denotes Adjusted Goodness of Fit Index; RMSEA denotes Root Mean Square Error of Approximation; TLI denotes the Tucker Lewis Index; $\Delta \chi^2$ denotes the difference in chi squared between the models; sig denotes the statistical significance of the difference between the models with NS indicating no significant differences between the models.

The superior model fit for freely estimated solution, the results of the paired construct tests, and the shared variance estimates constitute strong support for the discriminant validity between the constructs. Therefore, support for H1.3 was found that predicted that each person-environment fit construct is discriminant valid. In addition, the correlation estimates between the four constructs were invariant across the exploratory and holdout datasets, which was confirmatory evidence of the identified relationships within the hypothesised model.

Table 6.7

Average Variance Extracted and Shared Variance Estimates for the Person-Environment Fit

Scales

<table>
<thead>
<tr>
<th>Variable</th>
<th>Items</th>
<th>Items 1</th>
<th>Items 2</th>
<th>Items 3</th>
<th>Items 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Fit</td>
<td>3</td>
<td>.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person-Organisation Fit</td>
<td>2</td>
<td>.36</td>
<td>.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person-Job Demands-Abilities Fit</td>
<td>3</td>
<td>.22</td>
<td>.18</td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td>Person-Job Needs-Supplies Fit</td>
<td>3</td>
<td>.07</td>
<td>.27</td>
<td>.31</td>
<td>.82</td>
</tr>
</tbody>
</table>

N.B. Shared variance estimates are below the diagonal, and average variance extracted are presented on the diagonal.
Occupational Commitment and Professional Fit

The next step was to examine the discriminant validity between occupational commitment and professional fit scales using the post-placement exploratory dataset \( (N = 239) \) and holdout \( (N = 287) \) datasets simultaneously. The first step involved the development of the baseline model representing the two-factor solution (model one). As presented in table 6.7, model one was supported by the goodness of fit statistics. The next step involved the comparison of the baseline model to a constrained model (model two). Within model two, the correlation between occupational commitment and professional fit was constrained to equal one, which reflected a single-factor solution rather than the hypothesised two-factor model. The difference chi square test showed that the unconstrained model was significantly better than the constrained single-factor model, providing initial support for H1.4 that the constructs are distinct but statistically related.

Table 6.8

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 ) (df)</th>
<th>( P )</th>
<th>AGFI</th>
<th>RMSEA</th>
<th>TLI</th>
<th>( \Delta \chi^2 )</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model One</td>
<td>48.28 (34)</td>
<td>.25</td>
<td>0.90</td>
<td>.04*</td>
<td>.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Unconstrained)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model Two</td>
<td>112.14 (36)</td>
<td>.01</td>
<td>0.78</td>
<td>.09</td>
<td>.83</td>
<td>63.86</td>
<td>.00</td>
</tr>
<tr>
<td>Model Three</td>
<td>49.36 (35)</td>
<td>.25</td>
<td>0.90</td>
<td>.04*</td>
<td>.96</td>
<td>1.08</td>
<td>NS</td>
</tr>
</tbody>
</table>

N.B. * denotes RMSEA PCLOSE level > .05; \( \chi^2 \) denotes chi squared; df denotes degrees of freedom; \( p \) denotes probability level associated with chi squared; AGFI denotes Adjusted Goodness of Fit Index; RMSEA denotes Root Mean Square Error of Approximation; TLI denotes the Tucker Lewis Index; \( \Delta \chi^2 \) denotes the difference in chi squared between the models; sig denotes the statistical significance of the difference between the models with NS indicating no significant differences between the models.

Following the paired construct test, discriminant validity was investigated by calculating the shared variance and comparing this value to the average variance extracted by each construct. Regarding professional fit, the average variance extracted by the latent
construct was 0.76, and for occupational commitment was 0.58. Both of these estimates were greater than the shared variance of 0.48, which supports the discriminant validity of the constructs. In order to validate the findings, the variance between the constructs was constrained to be equal across the exploratory and holdout datasets ($N = 287$; model three). As presented in table 6.7, goodness of fit supported the constrained model which validated the hypothesised relationships. With a moderate correlation between the constructs ($r = .62$), the findings provided strong support for H1.4 that professional fit and occupational commitment are distinct constructs.

**General Self-Efficacy, Transition to Practice Self-Efficacy and Self Esteem**

The discriminant validity between the NGSE scale, the transition to practice self-efficacy scale, and the Rosenberg (1965) self-esteem scale was investigated using the pre-placement exploratory ($N = 199$) and holdout ($N = 187$) datasets simultaneously. In the first step, a three-factor model representing self-esteem, general self-efficacy and transition to practice self-efficacy (model one) was investigated. Each model retained the error covariance paths established in the single-factor confirmatory analyses. Method effects associated with the Rosenberg self-esteem measure have been frequently reported by researchers (e.g., DiStefano & Motl, 2009), thus an additional latent construct was included within the model to account for the shared variance associated with the negatively worded items. Comparative fit index and RMSEA values of 0.96 and 0.04 respectively demonstrated that the three-factor model represented good fit for both samples. Furthermore, the RMSEA confidence intervals were both under the recommended 0.06 cut-off criterion. While TLI supported model fit with a value of 0.96, the bootstrap adjusted chi-square was below the 0.05 criterion for the two-group sample, so failed to support for the three-factor model. Given that chi-square is estimation is sensitive for large samples (i.e., $N > 200$; Byrne, 2009),
the model was investigated on the holdout sample independently, which produced a non-
significant chi square statistic ($\chi^2_{(230)} = 358.51; p = 0.06$). Thus, the higher chi-square
statistic in the combined dataset was considered a product of sample size, rather than a sign
of poor model fit. Therefore, this model was used to conduct paired construct tests, and to
calculate the average variance extracted within each construct.

![Diagram](image)

**Figure 6.2.** Discriminant validity between the NGSES, the transition to practice self-efficacy scale and the self-esteem scale

N.B. GSE represents ‘general self-efficacy’; SE represents ‘self-esteem’; TSE represents ‘transition to practice self-efficacy’.

Three paired construct tests were conducted on the data. Model two was a single-
factor model of general self-efficacy and self-esteem, which specified path ‘a’ in figure 6.2 to
equal one. Model three represented the single-factor solution of general self-efficacy and
transition to practice self-efficacy, which specified path ‘b’ in figure 6.2 to equal one. Model
four represented the single-factor solution of self-esteem and transition to practice self-
efficacy, which specified path ‘c’ in figure 6.2 to equal one. Model five was developed to
validate the structural relationships between each construct. Each factor correlation was
constrained between the exploratory and holdout samples. Each of these models was
compared to a freely estimated model (model one).
Table 6.8

Nested Model Comparisons for the Discriminant Validity between General Self-Efficacy, Transition to Practice Self-Efficacy, and Self-Esteem

<table>
<thead>
<tr>
<th>Model</th>
<th>χ² (df)</th>
<th>P</th>
<th>AGFI</th>
<th>RMSEA</th>
<th>TLI</th>
<th>Δχ²</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model One (Unconstrained)</td>
<td>712.98 (460)</td>
<td>.03</td>
<td>0.84</td>
<td>.04*</td>
<td>.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model Two</td>
<td>959.12 (462)</td>
<td>.01</td>
<td>0.76</td>
<td>.06</td>
<td>.90</td>
<td>246.15</td>
<td>.00</td>
</tr>
<tr>
<td>Model Three</td>
<td>1134.00 (462)</td>
<td>.01</td>
<td>0.75</td>
<td>.06</td>
<td>.87</td>
<td>421.03</td>
<td>.00</td>
</tr>
<tr>
<td>Model Four</td>
<td>994.00 (462)</td>
<td>.01</td>
<td>0.73</td>
<td>.06</td>
<td>.90</td>
<td>282.02</td>
<td>.00</td>
</tr>
<tr>
<td>Model Five</td>
<td>717.62 (463)</td>
<td>.03</td>
<td>0.84</td>
<td>.04*</td>
<td>.95</td>
<td>4.64</td>
<td>NS</td>
</tr>
</tbody>
</table>

N.B. * denotes RMSEA PCLOSE level > .05; χ² denotes chi squared; df denotes degrees of freedom; p denotes probability level associated with chi squared; AGFI denotes Adjusted Goodness of Fit Index; RMSEA denotes Root Mean Square Error of Approximation; TLI denotes the Tucker Lewis Index; Δχ² denotes the difference in chi squared between the models; sig denotes the statistical significance of the difference between the models with NS indicating no significant differences between the models.

As presented in table 6.8, goodness of fit failed to support any of the single factor models. Furthermore, the difference chi-square test for models one, two and three demonstrated that the unconstrained model was significantly better than any of the three single factor models. Collectively, this pattern of results provided initial support for H1.4 that each construct is statistically distinct.

In the final step, the average variance extracted was compared to the shared variance between each of the constructs. As presented in table 6.9, the average variance extracted was greater than the shared variance, providing support for the discriminant validity between the constructs. Taken together, the results produced strong support for H1.4 that all three constructs are statistically distinct.
Table 6.9

Average Variance Extracted and Shared Variance Estimates for General Self-Efficacy, Transition to Practice Self-Efficacy and Self-Esteem

<table>
<thead>
<tr>
<th>Variable Items</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Self-Efficacy</td>
<td>8</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>Transition to Practice Self-Efficacy</td>
<td>6</td>
<td>0.37</td>
<td>0.76</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>10</td>
<td>0.45</td>
<td>0.42</td>
</tr>
</tbody>
</table>

N.B. Shared variance estimates are below the diagonal, and average variance extracted is presented on the diagonal

Social and Structured Support

A paired construct test was conducted on both the social and structured support scales using the post-placement exploratory (\(N = 239\)) and holdout (\(N = 287\)) datasets simultaneously. In this analysis, a second model was developed that constrained the correlation path between social and structured learning support constructs to equal one (model two). As shown in table 6.10, goodness of fit statistics failed to support the single-factor solution. Specifically, the constrained model (model two) was significantly worse than the unconstrained model (model one), and the hypothesised two-factor solution revealed a better fit of the data.

Table 6.10

Nested Model Comparisons for the Discriminant Validity of the Social Support and Structured Learning Scales

<table>
<thead>
<tr>
<th></th>
<th>(\chi^2) (df)</th>
<th>(P)</th>
<th>AGFI</th>
<th>RMSEA</th>
<th>TLI</th>
<th>(\Delta \chi^2)</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model One (unconstrained)</td>
<td>49.70 (30)</td>
<td>.08</td>
<td>.95</td>
<td>.03*</td>
<td>.98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model Two</td>
<td>423.52 (31)</td>
<td>.00</td>
<td>.71</td>
<td>.16</td>
<td>.66</td>
<td>373.81</td>
<td>.00</td>
</tr>
<tr>
<td>Model Three</td>
<td>55.38 (37)</td>
<td>.10</td>
<td>.95</td>
<td>.03*</td>
<td>.98</td>
<td>0.90</td>
<td>.33</td>
</tr>
</tbody>
</table>

N.B. * denotes RMSEA PCLOSE level > .05; \(\chi^2\) denotes chi squared; df denotes degrees of freedom; AGFI denotes adjusted goodness of fit index; \(p\) denotes probability level associated with chi squared; RMSEA denotes Root Mean Square Error of Approximation; TLI denotes the Tucker Lewis Index; \(\Delta \chi^2\) denotes the difference in chi squared between the models; sig denotes the statistical significance of the difference between the models with NS indicating no significant difference between the models.
Model one was then validated by constraining the correlation paths between the constructs to be equal across datasets (model three). As shown in table 6.10, goodness of fit statistics supported the constrained model, and the chi square difference test revealed a non-significant difference between model three and model one. Thus, the freely estimated two-factor solution produced equivalent estimates across datasets, which validated the hypothesised model. Taken together, the paired constructs test provided initial support for H1.5 that each construct is discriminant valid.

Table 6.11

*Average Variance Extracted and Shared Variance Estimates for the Social Support and Structured Learning Scales*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Items</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Support</td>
<td>4</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>Structured Learning</td>
<td>4</td>
<td>0.51</td>
<td>0.71</td>
</tr>
</tbody>
</table>

N.B. Shared variance estimates are below the diagonal, and average variance extracted estimates are presented on the diagonal

In the final step, the average variance extracted by each latent construct was compared to the shared variance. As reported in table 6.11, the average variance extracted for social support and structured learning, was greater than the shared variance between the constructs. Thus, through confirming discriminant validity between the scales, the results provide strong support for H1.5.

*Job and Organisational Attraction*

Finally, the discriminant validity between the job and organisational attraction was investigated using the post-placement exploratory ($N = 239$) and holdout ($N = 287$) datasets simultaneously. The first step involved developing the baseline model (model one), which
was supported by the data (see table 6.12). The next step involved conducting a paired construct test, whereby the constrained single factor model of attraction (model two) was compared to the hypothesised two-factor model (model one). As reported in table 6.12, goodness of fit failed to support the single-factor model of attraction. Furthermore, the chi-square difference test demonstrated that model two was significantly worse than the hypothesised two-factor solution.

Table 6.12

 Nested Model Comparison of Measurement Invariance and Discriminant Validity Between Datasets and Across Time for the Attraction Scales

<table>
<thead>
<tr>
<th></th>
<th>$\chi^2$ (df)</th>
<th>AGFI</th>
<th>RMSEA</th>
<th>TLI</th>
<th>$\Delta\chi^2$</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model One (unconstrained)</td>
<td>21.97 (8)</td>
<td>.95</td>
<td>.05*</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model Two</td>
<td>457.69 (13)</td>
<td>.39</td>
<td>.31</td>
<td>.66</td>
<td>435.73</td>
<td>.00</td>
</tr>
<tr>
<td>Model Three</td>
<td>55.38 (37)</td>
<td>.95</td>
<td>.05*</td>
<td>.99</td>
<td>0.04</td>
<td>.95</td>
</tr>
</tbody>
</table>

N.B. * denotes RMSEA PCLOSE level > .05; $\chi^2$ denotes chi squared; df denotes degrees of freedom; AGFI denotes adjusted goodness of fit index; p denotes probability level associated with chi squared; RMSEA denotes Root Mean Square Error of Approximation; TLI denotes the Tucker Lewis Index; $\Delta\chi^2$ denotes the difference in chi squared between the models; sig denotes the statistical significance of the difference between the models with NS indicating no significant difference between the models.

This model was validated by constraining the correlation paths between the constructs to be equal across datasets (model three). As presented in table 6.12, goodness of fit statistics supported the constrained model, and the chi square difference test revealed a non-significant difference between model three and model one. Thus, the freely estimated two-factor solution generated an equivalent correlation coefficient across datasets, which validated the hypothesised model and provided initial support for H1.6 that each factor would be discriminant valid.
In the final step, the average variance extracted by each latent construct was compared to the shared variance. As presented in table 6.13, the shared variance between specialty and organisational attraction, was less than the average variance extracted for both constructs. Taken together, the results provided strong support for H1.6 that job and organisational attraction are related, yet statistically distinct constructs.

**Discussion**

**Overview**

The aim of study one was to investigate the validity of the measurement models used within this research program. The scales were investigated using EFA, CFA and multifactor CFA on data gained from a sample of Australian nursing undergraduate students. The following section contains a discussion of the results, and describes the implications for theory and practice.

**Professional Fit**

The first aim of this study was to investigate the validity of the professional fit, person-organisation fit, and person-job fit scales. It was predicted that each person-environment fit construct (i.e., person-job fit, person-organisation fit, and professional fit) would be represented by a single-factor solution. The results from the analyses produced mixed support for this hypothesis. Specifically, while models representing professional fit
and person-job fit (including both needs-supplies and demands-abilities sub dimensions) were supported by the data, the three item scale of person-organisation fit suffered from low reliability ($\alpha = .67$) and poor convergent validity. These findings were inconsistent with those of Cable and Judge (1996,) who reported a strong reliability coefficient for the full measure ($\alpha = .87$). The results implied that a method effect contributed to low reliability, due to the negatively worded item (“To what degree did your values and personality prevent you from fitting in the workplace because they are different from most of the other employees' values and personality?”). This item was dropped from the final single-factor model, which improved the reliability ($\alpha = .78$) and goodness-of-fit estimates. Future research is needed to determine whether these findings are due to a method effect associated with the current sample, or represent problems with the person-organisation fit scale.

The next aim was to investigate the invariance of the items used to measure person-environment fit. This was an important step, as researchers have generally not conducted invariance testing on measures of person-job and person-organisation fit. The results demonstrated that the items reflected the latent construct consistently across groups and measurement occasions. Thus, one conclusion from these results was that each item is an excellent indicator of the latent construct (i.e., person-job fit, professional fit, person-organisation fit). Furthermore, the results suggested that the items measure the same construct over time, which provides a stronger test of theory. Thus, one can have greater level of confidence in the theoretical and practical implications of research that investigates these constructs longitudinally.

The multifactor confirmatory factor analysis showed that each variation of person-environment fit was distinct. This result was consistent with the research conducted by
Cable and DeRue (2002), who found that person-job fit and person-organisation fit were distinct constructs. An implication of this finding is that Australian undergraduate nursing students’ distinguish between fit with their profession, and the demands and supplies of the job, and also the workplace. Future researchers are encouraged to consider all four variations, as they are likely to hold important consequences on attitudes and perceptions of Australian undergraduate nursing students. For example, just as professional fit may predict occupational choice, organisational fit may predict workplace choice (Kristof-Brown et al., 2005; Cable & DeRue, 2002; Hoffman & Woehr, 2006). In summary, these results offer greater specificity on what dimensions of fit are important for undergraduate nursing students who use these perceptions to make decisions related to their profession, their future workplace, and their specialty they work in. Collectively, the results provided strong support for the professional fit, person-organisation fit, and person-job fit scales. Therefore, excluding the problematic item in the person-organisation fit scale, all items are used to measure each dimension of person-environment fit in studies 2 and 3.

**Occupational Commitment**

Occupational commitment was the second construct investigated within the current study. It was predicted that the four-item measure, adapted from the Meyer and Allen’s (1991) affective organisational commitment scale, would be represented by a single-factor solution. With the addition of two error covariance paths, the results supported the single-factor measurement model of occupational commitment, with the addition of two error covariance paths. While the factor loadings for the reverse worded items were low, they all converged upon the construct, which supported the prediction that occupational commitment would be represented by both motivational and affective items (Hall, 1971; Meyer & Allen, 1993). However, the scale’s reliability estimate was lower than expected,
which raised questions concerning the use of reverse worded items within the measure. Future research is needed to investigate whether this finding is particular to the current sample, or reflect problems with the four-item measure.

Results from the study supported the invariance of scale items between the exploratory and holdout samples. This is an important finding as it is produced evidence that the scale captures the same construct for different samples. Thus, the meaning of the construct is represented consistently, which lends confidence to the use of the scale in future research.

Following the test of measurement invariance, the discriminant validity of the construct was investigated. It was predicted that occupational commitment would be a distinct construct from professional fit, which was strongly supported by the data. Specifically, the alternative model representing a single-factor solution was significantly worse than the hypothesised two-factor model, which is a major contribution to research on occupational commitment. A common approach towards measuring occupational commitment is to include items pertaining to value and goal congruence (i.e., professional fit; Teng, Shyu & Chang, 2007; Collareli & Bishop, 1990; Lachman & Aranya, 1986). However, the results of the current study identified a conceptual boundary between these constructs, which supported the theoretical propositions presented by Hall’s (1971) suggestion that values and goals congruence is distinct from occupational commitment. Thus, further research is needed to investigate the relationships between the constructs, as they are likely to be highly related, yet hold different causes and consequences. For example, under the propositions of the attraction-selection-attrition model, individuals may be attracted to, select into, and remain in professions in which they perceive a high level of professional fit (Schneider, 1987). Taken together, it appears that the conceptualisation and measurement
of professional fit provides an extension to vocational choice theory. Therefore, the full scales of occupational commitment and professional fit are used in study 2 and 3.

_Self-Efficacy_

_**General Self-Efficacy**_

To assess the convergent and construct validity of the NGSE developed by Chen et al. (2001), a single-factor congeneric model was analysed. It was predicted that the construct of general self-efficacy would be represented by a single-factor model, and that prediction was supported by the results. These results produced evidence that the NGSE scale is appropriate for use on a sample of Australian undergraduate nurses. This is an important finding, as general self-efficacy is linked with career-related attitudes and is associated with individual’s career success (e.g., Judge & Bono, 2001; Eden, 1998; Speier & Frese, 1997). Further research is needed to extend these results by investigating the consequences of general self-efficacy for Australian undergraduate nursing students.

Investigation of the prediction that the NGSE scale would be invariant across groups, indicated mixed support. The alternative model, which showed that nine of the 10 factor loadings were invariant across groups, provided a better fit across each dataset. This is an important finding, as tests of measurement invariance have not been conducted on the NGSE scale. For the holdout sample, the factor loading for the item “even when things are tough, I can perform quite well,” was significantly lower than in the exploratory group. These results indicated that the latent factor was not reflected in the same manner between participants, and while the difference between each factor loading was low, these results raise questions about the appropriateness of the item. Researchers are encouraged to conduct further tests of invariance on the NGSE scale. In doing so, it is recommended that
invariance testing is conducted across groups (e.g., gender; professional background; education) to understand its source. Nevertheless, the full scale has been validated in previous research, so is used in study 2 and 3.

Transition to Practice Self-Efficacy

The transition to practice self-efficacy scale was supported by the data with the addition of three error covariance paths. The next step was to investigate measurement invariance of the self-efficacy scale, which was also supported by the data and indicated that the six-item scale represented the same construct across time, and across different samples. These results provide support both for the new measure of self-efficacy, and for the use of the scale within the current research program.

Results from this study revealed a high level of discriminant validity between the transition to practice self-efficacy scale, the NGSE scale and the Rosenberg (1965) self-esteem scale. This finding has several implications. Firstly, these results provide additional evidence for the validity of the transition to practice self-efficacy scale. The results suggest that nursing students assess their confidence to make the transition to practice, their self-esteem, and their general self-efficacy independently. These results are consistent with research that demonstrates that task-specific self-efficacy is strongly related to yet distinct from self-esteem and general self-efficacy (Chen & Gully, 1997; Chen et al., 2001). Secondly, the results are consistent with theoretical propositions that general self-efficacy and self-esteem are distinct constructs. These results extend Chen et al’s (2001) findings through providing a rigorous assessment of discriminant validity, and support the use of the NGSE scale within an Australian context. Finally, according to empirical research, each of the domains has important consequences on attitudes and behaviour (Chen, Goddard, &
Casper, 1999; Eden & Granat-Flomin, 2000; Judge & Bono, 2001). Therefore, researchers are encouraged to investigate all forms simultaneously, to understand their unique impact on the outcomes of investigation.

**Social and Structured Support**

One aim of this research program was to investigate the role of social and structured support on students’ attitudes and perceptions. One of the major challenges to this aim was locating an appropriate scale for use within the WIL context. While measures of the clinical learning environment were available, they lack rigorous psychometric evaluation and acceptable reliability and validity estimates (e.g., Chan, 2002). Thus, based on a critique of the relevant literature, measures of social and structured learning support were developed, then validated on data obtained from a sample of Australian undergraduate nursing students.

Social support was measured using a modified version of Jones’ (1986) investiture vs. divestiture socialisation scale (Jones, 1986). While the original scale has been applied across numerous domains (e.g., cross cultural, new graduates), it had not been applied to the student placement context. Therefore, consistent with past research (e.g., Allen, 2001; Xian & Feng, 2006; King & Sethi, 1998; Cooper-Thomas & Anderson, 2002; Manguc et al., 2007), the scale was adapted for the nursing placement context. The structured support scale was developed from a review of the qualitative research on work integrated learning (e.g., Billet, 2002), and the clinical learning environment (Marriot, 1991; Chan, 2002; Davey, 2003; Hosoda, 2006). Both of these scales were analysed using EFA, CFA and multifactor CFA to determine the validity and reliability of the measures.

It was predicted that the two-factor model of structured and social support would be identified by CFA. The results clearly supported this prediction, and showed evidence of the
scale’s convergent validity. Therefore, the results support the use of the selected items to measure each latent construct. The prediction that the factor loadings would be invariant across samples was supported by the analysis demonstrating that the scale items represented each construct in the same way between groups.

Results from this study also revealed a high level of discriminant validity between the structured and social support scales. The fact that the freely estimated model was supported across both samples suggests that each construct is distinct, although statistically related. These results are important as each construct is likely to have different consequences that should be investigated through extending these results. For instance, a high level of social support within the placement environment may help the individual to uncover the values, norms and goals of the workplace, which may heighten person-organisation fit perceptions (Kim et al., 2005). Likewise, providing a structured learning environment is likely to increase knowledge and skill development, which may increase person-job fit (Chapman et al., 2005). Thus, these results raise additional questions regarding how these constructs operate together, including their relationships with career-related outcomes.

The conventional approach within the research has been to investigate newcomer learning upon entry to employment (Kim et al., 2005; Allen, 2001; Xian & Feng, 2006; King & Sethi, 1998). Nevertheless, learning is an essential component of individuals’ early WIL experiences (Collin, 2002), yet remains one of the most under-researched areas of industrial and organisational psychology. Therefore, through validating a scale that measures constructs relevant to the learning experience, this study has contributed conceptualisation and measurement within the area. Future research is required to build and refine this
measure across different populations. Each scale identified within the CFA is used within studies 2 and 3.

**Specialty and Organisational Attraction**

The conventional approach to measuring attraction has been to include items that represent behavioural intentions (Chapman et al., 2005, Turban & Keon, 1993): however, under the propositions of the theory of reasoned action, behavioural intentions are an outcome of attraction rather than an item of its measurement (Ajzen & Fishbein, 1977; Ajzen, 1991). Therefore, a new measure was developed for this research program, and investigated on data from a sample of Australian undergraduate nursing students. Hypothesis 1.15, which predicted a two-factor solution representing both organisational and speciality attraction, was supported by the data. Thus, given the high level of construct validity found, researchers are encouraged to measure attraction in a one-dimensional manner, rather than using scales that include behavioural intentions (Highhouse et al., 2003).

The prediction that each indicator would be invariant across samples and time was supported by the data, lending confidence to researchers wishing to examine attraction longitudinally, as the results suggest that each measure captures the same construct across time. The results also demonstrated a high level of discriminant validity between each measure of attraction (i.e., organisational and specialty). The fact that the constrained single-factor solution was a significantly worse fit than the hypothesised two-factor model demonstrated that undergraduate nursing students meaningfully distinguish between specialty and organisational attraction. Thus, in a climate of nursing shortages, these results raise questions regarding the causes of attraction and the consequences they are likely to have on individuals’ job and organisational choice intentions (Schneider, 1987; Dawis, 1987;
Ajzen & Fishnein, 1977; Ajzen, 1991). For example, social support within a placement experience may influence an individual’s attraction to the organisation, thus predicting intentions to pursue a position within the organisation. Similarly, a structured learning environment, whereby the student has a positive learning experience, may predict speciality attraction, thus influencing intentions to pursue a position within a particular specialty. These relationships cannot be examined in research that combines organisational and speciality attraction into a single construct (e.g., Chapman et al., 2005). Researchers are encouraged to extend these findings by independently examining the causes and consequences of speciality and organisational attraction. Regarding the current research program, both scales will be used to measure job and organisational attraction.

Conclusion

This chapter concludes the second section of this thesis, which is concerned with the most appropriate measurement strategy for several constructs that have known conceptualisation and measurement limitations. In summary, in chapter 5, based on a review of the relevant literature, a series of scales were proposed and their accompanying limitations described. This chapter identified the reliability and validity of each measure, and confirmed the scale structures to be used to measure the constructs of professional fit, occupational commitment, transition to practice self-efficacy, general self-efficacy, social and structured support, and job and organisational attraction within this research program. The present research study found that each scale was represented by a single factor solution, and provided evidence for the discriminant validity of each construct. Future research could provide further investigations on each scale to test the scale structures.
CHAPTER 7

LITREATURE REVIEW: THE CAUSES AND CONSEQUENCES OF PROFESSIONAL FIT

Overview

The purpose of this chapter is to provide a review of the literature regarding the causes and consequences of professional fit within the WIL context. The chapter has three specific aims. The first aim of this chapter is to conduct a review of the literature pertaining to the hypothesised conceptual model presented in figure 7.1. The second aim of this chapter is to provide a review of the theory and empirical research regarding several alternative research models. The final aim of this chapter is to describe the objectives of the empirical study that follows in chapter eight.

The first chapter described how the nursing profession is experiencing a nationwide skills shortage characterised by a high rate of graduate attrition, and argued that early career experiences, such as those obtained through WIL, may influence the retention and commitment of new graduates. The first chapter also identified that few researchers have integrated theory to describe how WIL influences career outcomes is limited. The second chapter proposed that four dimensions of person-environment fit (viz. person-organisation fit, person-job needs-supplies fit, person-job demands-abilities fit, professional fit) have utility in describing how WIL influences career-related outcomes (viz. occupational commitment and transition to practice self-efficacy). Along with validation of the measurement models, chapter six presented strong evidence to suggest that Australian undergraduate nursing students distinguish between their fit with their job (viz. person-job needs-supplies, person-job demands-abilities fit), the organisation (viz. person-organisation fit), and the profession (viz. professional fit). Given that each dimension of person-
environment fit was found to be meaningfully distinct, this chapter extends upon those findings, and provides a review of the literature regarding the causes and consequences of professional fit within the WIL context.

The Hypothesised Research Model

The model depicted in figure 7.1 is the hypothesised research model for the causes and consequences of professional fit. The first part of the model suggests that both environmental and individual differences are important in the prediction of student’s perceived professional fit. The next part of the model indicates that professional fit predicts higher levels of occupational commitment and transition to practice self-efficacy. Overall, the model implies that professional fit perceptions play a central role explaining how WIL influences occupational commitment and transition to practice self-efficacy. Each of the proposed relationships is described in greater detail below.

Figure 7.1.
Hypothesised Research Model: The Causes and Consequences of Professional Fit
Causes of Professional Fit

As discussed earlier, professional fit describes the extent to which an individual perceives match or congruence with the culture of the profession. Specifically, this construct refers to students’ subjective interpretation of the degree to which they share similar values and goals with others within the occupational group. The nursing and WIL literatures have proposed that placements provide opportunities for professional socialisation, and help students integrate with the culture of the profession (Schien, 1971; Hall, 1979; Shaf, 2002; Fagermoen, 1997); however, existing research that has investigated the causes and consequence of professional fit within the WIL context remain sparse. Literature from the industrial-organisational psychology field suggests that both individual and environmental differences are important in the prediction of person-environment fit perceptions (Kim et al., 2005; Gruman et al., 2006). For example, institutionalised socialisation practices which include both structured and social support have been found to improve individuals’ person-job and person-organisation fit perceptions (Cable & Parsons, 2001; Kim et al., 2005; Gruman et al., 2006). Likewise, an individual’s preference for framing the environment in a positive way has been associated with higher level of person-organisation fit (Kim et al., 2005), and GSE has been found to improve perceived person-job demands-abilities fit perceptions (DeRue & Morgeson, 2006). Despite these findings, the literature has generally focused upon the individual’s fit with the organisation or job, rather than the profession. Therefore, the purpose of this literature review was to extend the current body of literature by providing an integrative review of the relationship between environmental (viz. social and structured support) and individual differences (viz. positive framing, task negotiation, and GSE) with WIL students’ perceived professional fit.
Structured Support and Professional Fit

Structured support, as the name indicates, refers to the provision of systematic and meaningful work activities that are intended to improve student’s knowledge, skills, and abilities (Gruman et al., 2006; Jones, 1986; Davey, 2003; Henderson et al., 2006; Fisher, 1985; Billett, 2008; Van Maanen & Schien, 1979). In a structured learning environment, students work alongside other professionals and respond to meaningful work tasks.

Socialisation theory has utility in describing the relationship between structured support and professional fit; specifically, socialisation theory suggests that structured support helps newcomers to learn about commonly shared attitudes, behavioural norms, values, and goals which guide day-to-day interactions within particular groups through providing individuals with access to meaningful work tasks (Schein, 1971; Van Maanen & Schien, 1979). The socialisation literature also proposes that structured support may reduce the ‘shock’ and uncertainty that is experienced by newcomers when entering a new setting (Feldman & Weitz, 1990; Windsor, 1987; Chan, 2002; Jones, 1986; Louis, 1981), which arguably improves the WIL experience for students. Researchers also argue that in a structured learning environment, approaches to completing tasks are taught in a standardised manner, which communicates the core goals and values of the profession in a consistent way (Cable & Parsons, 2001). By contrast, in an unstructured environment the student may receive inconsistent messages on what is important and find it difficult to uncover the norms and principles that underpin day-to-day life within the profession. Thus, one line of reasoning is that a structured learning setting encourages newcomers to accept preset cultural beliefs and attitudes, rather than challenge the status quo (Jones, 1986; Cable & Parsons, 2001). Collectively, this line of reasoning suggests that structured learning activities help to
improve students’ fit with the profession through reducing uncertainty and improving learning outcomes.

Despite these theoretical linkages, the current body of empirical research remains sparse. Early research conducted by Feldman and Weitz (1990) demonstrated that students’ perceptions of their occupation improved following a structured internship program. The researchers concluded that the confusion and uncertainty associated with unstructured WIL programs negatively impacted students’ attitudes towards their occupation. Later research conducted by Eames (2000) found that a structured WIL program improved students’ assimilation within the profession, and Gruman, Saks and Zwieg (2006) reported a moderate association between structured support and social integration \( r = .21 \). Literature from the nursing discipline often describes the importance of structured WIL programs to improve professional socialisation, yet professional fit is rarely examined directly (Chan, 2002; Hosoda, 2006; Dunn & Hansford, 1997; Henderson, Heel, Twentyman & Lloyd, 2006). Instead, many of these studies have demonstrated that structured WIL program improve students’ professional identity. While more research is needed to explicitly examine the proposed relationship, this pattern of results supports the expectation that structured support will improve students’ professional fit.

Social Support and Professional Fit

As described in chapter two, the purpose of social support is to confirm the identity of the student and provide help, guidance, and encouragement via access to other professionals (Davey, 2003; Henderson, Heel, Twentyman & Lloyd, 2006; Fisher, 1985). The construct of social support was proposed to improve students’ professional fit for two reasons. The first reason, drawn from the socialisation literature, suggests that social
support helps individuals overcome the uncertainty, stress and shock when entering a new workplace (Cooper-Thomas et al., 2004; Louis, 1980). One line of argument is that social support helps students feel accepted by other members of the profession, thus reducing the impact of stress and uncertainty on newcomer learning and adjustment (Fisher, 1985). The second reason is that social support helps students to learn about the culture of the profession. Riechers (1987) proposed that meaning is attached to events through interpersonal exchanges individuals have with others in a particular setting. Thus, one basic proposition is that social support helps students to attribute meaning to the day-to-day encounters they have with other professionals. Such interactions can be considered to help the student to understand, predict, and respond to other professionals, thus improve their integration with the professional group (Louis, 1980; Billet, 2007; Nash, Lemke, Scarse, 1999). Collectively, the dual effects of social support are thought to improve students’ perceived professional fit through uncertainty reduction and greater learning opportunities.

Despite these theoretical linkages, the relationship between social support and professional fit has received limited research attention within the industrial–organisational psychology literature. Qualitative research into WIL has demonstrated that social support helps students to learn about the underlying cultural assumptions and principles that characterise the profession. For example, Beard, Coll and Harris (2001) described a case study of a student undertaking a placement as an analytical chemist, and found that social support helped the student to overcome the shock of working in a new location and understand the principles of professional practice. The case study revealed that through interactions with other professionals, the student was able to identify the importance of standard operating procedures and the need for high levels of attention to detail within the profession. Although professional fit was not studied directly, these results demonstrate
that the supportive WIL experience helped to socialise the student within the profession, thus resulting in a higher level of congruence.

Empirical research from the nursing literature has also supported the proposed relationship. By studying a sample of 89 new graduate nurses, Boyle and Taunton (1996) found that social support helped to reduce ambiguity and improve student’s understanding of the profession. In a similar study, Newhouse, Homman, Suflia and Hairston (2007) investigated the benefits of a WIL program for nurses designed to socialise newcomers within the profession. The program incorporated high levels of social support, and was found to improve student’s sense of belongingness to the profession. Similarly, Dunn and Hansford (1997) found that social support was an essential component of the WIL experience for 229 nursing undergraduate students, and reported that it helped students attribute meaning to events and practices. Collectively, these findings are consistent with the expectation that social support improves professional fit through reducing uncertainty and improving learning.

Positive Framing and Professional Fit

As described in chapter two, a central feature of positive framing is that individuals differ in terms of the cognitive frame they place on events (Ashford & Black, 1996; Kim, et al., 2005; Wanberg & Kammer-Mueller, 2000; Taylor & Brown, 1988). As described by Ashford and Black (1996), positive framing occurs when individuals attempt to change their understanding of a situation through modifying the way they interpret it. For example, individuals who use positive framing view challenges as opportunities, rather than problems or threats. While the literature has almost exclusively focused on the relationship between positive framing and person-organisation fit (Kim et al., 2005), there are at least two reasons why positive framing may improve students’ professional fit perceptions. The first reason is
that positive framing should help students cope while coming to terms with a relatively complex professional culture. Hosoda (1996) argued that the nursing WIL environment is a source of stress and anxiety which is characterised by deep-rooted cultural beliefs that are ambiguous to the newcomer. During the WIL experience, one of the primary challenges for students is to learn about long-standing traditions, beliefs and assumptions that characterise the profession (Chan, 2002; Hosoda, 1996; Oe Hlean & Sgesten, 1998). Therefore, one line of argument is that positive framing may help students to overcome the stress and anxiety associated with professional socialisation, and help them to view their compatibility with the profession favourably.

The second line of reasoning is drawn from the arguments presented by Kim et al. (2005) regarding the relationship between positive framing and person-organisation fit. Kim et al. (2005) argued that those who prepare themselves with a positive frame are more receptive of cultural norms and values, and less likely to be cynical about the day-to-day practices that characterise an organisation. Consistent with this line of thinking, those who are more optimistic may view the values, goals, and norms espoused within the profession more favourably, rather than question the status quo. Although existing research regarding the relationship between positive framing and WIL outcomes remains limited, it is reasonable to expect that positive framing would improve professional fit perceptions for nursing students.

Task Negation and Professional Fit

As described in chapter two, the construct of task negotiation describes the extent to which an individual attempts to shape their own learning experience through seeking out projects or activities within the WIL setting. In this regard, task negotiation is a behavioural self-management strategy through which individuals explicitly attempt to alter their
environment to suit their needs (Ashford & Black, 1996). The first line of reasoning that links task negation with professional fit is drawn from the socialisation literature. In his seminal contribution to the literature, Reichers (1987) proposed individuals come to understand cultural beliefs and values through social exchanges with others in the workplace. Indeed, the process of task negotiation can be considered as another avenue for the student to acquire information about the profession. For example, through task negotiation, the student may learn about the shared values and attitudes surrounding safe practice through the importance of ‘double gloving’ during a surgical operation. Therefore, one line of argument is that the process of task negotiation may help the student learn about the particular reasons that make different tasks important within the profession.

The second reason that task negotiation may improve professional fit derives from the literature on workplace entry, which suggests that task negotiation helps to structure one’s own work behaviour and input, thus reducing uncertainty and ambiguity within the work environment (Ashford & Black, 1996). Therefore, through the benefits of ambiguity reduction, the student may adapt to the WIL context more easily, which may improve the enculturation process. Although the existing research on the role of task negotiation for predicting professional fit remains limited, Dunn and Hansford (1997) found that nursing students who negotiated opportunities for learning were more satisfied with the WIL experience, and Gruman, Saks and Zweig (2006) found a significant correlation between task negotiation and social integration ($r = .24$). Literature from the WIL discipline has also emphasised the role of task negotiation for improving students’ learning experiences (Wong, Coll & Harris, 2001; Martin, 2005). Collectively, this pattern of results identified that task negotiation is important for improving learning and reducing uncertainty. Thus, it was predicted that task negotiation would improve student’s perceived professional fit.
General Self-Efficacy and Professional Fit

As described in chapter two, the construct of GSE describes an individual’s perceived level of competence to respond successfully to a variety of situational challenges and demands (Chen et al., 2000). Those with high levels of GSE are expected to overcome ambiguity, proactively deal with stress and uncertainty. As described by Judge, Thoresen, Pucik and Welbourne (1999), GSE “allows for the adaptation of performance to complement the circumstance” (p. 109). Based on these theoretical propositions, GSE can be considered to be an important construct for helping students to adapt to the uncertainty associated with a new learning environment and integrate with other nurses within the WIL context. Existing theory suggests that stress and anxiety are a common experience for new nurses during the period of professional socialisation (Fragerberg, 2004; Cowin & Hengstberger-Sims, 2006; Duschscher & Cowin, 2006), yet little empirical research that has tested the role of GSE in the WIL context. Nevertheless, recent research conducted by DeRue and Morgeson (2007) identified that GSE was significantly correlated with perceived team fit. Although more research is required, it was expected in the current research program that GSE would improve students’ professional fit perceptions through helping them recover after setbacks, and cope with the WIL experience.

Outcomes of Professional Fit

Professional Fit and Occupational Commitment

The first outcome of professional fit to be investigated was occupational commitment. As described in chapter two, occupational commitment refers to an individual’s affective attachment to his or her occupation and motivation to remain within the field (Carless, 2005; Hall, 1971; Meyer et al., 1993). The attraction-selection-attrition
model has utility for describing the relationship between professional fit and occupational commitment. The model was originally developed for use within the organisational context, and assumes that individuals seek out and remain committed to organisations with which they perceive a high level of congruence (Schneider, 1987). Extended to the occupational context, the model explains that individuals will be more committed to professions that espouse characteristics similar to their own. Indeed, this proposition is consistent with theories of career motivation and adjustment which suggest that individuals will be most satisfied in occupations that are consistent with their preferences and characteristics (Schein, 1971; Hall, 1979; Holland, 1985; Sharf, 2002).

While existing literature on the relationship between professional fit and occupational commitment is limited, literature from the nursing discipline has provided support for the proposed relationship. For example, Lai et al. (2008) found that individuals with higher levels of professional fit were more committed to their occupations. Similarly, Gregg and Magilvy (2001) found that the integration with the culture of the nursing profession was an important factor of the commitment of Japanese nurses. Literature from the industrial–organisational psychology field has demonstrated that the related construct of person-job fit predicts higher levels of occupational commitment. For example, early research conducted by Goulet and Singh (2002) demonstrated that person-job demands-abilities fit was positively related to occupational commitment. Later research conducted by Carless (2005) supported these results and found that high levels of person-job fit predicted the occupational commitment of police force applicants. Collectively, this pattern of results suggests that professional fit may play an important role in the occupational commitment of nurses. Therefore, in the current study it was expected that professional fit would improve students’ self reported commitment to the nursing profession in their WIL practicum.
The second outcome investigated within this study was transition to practice self-efficacy. As described earlier, transition to practice self-efficacy is defined as an individual’s perceived confidence concerning the application of skills and abilities important throughout the transition from student to nurse. This definition is based on a review of the literature from the nursing and vocational psychology disciplines (Solberg, Good, Fischer, Brown, & Nord, 1995; Super, 1980; Wenrich, Curtis & Shannon, 2001; Yang & Gysbers 2007; Chan, 2002; Cowin & Hengstberger-Sims, 2006; Duchscher & Cowin, 2006; Ng & Feldman, 2007). Within the context of the transition, self-efficacy concerns the judgment of what individuals can do with the skills that they possess rather than the actual skills themselves (Bandura, 1978). Thus, transition to practice self-efficacy concerns the individual’s subjective evaluation of competence across a range of skill sets that characterise the transition from university to professional practice.

Qualitative research from the nursing field suggests that professional fit is an essential component of a successful transition to practice (Thomka, 2001). As described earlier, high levels of professional fit coincide with an understanding of the values, goals, norms, and principles that guide day-to-day encounters within the occupation. In an early article, Louis (1980) argued that this knowledge provides newcomers with culturally specific road maps that help them to make sense of what is happening around them and to respond with meaningful actions. Certainly, students with high levels of professional fit can be expected to be more confident regarding the transition to practice, as they are more likely to know how to meaningfully respond to day-to-day events. Thus, one line of argument is
that students who report higher levels of fit with the nursing profession will also report greater levels of transition to practice self-efficacy.

Despite the proposed relationship between professional fit and self-efficacy, empirical evidence remains limited, and thus conclusions concerning causality cannot be made. In fact, two alternative models can be proposed regarding the relationship between professional fit and transition to practice self-efficacy. The first alternative model reflects the notion that improvements in self-efficacy beliefs may predict higher levels of professional fit. Students with higher self-efficacy will hold more favourable perceptions of their ability to cope with the stress and pressure; handle day-to-day interactions with staff and patients; integrate with a new team; and be able to apply theory to practice (Yang & Gysbers 2007; Chan, 2002; Cowin & Hengstberger-Sims, 2006; Duchscher & Cowin, 2006; Ng & Feldman, 2007). Thus, one clear line of argument is that students who view their abilities to meet the demand of the profession positively may experience higher levels of professional fit, as they are likely to know how to read and respond to day-to-day events. Consistent with this argument, those who perceive that they are unable to meet the challenges of the role may perceive lower levels of congruence with the profession.

The second alternative model was based on reciprocal causality between transition to practice self-efficacy and professional fit. As described by Kline (1998), one strategy for testing competing theoretical perspectives on causality is to investigate a model that specifies the dual relationships between each construct. Three models will be explored in the current research program, which include: (1) the hypothesised model reflecting the prediction that professional fit improves transition to practice self-efficacy; (2) a second alternative model predicting that transition to practice self-efficacy improves professional fit.
perceptions; and (3) a third alternative model predicting reciprocal causality between the constructs.

Alternate Research Model: The Causes of Transition to Practice Self-Efficacy

The preceding section outlined both theoretical and empirical support for the hypothesised research model, and described two alternative models for the predicted relationship between transition to practice self-efficacy and professional fit. As indicated earlier, the three models do not allow paths between individual (i.e., positive framing, GSE, and task negotiation) and environmental differences (i.e., social and structured support) with transition to practice self-efficacy. However, as existing research is limited, conclusions regarding the relationships between the constructs are largely exploratory. Therefore, a fourth model was identified which reflects the notion that individual and environmental differences directly predict changes in transition to practice self-efficacy. Thus, each model discussed earlier will be compared to the conceptual model proposed in figure 7.2.

![Diagram of the Causes and Consequences of Transition to Practice Self-Efficacy](image)

*Figure 7.2.*

The Causes and Consequences of Transition to Practice Self-Efficacy
Consistent with the review presented earlier, the alternative model introduced in figure 7.2 reflects the proposed relationships between individual (viz. positive framing, general self-efficacy, task negotiation), and environmental differences (viz. social and structured support) with professional fit. However, the model also proposes direct, rather than indirect relationships between the predictor variables and transition to practice self-efficacy. Specifically, the model reflects a critique of the relevant literature which suggests that individual and environmental differences will have a positive effect on students’ transition to practice self-efficacy beliefs. Each of the proposed relationships is described in greater detail in the following section.

*Structured Support and Transition to Practice Self-Efficacy*

The critique of the literature revealed that structured support may help to improve student’s transition to practice self-efficacy beliefs. This concept is based upon the notion that structured support provides students with access to several sources of efficacy enhancing activities, notably enactive mastery and vicarious learning (Bandura, 1997). Enactive mastery occurs through structured learning experiences that aim to help the student successfully apply theory to practice. Bandura (1997) argued that enactive mastery experiences are the most influential source of efficacy information, as they provide evidence of whether the individual can meet the demands of the role. Structured support may also provide students with better access to vicarious learning, which reflects opportunities for students to observe others completing particular tasks. Bandura (1997) also contended that vicarious learning is an important source of efficacy information, as people evaluate their own capability in terms of the attainment of others. For example, through opportunities to observe a staff member apply a dressing to a wound, the student may have more
confidence to complete the task. Consistent with this line of reasoning, it was expected that structured support would improve students’ transition to practice self-efficacy.

Empirical research has supported the relationship between structured training programs and self-efficacy (Saks, 1995; Gist, 1989; Gist, Schwoerer & Rosen, 1989; Cantrell, Brown, & Lupinacci, 2005). For example, Saks (1995) conducted an investigation into the relationship between training and self-efficacy for 154 graduate accounts and found that the training program predicted higher levels of self-efficacy and performance for graduate students. Similarly, Gist (1989) found that military personnel who completed a structured training program had higher levels of self-efficacy, and Gist, Schwoerer and Rosen (1989) demonstrated that a structured problem solving training program helped to improve participant’s efficacy beliefs. The nursing literature has also identified that structured programs improve the transition to practice for graduate nurses (e.g., Cantrell, Brown, & Lupinacci, 2005). Collectively, this pattern of results supports the proposition that structured support will improve students’ efficacy beliefs.

Social Support and Transition to Practice Self-Efficacy

Social support is thought to improve student’s efficacy beliefs for two reasons. The first reason is that those who receive positive social support and encouragement will be more likely to complete efficacy-enhancing activities. Wood and Bandura (1997) argued that “people receive realistic encouragements, they will be more likely to exert greater effort and become successful than if they are troubled by self doubts” (p. 365). Social support acts as a motivating force for students to complete efficacy-building activities. The second reason is that social support helps students frame their experiences in a positive manner. Bandura (1997) contended that even successful experiences can be attributed in a way that lowers efficacy beliefs; for example, after completing a WIL project a student may interpret
the experience as stressful, and identify limitations with his or her coping abilities. Bandura (1997) argued that social support helps students to interpret experiences favourably and improve their efficacy beliefs.

Empirical research has supported the relationship between social support and self-efficacy. For example, Ellerton and Gregor (2003) found that access to supportive staff improved the student’s confidence prior to the transition to practice. In a similar study, Kruger (1997) identified that providing individuals with reassurance helped to improve their problem-solving and planning self-efficacy beliefs. Similarly, Goldenberg, Iwasiw, and MacMaster (1997) found that nursing students’ perceptions of self-efficacy significantly improved after a supportive WIL placement. Collectively, this pattern of results supports the expectation that social support improves students’ transition to practice self-efficacy beliefs.

**General Self-Efficacy and Transition to Practice Self-Efficacy**

As described earlier, the GSE construct reflects the notion that individuals have a general level of perceived competence that influences how they act and react within specific situations (Chen et al., 2000; Eden, 1998). Eden (1998) argued that while task specific self-efficacy (e.g., transition to practice self-efficacy) is closely related to specific performance outcomes (e.g., successful integration within the profession), GSE is an individual difference variable that predicts specific efficacy beliefs within a variety of contexts (e.g., transition to practice, career decision making etc). Specifically, as described by Yeo and Neal (2006), GSE is “conceptualised as a motivational trait variable that is expected to be manifest in motivational states such as task-specific self-efficacy, which in turn enhances performance by facilitating the allocation and persistence of on-task effort” (p. 1090). Furthermore, GSE has been proposed to help individuals maintain their efforts towards the successful
completion of WIL activities, and overcome the stress and pressure of clinical practice. For these reasons, GSE was proposed to improve student’s transition to practice self-efficacy.

The review of the literature identified a plethora of empirical evidence that has supported the relationship between GSE and task specific self-efficacy (Chen et al., 2001; Schwarzer & Hallum, 2008; Yeo & Neal, 2006). For example, Chen et al., (2001) investigated the relationship between GSE and 10 different measures of occupational-specific self-efficacy. The researcher found that the correlation between GSE and the 10 facets of occupational self-efficacy were positive and significant \( r = -0.15 \) to \( 0.43, p < .001 \). In a study of 1,203 teachers, Schwarzer and Hallum (2008) found that GSE was significantly correlated with teaching self-efficacy \( r = 0.72, p<0.01 \). More recently, Yeo and Neal (2006) investigated the relationship between GSE and task specific self-efficacy for 93 undergraduate students and found strong support for the predictive relationship between GSE and task-specific self-efficacy. Taken together, these results strengthened the expectation that students GSE will be positively related to students’ transition to practice self-efficacy beliefs.

**Positive Framing and Transition to Practice Self-Efficacy**

The literature also suggests that positive framing may improve students’ transition to practice self-efficacy beliefs. Wood and Bandura (1987) argued that “the impact of performance attainments on efficacy beliefs depends on what is made of those performances” (p. 81). Central to this argument is the notion that self-efficacy is influenced by the way that experiences are interpreted and reconstructed in memory (Bandura, 1977; Gist & Mitchell, 1991; Wood & Bandura, 1987); therefore, one strong line of argument is that people who are low on positive framing may attribute the completion of a successful task to chance happenings, rather than to their own effort and ability. Through a more
pessimistic cognitive frame, experiences may be interpreted in a manner that reduces efficacy beliefs. By contrast, people who are high on positive framing view the attainment of goals within the WIL context as directly related to their capabilities and abilities, which may improve their efficacy beliefs (Wood & Bandura, 1987).

Despite these propositions, empirical evidence investigating the relationship between positive framing and self-efficacy remains limited. Silver, Mitchell and Gist (1995) investigated the relationship between individuals’ causal attributions and subsequent self-efficacy beliefs. The researchers found that the negative attribution of past performance lowered students’ perceived self-efficacy. In a closely related study, Thomas and Matheiu (1994) found that the cognitive evaluation of past performance was significantly related to self-efficacy beliefs. While research has not investigated positive framing directly, these studies support the argument that positive framing may improve students’ transition to practice self-efficacy perceptions.

Task Negotiation and Transition to Practice Self-Efficacy

In the current research program, task negotiation was also proposed to improve students’ transition to practice self-efficacy. As described earlier, task negotiation describes the extent to which an individual attempts to shape their own learning experience through seeking out projects or activities within the workplace that match their needs. One line of argument is that the process of task negotiation may help students to gain access to efficacy enhancing activities. The idea that task negotiation influences self-efficacy is consistent with the more general concept of controllability, which identifies that individuals can shape their efficacy beliefs through influencing types of experiences to which they are exposed (Gist & Mitchell, 1992). Certainly, students who gain access to activities that meet their needs may have greater opportunities for enactive mastery and vicarious learning, which improve
efficacy beliefs (Bandura, 1997). Furthermore, students who gain access to more appropriate tasks may avoid activities that reduce efficacy beliefs, and undertake challenging activities and choose social environments they judge themselves capable of managing (Wood & Bandura, 1989). Thus, the process of task negotiation may help students to create circumstances conducive to improving their efficacy beliefs.

Only one study was identified that has examined the relationship between task negotiation and self-efficacy within the WIL context. Specifically, Gruman, Saks and Zweig (2006) found a non-significant relationship between task negotiation and self-efficacy. However, the remaining qualitative studies from the WIL context indicate that task negotiation is an essential component for a successful WIL experience (Billett, 2004; Beard, Coll, & Harris, 2001; Martin & Lebberman, 2005; Wong, Coll, & Harris, 2001). In light of the mixed empirical results, further research is needed. One of the goals of study two was to extend the current body of research by investigating the relationship between task negotiation and self-efficacy.

**Longitudinal Relationships**

One limitation of cross sectional research is that this methodology can lead to inaccurate estimation of the causal relationships between the constructs (McArdle, 2009). Therefore, given that one of the broad aims of this study was to investigate how the WIL experience predicts changes in professional fit, the research model was designed to account for the cross-lagged, and autoregressive relationships between the constructs (McArdle, 2009). Specifically, consistent with recommendations, the model will account for the autoregressive relationships pre and post WIL professional fit perceptions (Cooper-Thomas et al., 2004). The model will also account for the cross-lagged relationships between
professional fit perceptions and post WIL outcomes (viz. occupational commitment and transition to practice self-efficacy).

Summary and Purpose of the Current Study

Despite the fact that many career theorists argue that fit with the values and goals of the profession is important (Shaf, 2002; Schien, 1971; Hall, 1971; Cochran, 1983; Fagerberg, 2004; Fagermoen, 1997; OeHlean & Sgesten, 1998), empirical research investigating the role of professional fit is limited. Therefore, the purpose of the following study is to extend the research on the causes and consequences of professional fit. To this end, the preceding discussion extended the findings presented in chapter six that demonstrated professional fit to be a distinct construct, and proposed several conceptual models that reflect the causes and consequences of professional fit. Consistent with the broad propositions of socialisation theory (Van Mannen & Schein, 1979; Crant, 2000; Kim et al., 2005; Jones, 1986; Morrison, 1993; Ashford & Black, 1996), the preceding discussion proposed that both environmental and individual differences are important antecedents of professional fit for WIL students. One of the central aims of the following study is to examine the proposed model to extend the current body of literature on professional fit.

This chapter identified that existing research investigating into how the WIL experience influences occupational commitment and transition to practice self-efficacy is limited. Although several qualitative studies have demonstrated that the WIL experience is an important factor in career-related outcomes (Taylor, 1988; Eames, 2000), there has been little attempt to extend the literature by empirically investigating how WIL influences these outcomes. Therefore, one of the broad goals of the following study was to examine several
theoretically based models that reflect the proximal and distal antecedents of occupational commitment and transition to practice self-efficacy.

As a result of the literature review, it was proposed that the dual effects of individual and environmental differences are important predictors of task specific self-efficacy. Specifically, it was predicted that social and structured support would improve transition to practice self-efficacy beliefs through providing students with access to enactive mastery and vicarious learning experiences (Bandura, 1997; Wood & Bandura, 1987; Gist & Mitchell, 1997). It was also proposed that positive framing, task negotiation, and GSE may also improve students’ efficacy beliefs. Given the dearth of published studies that have investigated these constructs, this study aimed to extend empirical research into the dual effects of environmental and individual differences on transition to practice self-efficacy.

Finally, as described in chapter one, the nursing profession is currently experiencing a global skills shortage, which is compounded by a high level of graduate attrition. Despite research supporting the proposition that WIL is important for the professional socialisation and retention of graduate nurses (Chan, 2001), few researchers have investigated how these experiences influence students’ commitment to the field. Investigating the causes of occupational commitment for Australian undergraduate nurses may inform future strategies to retain new graduates and combat the skills shortage. Therefore, one aim of the following study is to help identify the factors that have been proposed to influence the occupational commitment of early career nurses.
CHAPTER 8

STUDY TWO: THE CAUSES AND CONSEQUENCES OF PROFESSIONAL FIT

Overview

The overall purpose of study two is to investigate the causes and consequences of professional fit for nursing students within the WIL context. Study two had two specific aims. The first aim is to extend the current body of research by investigating the dual effects of both individual (viz. positive framing, GSE, task negotiation) and environmental differences (viz. structured and social support) on professional fit. The second aim is to investigate how WIL influences transition to practice self-efficacy and occupational commitment. Although many researchers contend that WIL improves career-related outcomes (Taylor, 1988; Eames, 2006, Dressler & Keeling, 2004), there is limited research that has evaluated theoretically derived models to explain the causal relationships between the constructs. Therefore, the goal of the current study is to contribute to the current body of literature by examining how WIL influences professional fit, transition to practice self-efficacy and occupational commitment.

Two research models are examined within the current study. The first research model presented in figure 8.1 reflects the broad proposition that both environmental and individual differences predict transition to practice self-efficacy and occupational commitment through their effect on professional fit. The second model presented in figure 8.2 reflects the theoretically supported alternative proposition that changes in transition to practice self-efficacy are directly influenced by environmental and individual differences.

The study included comparisons of three variations of each model of the relationship regarding between professional fit and transition to practice self-efficacy, which include: (a)
the hypothesised relationship reflecting the prediction that professional fit improves students’ transition to practice self-efficacy; (b) an alternative proposition that transition to practice self-efficacy improves professional fit; and (c) a third alternative model that reflects a reciprocal relationship between the constructs.

Figure 8.1. The hypothesised model reflecting the causes and consequences of professional fit within the WIL context

The proposed relationships for the model presented in figure 8.1 are as follows:

H3.8. Structured support will predict higher levels of professional fit.

H3.9. Social support will predict higher levels of professional fit.

H3.10. Positive framing will predict higher levels of professional fit.

H3.11. General self-efficacy will predict higher levels of professional fit.

H3.12. Task negotiation will predict higher levels of professional fit.

H3.13. Professional fit will predict higher levels of occupational commitment.

H2.7a. Professional fit will predict higher levels of transition to practice self-efficacy.

H2.8b. Transition to practice self-efficacy will predict higher levels of professional fit.
**H2.9b.** A reciprocal and positive relationship will exist between professional fit and transition to practice self-efficacy.

![Diagram](image)

*Figure 8.2. The alternative model reflecting the direct relationships between individual and environmental differences and professional fit.*

In addition to the proposed relationships presented above, the alternative hypotheses for the model in figure 8.2 are as follows:

**H2.10.** Structured support will predict higher levels of transition to practice self-efficacy.

**H2.11.** Social support will predict higher levels of transition to practice self-efficacy.

**H2.12.** Positive framing will predict higher levels of transition to practice self-efficacy.

**H2.13.** General self-efficacy will predict higher levels of transition to practice self-efficacy.

**H2.14.** Task negotiation will predict higher levels of transition to practice self-efficacy.

**Method**

**Participants**

Participants comprised third year Bachelor of Nursing undergraduate students from nine Australian universities. Data were collected from students prior to and following their final placement. This resulted in three datasets for use within the research program. The first dataset comprised data collected from Australian undergraduate nursing students prior
to their final placement ($N = 399$). The second dataset comprised data collected from students following their final placement ($N = 538$). The final dataset represents the matched, longitudinal data set ($N = 264$). The participants are described in detail in chapter 4.

**Measures**

**Demographic Variables**

The questionnaires collected demographic data and used to examine group differences within the outcome variables. Respondents were asked to indicate their age, gender, placement specialty, location (rural or city), and the duration of the placement. Respondents were also asked to indicate whether their clinical placement was their first preference. Furthermore, the respondents were asked to indicate their previous experience in nursing, and past experience with the team and workplace.

**Transition to practice self-efficacy**

The measure of transition to practice self-efficacy was calibrated over a six point scale ranging from (1) strongly disagree to (6) strongly agree. Sample items include, “I am confident in my ability to locate a graduate program / employment that suits me,” “I am confident in my abilities to communicate effectively with patients when I graduate,” and “I believe in my abilities to deal with stress and challenges in the ward or the team when I graduate.” Detailed information on the scale is in chapter 4.

**Professional fit**

A four-item measure of professional fit was designed for this research program. Each item reflected subjective fit with values or goals of the profession. A sample items includes, “to what extent do you feel like you fit with the nursing profession at large.” The four-item
Occupational commitment

Occupational commitment was measured using a modified version of Meyer & Allen’s (1991) affective commitment measure, which was calibrated across 6-point scale ranging from strongly disagree (1) to strongly agree (6). Four items from the affective commitment scale were modified to measure occupational commitment. These include, “I would be very happy to spend the rest of my career within the nursing profession”, “I think that I could easily become as attached to another profession as to this one”, “I do not feel emotionally attached to the nursing profession”, and “The nursing profession has a great deal of personal meaning for me”. Detailed information on the scale is in chapter 4.

Structured and Social Support

The structured support offered within placement was assessed using a measure specifically designed for this research program. A sample item of the newly developed scale is, “This placement was structured so that I had the opportunity to discuss experiences and ask questions with experienced staff members”. A modified version of Jones’ (1986) scale of investiture / divestiture socialisation was used to capture social support. Sample items for the social scale include “almost all of the staff on this placement were supportive of me personally”, and “staff went out of their way to help me fit in within the workplace”. Both scales were calibrated across six-point scale ranging from strongly disagree (1) to strongly agree (6). Detailed information on the scale is in chapter 4.
**Positive Framing**

Positive framing was measured using a four-item scale developed by Ashford and Black (1997) and was calibrated across a six-point scale ranging from ‘to a very little extent’ (1) to ‘to a very large extent’ (6). Sample items for the scale include “on placement to what extent did you try to see your situation as a challenge rather than a problem?” and “on placement to what extent did you try to look on the bright side of things?” Detailed information on the scale is in chapter 4.

**Task Negotiation**

Task negotiation was measured using a four-item scale developed by Ashford and Black (1996) and was calibrated across a 6-point scale ranging from ‘to a very little extent’ (1) to ‘to a very large extent’ (6). Sample items for the scale include, “on placement to what extent did you negotiate with others (including your supervisor and/or coworkers) about your task assignments”, and “on placement to what extent did you negotiate with others (including your supervisor and/or coworkers) about their expectations of you”. Detailed information on the scale is in chapter 4.

**General self-efficacy**

General self-efficacy was measured using the new general self-efficacy (NGSE; Chen et al., 2001) scale. A sample item from the NGSE scale is “I believe I can succeed at most any endeavour to which I set my mind”. The scale was calibrated over a six point scale ranging from (1) strongly disagree to (2) strongly agree. Detailed information on the scale is in chapter 4.
Procedure

In addition to the general procedure discussed in chapter four, unit weighted composite variables were calculated for each of the constructs. Parameters were manually calculated using the factor weights and squared multiple correlations gained from each single-factor congeneric analysis. Specifically, in place of Cronbach’s alpha, composite reliability was estimated using the formula proposed by Werts, Rock, Linn and Jöreskog (1978). The composite reliability was then to be used to calculate the regression coefficient and residual variance, which were set as fixed parameters within the model (see Munck, 1979 or Holmes-Smith, 2005 for examples). The matched dataset ($N = 232$) was to be used to estimate the variance-covariance matrix and examine the proposed structural relationships.

Results

Descriptive Statistics and Zero Order Correlations

The first step of the data analysis involved calculating the parameters associated with the composite variables. As presented in table 8.1, each scale had acceptable composite reliability coefficients indicating modest reliability across all of the scales. The mean for each composite fell slightly above the midpoint on a six point scale, and the standard deviation for each scale indicated that each construct had a moderate degree of variability. The factor loadings and error variance estimates within the following table were set as fixed parameters within the structural equation model.
Table 8.1

Means, Standard Deviations and Composite Scale Parameters for the Constructs Examined in Study Two

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>$r_c$</th>
<th>$\lambda_c$</th>
<th>$\Theta_c$</th>
<th>$\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Commitment</td>
<td>4.70</td>
<td>1.06</td>
<td>.63</td>
<td>.55</td>
<td>.24</td>
<td>.67</td>
</tr>
<tr>
<td>Professional Fit (Time 1)</td>
<td>5.02</td>
<td>.75</td>
<td>.89</td>
<td>.78</td>
<td>.07</td>
<td>.85</td>
</tr>
<tr>
<td>Professional Fit (Time 2)</td>
<td>4.98</td>
<td>.82</td>
<td>.90</td>
<td>.78</td>
<td>.07</td>
<td>.91</td>
</tr>
<tr>
<td>Transition Self-Efficacy (Time 1)</td>
<td>4.71</td>
<td>.97</td>
<td>.85</td>
<td>.85</td>
<td>.09</td>
<td>.95</td>
</tr>
<tr>
<td>Transition Self-Efficacy (Time 2)</td>
<td>4.90</td>
<td>.91</td>
<td>.88</td>
<td>.85</td>
<td>.09</td>
<td>.93</td>
</tr>
<tr>
<td>General Self-Efficacy</td>
<td>4.85</td>
<td>.76</td>
<td>.85</td>
<td>.71</td>
<td>.09</td>
<td>.93</td>
</tr>
<tr>
<td>Positive Framing</td>
<td>5.22</td>
<td>.87</td>
<td>.81</td>
<td>.79</td>
<td>.17</td>
<td>.93</td>
</tr>
<tr>
<td>Task Negotiation</td>
<td>3.62</td>
<td>1.25</td>
<td>.94</td>
<td>1.21</td>
<td>.33</td>
<td>.83</td>
</tr>
<tr>
<td>Social Support</td>
<td>4.44</td>
<td>1.28</td>
<td>.73</td>
<td>1.03</td>
<td>.40</td>
<td>.89</td>
</tr>
<tr>
<td>Structured Support</td>
<td>3.91</td>
<td>1.20</td>
<td>.91</td>
<td>1.66</td>
<td>.13</td>
<td>.85</td>
</tr>
</tbody>
</table>

N.B. $r_c$ is the composite score reliability based on the factor score weights; $\lambda_c$ is the estimate of the variance in the items that is explained by the composite measure; $\Theta_c$ is the estimate of the remaining variance not explained by the composite; and $\alpha$ is Cronbach's alpha.

A series of one way ANOVAs and zero order correlations were conducted to determine if there were any differences between the outcome variables (viz. professional fit, transition to practice self-efficacy, and occupational commitment) based on each demographic variable. The first analysis identified a significant correlation between transition to practice self-efficacy and past work experience in nursing ($r = .16, p < .05$); however, prior work experience with nursing was unrelated to professional fit and occupational commitment. Analysis also revealed a significant correlation between age and occupational commitment ($r = .19, p < .01$), and transition to practice self-efficacy ($r = .14, p < .05$), but age was unrelated to professional fit. The demographic variables that were significantly related to the outcomes to be examined in this study were included as control variables in the structural equation model.

Mean values of outcome variables did not differ by the location of the placement (viz. rural vs. city), gender, weekly placement activities (full time vs. part time), past general
work experience, prior experience in the particular speciality or workplace, and whether students were allocated their preferred speciality or workplace.

The proposed relationships between the variables were initially examined using a zero-order correlation analysis, which is presented in table 8.2. Consistent with hypotheses 2.1 through to 2.5, both individual (i.e., GSE, positive framing, task negotiation) and environmental differences (i.e., social and structured support) were significantly positively correlated with professional fit. The analysis also revealed initial support for hypothesis 2.6 which predicted that professional fit would be associated with occupational commitment. In addition, and transition to practice self-efficacy was significantly positively correlated with professional fit, which provided initial support for hypotheses 2.7, 2.8 and 2.9. Finally, positive framing, GSE, social and structured support were significantly positively correlated with transition to practice self-efficacy which provided initial support for hypotheses 2.10 through to 2.13; however, hypothesis 2.14, which predicted that task negotiation would be positively associated with students’ transition to practice self-efficacy was not supported.

*Structural Equation Model*

As described earlier, several models were to be examined and compared using the chi-square difference test. Model one reflects the hypothesised model which proposed that environmental and individual differences improve students’ transition to practice self-efficacy through professional fit. Model two represents the alternative proposition that individual and environmental differences directly predict higher levels of transition to practice self-efficacy. Comparisons were made between three variations of each model reflecting alternative hypotheses regarding causality between transition to practice self-
efficacy and professional fit. These relationships are denoted by ‘a’, ‘b’, or ‘c’ for each model presented in table 8.3.

Specifically, ‘a’ represents the prediction that professional fit will improve students’ transition to practice self-efficacy, and ‘b’ represents the alternative hypothesis that transition to practice self-efficacy improves students’ professional fit perceptions. Finally, ‘c’ reflects the notion that a reciprocal relationship may exist between the constructs. Based on all possible combinations, a total of six models were examined (i.e., 1a, 1b, 1c, 2a, 2b, 2c; see table 8.3).

Results from the chi square difference test demonstrated that each of the models was statistically different from the hypothesised model. Models 1a through to 2a failed the goodness of fit test, which indicated that they did not provide a good fit of the data. As reported in table 8.3, models 2b and 2c provided chi-square estimates greater than the 0.05 cut-off criterion. Both of these models had excellent goodness-of-fit statistics across the range of indices examined, and the difference chi-square test indicated that the models were statistically equivalent ($\Delta \chi^2 = 0.26; p = 0.87$). Therefore, the Akaike Information Criterion (AIC) and Consistent Akaike Information Criterion (CAIC) were inspected to identify the most parsimonious model. As described by Holmes-Smith (2005), when comparing models, the "best" model is the model with the smallest AIC and CAIC values. These values take into consideration the magnitude of change in chi square relative to the number of parameters within the model.
Table 8.2

**Correlation Matrix for the Constructs of Task Negotiation, Positive Framing, General Self-Efficacy, Structured Support, Social Support, Transition to Practice Self-Efficacy, Occupational Commitment and Professional Fit.**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Task Negotiation</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Positive Framing</td>
<td>0.01</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 GSE</td>
<td>0.01</td>
<td>0.39**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Structured Support</td>
<td>0.21**</td>
<td>0.21**</td>
<td>0.07</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Social Support</td>
<td>0.13*</td>
<td>0.31**</td>
<td>0.18**</td>
<td>0.66**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 T1 Transition to practice self-efficacy</td>
<td>0.06</td>
<td>0.46**</td>
<td>0.66**</td>
<td>0.17*</td>
<td>0.21**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 T2 Transition to practice self-efficacy</td>
<td>0.11</td>
<td>0.50**</td>
<td>0.52**</td>
<td>0.30**</td>
<td>0.32**</td>
<td>0.69**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Commitment</td>
<td>0.10</td>
<td>0.29**</td>
<td>0.23**</td>
<td>0.30**</td>
<td>0.32**</td>
<td>0.26**</td>
<td>0.44**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 T1 Professional Fit</td>
<td>0.04</td>
<td>0.35**</td>
<td>0.37**</td>
<td>0.25**</td>
<td>0.30**</td>
<td>0.22**</td>
<td>0.38**</td>
<td>0.47**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>10 T2 Professional Fit</td>
<td>0.18**</td>
<td>0.46**</td>
<td>0.32**</td>
<td>0.37**</td>
<td>0.43**</td>
<td>0.43**</td>
<td>0.61**</td>
<td>0.69**</td>
<td>0.52**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

N.B. * Denotes values that are significant at $p<0.001$; * Denotes values that are $(p < 0.05)$; TTPSE denotes transition to practice self-efficacy; GSE denotes General Self-Efficacy.
The results indicated that model 2b (AIC = 85.23 & CAIC = 258.99) was more parsimonious that model 2c (AIC = 87.21 & CAIC = 264.42). This model supported the alternative proposition that transition to practice self-efficacy predicts higher levels of professional fit. The results also supported the proposition that individual and environmental differences predict higher levels of transition to practice self-efficacy. The final model is presented in figure 8.3 below.

Table 8.3

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df)</th>
<th>P</th>
<th>AGFI</th>
<th>RMSEA</th>
<th>TLI</th>
<th>$\Delta\chi^2$</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1a</td>
<td>93.62 (14)</td>
<td>.00</td>
<td>.68</td>
<td>.18</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 1b</td>
<td>195.32 (14)</td>
<td>.00</td>
<td>.52</td>
<td>.26</td>
<td>.34</td>
<td>99.70 .00</td>
<td></td>
</tr>
<tr>
<td>Model 1c</td>
<td>55.32 (13)</td>
<td>.00</td>
<td>.80</td>
<td>.13</td>
<td>.82</td>
<td>38.30 .00</td>
<td></td>
</tr>
<tr>
<td>Model 2a</td>
<td>15.68 (9)</td>
<td>.06</td>
<td>.89</td>
<td>.08</td>
<td>.93</td>
<td>77.94 .00</td>
<td></td>
</tr>
<tr>
<td>Model 2b</td>
<td>7.23 (9)</td>
<td>.30</td>
<td>.95</td>
<td>.03*</td>
<td>.99</td>
<td>86.39 .00</td>
<td></td>
</tr>
<tr>
<td>Model 2c</td>
<td>7.45 (8)</td>
<td>.20</td>
<td>.95</td>
<td>.04*</td>
<td>.98</td>
<td>86.17 .00</td>
<td></td>
</tr>
</tbody>
</table>

N.B. * denotes RMSEA PCLOSE level > .05; $\chi^2$ denotes chi squared; df denotes degrees of freedom; P denotes probability level associated with chi squared; AGFI denotes Adjusted Goodness of Fit Index; RMSEA denotes Root Mean Square Error of Approximation; TLI denotes the Tucker Lewis Index; $\Delta\chi^2$ denotes the difference in chi squared between the models; sig denotes the statistical significance of the difference between the models with NS indicating no significant differences between the models.

The next step involved reviewing the standardised beta weights and squared multiple correlations for each construct. The results for the post WIL transition to practice self-efficacy construct were reviewed first, and with approximately 68% of the variance explained by the predictor variables depicted in figure 8.3, the cross lagged relationship between pre and post-WIL transition to practice self-efficacy was strong ($\beta=.65$, $p < 0.01$).

Providing support for H2.12, positive framing significantly predicted higher levels of post WIL transition to practice self-efficacy ($\beta=.19$, $p<0.01$). The results also provided support for H2.10 and demonstrated that structured support predicted higher levels of post WIL transition to practice self-efficacy ($\beta=.11$, $p<0.01$). Past nursing experience was also
positively related to post WIL transition to practice self-efficacy ($\beta = .11, p<0.01$). Finally, task negotiation, social support and general self-efficacy were unrelated to post-WIL transition to practice self-efficacy. Thus hypotheses 1.11, 1.13, and 1.14 were not supported.

![Overall model of the antecedents of career commitment, transition to practice self-efficacy and professional fit](image)

**Figure 8.3.** Overall model of the antecedents of career commitment, transition to practice self-efficacy and professional fit

N.B. Correlation paths between the exogenous variables and non significant paths are not included in the model for clarity. Each square represents the construct based on maximally weighed factor scores.

Approximately 74% of the variance in post-WIL professional fit perceptions was explained by each of the predictor variables presented in figure 8.3. Providing strong support for H2.8b, post WIL transition to practice was strongly related to post-WIL
professional fit perceptions ($\beta = .62, p < .01$). The cross lagged relationship between pre and post-WIL professional fit perceptions was also positive and significant ($\beta = .46, p < .01$). Predicted that social support would improve students’ fit with the profession, H2.2 was also supported ($\beta = .65, p < .01$). Task negotiation was positively related to post-WIL professional fit perceptions ($\beta = .65, p < .01$), which provided support for hypothesis 2.5. Positive framing, GSE, and structured support were unrelated to post WIL professional fit perceptions, and thus hypothesis 2.1, 2.3 and 2.4 were not supported. Approximately 87% of the variance in occupational commitment was explained by professional fit and age. While professional fit was strongly related to occupational commitment ($\beta = .65, p < .01$), age was only weakly associated with the construct ($\beta = .65, p < .01$).

The next step was to examine the indirect effects between the antecedents of professional fit and occupational commitment. The results showed that positive framing improved occupational commitment indirectly through both transition to practice self-efficacy and professional fit ($BCCI = .084 - .291, p = .01$). Similarly, the relationship between structured support and occupational commitment was explained through changes in students’ transition to practice self-efficacy beliefs and their fit with the profession ($BCCI = .03 - .21, p = .02$). Finally, transition to practice self-efficacy and task negotiation improved student’s occupational commitment through improvements in their professional fit perceptions ($BCCI = .35 - .83, p = .01$, and $BCCI = .03 - .22, p = .01$, respectively). Despite the finding that social support improved students’ professional fit perceptions, the results of the mediation analysis revealed that the construct was unrelated to occupational commitment.
Discussion

The purpose of this study was to investigate the causes and consequences of professional fit for Australian undergraduate nursing students within the WIL context. The first aim was to examine the dual effects of both individual and environmental differences on students’ professional fit perceptions. The second aim was to investigate how the WIL experience influences students’ transition to practice self-efficacy and occupational commitment.

In the first step of the analyses, the goodness-of-fit for each model was examined, with the results supporting the proposition that both individual and environmental differences are directly related to transition to practice self-efficacy. In the second step of the analyses, the hypothesised relationships were explored for the supported model. The theoretical and practical implications of these results are discussed below.

Professional Fit

As described earlier, the study compared three alternative models regarding the relationship between transition to practice self-efficacy and professional fit. The results demonstrated that transition to practice self-efficacy was a strong predictor of professional fit perceptions. These results suggest that students who have more favourable perceptions of their ability to make the transition to practice, also perceive a stronger degree of fit with the culture of their profession. The fact that transition to practice self-efficacy was a strong predictor of professional fit suggests that workplaces should help students to improve their perceived competence in the application of skills to practice in order to socialise them more effectively within the profession.
The relationship between social support and professional fit was also supported within the model. These results provided support for the proposition that social support helps students to feel accepted by other members of the profession, and reduces the negative impact that stress and uncertainty has on newcomer learning and adjustment (Cooper-Thomas et al., 2004; Louis, 1980; Fisher, 1985; Lepine et al., 2004). These results also support the proposition that social support provides access to interpersonal exchanges with other professionals, enabling students to attach meaning to events and practices, thus improving their enculturation with the group (Reichers, 1987). One conclusion of these results is that workplaces should be encouraged to provide students with access to supportive employees in order to facilitate their adjustment to the culture of the profession.

The results of the current study also supported the prediction that task negotiation would improve students’ professional fit perceptions. Broadly, these results are consistent with the socialisation literature which suggests that individuals come to understand cultural beliefs and values through social exchanges with others in the workplace (Reichers, 1987). Specifically, these results suggest that the process of task negotiation can provide students with another avenue to acquire information about the values and goals that guide particular tasks and responsibilities within the profession. Also, these results support the proposition that task negotiation may help students to reduce the ambiguity and uncertainty within the WIL environment, and thus improve the effectiveness of the WIL experience (Ashford & Black, 1997). One conclusion from these results is that pre-WIL preparation programs should attempt to help students to identify their learning needs and to develop their skills in negotiating suitable activities with employers.

The prediction that structured support would improve students’ fit with the profession, was not supported by the data. This result suggests that students view social
support as more important than the structure of placement activities for their socialisation within the profession. In addition, the relationships between the remaining individual difference variables (viz. positive framing and GSE) and professional fit were also not supported. While the results of the correlation analysis showed that each of these variables were statistically associated, their relationships were not sustained within the structural equation model. Given that existing empirical evidence is limited, further research is required to determine the generalisability of these results to other professions. One possible explanation of these findings is that individual differences may be more important in different WIL contexts. Therefore, future research should also investigate two-way and three-way interactions to determine the presence of moderated relationships between the constructs.

Although the cross-lagged relationship between pre- and post-WIL professional fit perceptions was significant, the effect size was only moderate. This result suggests the WIL experience played an important role in changing students’ fit with the profession. This is an important finding as it provides support for the utility of WIL for helping nursing students adjust to the profession.

Transition to Practice Self-Efficacy

The relationship between structured support and transition to practice self-efficacy was supported, which is consistent with empirical evidence demonstrating that structured training programs help to improve efficacy beliefs (Saks, 1995; Gist, 1989). These results suggest that structured WIL programs help to improve efficacy beliefs through providing students with access to enactive mastery and vicarious learning experiences (Bandura, 1997). This is an important finding, as many authors have argued that WIL helps students
make the transition to practice, yet little empirical research exists. One implication of these results is that universities and workplaces should attempt to provide students with goal-directed activities on placement in order to improve efficacy beliefs.

The results of the current study support the relationship between positive framing and professional fit. These results provide support for Wood and Bandura’s (1987) proposition that self-efficacy beliefs are influenced by the manner in which the individual interprets and reconstructs particular experiences in memory. These results suggest that students who view the completion of WIL activities in a positive way, are more likely to interpret the attainment of goals as directly related to their own ability, thus improving their efficacy beliefs. One conclusion from these results is that universities should help students to improve their positive framing skills prior to the WIL placement.

The results of the current study also revealed that past nursing experience predicted higher levels of transition to practice self-efficacy. These results are consistent with Bandura’s (1997) underlying proposition that self-efficacy is influenced by repeated exposure to particular tasks within a given environment. Within the current context, students who had previous experience in the nursing profession were more confident in their abilities to make the transition from the university to the workplace.

The cross lagged relationship between pre and post-WIL transition to practice self-efficacy was significant; however, despite the strong relationship between the constructs, the model demonstrated that the WIL experience (viz. structured support) and individual differences (viz. positive framing) improved students’ transition to practice self-efficacy following the WIL placement. Therefore, these results demonstrate the importance of WIL for improving nursing student’s competence to make an effective transition to practice.
Although GSE was significantly correlated with transition to practice self-efficacy, this relationship was not sustained within the structural equation model. These results contrast with the widespread empirical support for the relationship between GSE and task specific self-efficacy (Chen et al., 2001; Schwarzer & Hallum, 2008; Yeo & Neal, 2006). One explanation for these results concerns the presence of moderators. Early research conducted by Eden and Aviram (1993) demonstrated that the effect of training was strongest for students with low GSE. Within the current context, one argument is that students with low levels of GSE are more susceptible to both positive and negative experiences within the WIL environment. Therefore, high levels of GSE may help students overcome stress and anxiety associated with placements that have low levels of structured and social support. Future research is required to investigate the interaction between GSE and social and structured support.

The results of the structural equation model also revealed that task negotiation was unrelated to transition to practice self-efficacy. One possible explanation is that those who use task negotiation may not always secure opportunities that help them to build their efficacy beliefs. Another explanation is that task negotiation may be more important in unstructured WIL settings. The basic proposition of task negotiation is that students may create their own enactive mastery experiences through securing relevant learning opportunities within the environment. However, in a highly structured environment, task negotiation may be relatively unimportant as students are generally provided with access to activities that aim to build upon their skills. Therefore, more research is required to investigate whether structured support moderates the relationship between task negotiation and self-efficacy.
Occupational Commitment

The results of the study support the prediction that professional fit would improve students’ commitment to the occupation. These results support the extension of the attraction-selection-attrition model to the occupational context of nursing (Schneider, 1985), and suggest that individuals are more committed to occupations that espouse similar values and goals to their own. These results are also consistent with theories of career motivation and adjustment which suggest that individuals will be more satisfied and committed to occupations that are consistent with their preferences and characteristics (Schein, 1971; Hall, 1979; Holland, 1985; Sharf, 2002). One conclusion from this research is that workplaces and universities should place importance on socialising students within the profession to improve the retention of new graduates. For example, professional mentoring programs with early graduates may help students learn about the values, goals and norms associated with the profession.

Analysis of the indirect effects identified that structured support and positive framing improved students’ commitment to the occupation through changes in transition to practice self-efficacy beliefs and professional fit perceptions. Task negotiation and transition to practice self-efficacy were also related to occupational commitment indirectly through students’ professional fit perceptions. Taken together, these results support the broad proposition of this research program that professional fit is an important explanatory variable that describes how the WIL influences occupational commitment. Furthermore, these results suggest that workplaces should increase the amount of structured support in order to facilitate the enculturation of students within the profession, boost their efficacy beliefs and improve their commitment to the field. These results also support the proposition that the student is an active agent for influencing career-related outcomes, and
that universities should create pre WIL preparation programs aimed at improving students’ ability to negotiate tasks and frame experiences in a positive manner.

Conclusion

This chapter addresses the broad research question regarding the causes and consequences of professional fit within the WIL context. In summary, the findings demonstrated that both individual and environmental differences (i.e., task negotiation, social support, transition to practice self-efficacy) improve students’ professional fit perceptions. This study also extends the research on transition to practice self-efficacy, and demonstrated that both individual and environmental differences (i.e., positive framing, structured support, prior nursing experience) predict changes in students’ efficacy beliefs following the WIL placement. Overall, this research showed that those who study the effect of individual or environmental factors in isolation may gain an incomplete picture of the antecedents of WIL outcomes. The results of the mediation analysis revealed that professional fit plays a central role in WIL’s influence on students’ commitment to the occupation of nursing.
CHAPTER 9

LITERATURE REVIEW: THE CAUSES AND CONSEQUENCES OF PERSON-JOB AND PERSON-ORGANISATION FIT

Overview

The purpose of this chapter is to provide a review of the relevant literature on the causes and consequences of person-job and person-organisation fit within the WIL context. The first aim of this chapter is to provide a review of literature on the relationship between environmental differences in socialisation (viz. social and structured support) and perceived fit (viz. person-organisation fit, person-job needs-supplies and person-job demands-abilities fit). The second aim of this chapter is to provide a review of the literature on the relationship between individual differences (viz. positive framing, task negotiation, general self-efficacy) and perceived fit. The final aim is to analyse the literature on the relationships between perceived fit, job and organisational attraction and future behavioural intentions (investigated in study three in chapter ten).

Chapter six validated the measurement models used in this research program, and provided strong support for the hypothesised four-factor solution of person-environment fit. These results showed that Australian undergraduate nursing students distinguish between their fit with their job (viz. person-job needs-supplies, person-job demands-abilities fit), the organisation (viz. person-organisation fit), and the profession (viz. professional fit). Chapter seven provided a review of the relevant theory and empirical evidence surrounding the causes and consequences of professional fit, and chapter eight demonstrated that both environmental and individual differences are important predictors of professional fit. Chapter eight also identified that professional fit was a strong predictor
of occupational commitment. This chapter provides an extension of study two by proposing that both individual and environmental differences are important predictors of person-job and person-organisation fit perceptions.

![Figure 9.1. The Causes and Consequences of Person-Organisation and Person-Job Fit](image)

The conceptual model depicted in figure 9.1 represents the causes and consequences of person-organisation and person-job fit (viz. needs-supplies and demands-abilities fit). The first part of this model proposes that both individual (viz. positive framing, general self-efficacy, task negotiation) and environmental differences (viz. social and structured support) predict higher levels of perceived fit. The second part of the model proposes that perceived fit predicts organisational pursuit and job pursuit intentions through its impact on attraction (viz. job and organisational attraction). Each of the proposed relationships is based on a critique of the industrial-organisational psychology, WIL, and nursing literatures which is described in greater detail in the following section.
Environmental Differences and Person-Organisation Fit

The first set of relationships explored in this chapter is between environmental differences (viz. social and structured support) and person-organisation fit. Early literature on the cause of person-organisation fit proposed that as a newcomer’s tenure with organisation increases, so too does their perceived fit (e.g., Hall, Schneider & Nygren, 1975; Hinrichs, 1964; De Cooman, Gieter, Peperman, Hermans, Du Bois, Caers & Jerges, 2009; Chatman, 1991). These researchers proposed that individuals come to accept the goals and values of the culture through regular interactions with established employees. Empirical research has supported this proposition. For example, recent research conducted by De Cooman et al. (2009) found that new employees reported higher levels of person-organisation fit after two years with the organisation. Similarly, Saks and Ashforth (1997) investigated the predictors of person-organisation fit for a sample of graduates prior to entering the organisation and demonstrated that prior WIL experience was significantly related to person-organisation fit ($r = .27$). Collectively, this line of research supports the notion that newcomers’ goals and values become more aligned with those of their organisation over time, which improves their perceived fit.

One limitation of this theoretical perspective is that it does not take into account the role that socialisation strategies play in helping newcomers adjust to the organisation. As described earlier, a central tenet of socialisation theory is that newcomers come to learn and adopt the values and goals of the organisation through the way in which they are socialised into the workplace (Louis, 1980; Kristof, 1996). These socialisation practices, which include structured and social support, help reduce the ambiguity and uncertainty within a new work environment and foster leaning and adaptation to the workplace. Unfortunately, although Kristof (1996) called for more research within the area, empirical
research remains limited. Therefore, the goal of the following literature review was to
describe the relationships between environmental differences in socialisation practices (viz.
social and structured support) and person-organisation fit within the WIL context to be
tested in the final study.

Social Support

As described earlier, the purpose of social support is to help newcomers adjust to
the workplace through providing guidance and encouragement. Recent literature has
identified that social support may improve perceptions of person-organisation fit for two
reasons. The first reason is based on the notion that social support helps newcomers
overcome the reality shock, stress and anxiety associated with organisational entry (Louis,
1980; Fisher, 1985). As described by Louis (1980), upon entering a new organisational
setting, newcomers must process many unfamiliar cues, which can be overwhelming and
stressful. Fisher (1985) argued that social support helps to cushion the impact of the reality
shock, and help integrate the newcomer within the organisation. Certainly, helping nursing
students overcome the initial stress of organisational entry may help also facilitate their
integration with others in the workplace. Thus, one strong line of argument is that social
support improves perceived person-organisation fit through reducing the negative effects of
reality shock upon organisational entry.

The second reason why socialisation is important is that social support helps the
student learn about the values and goals of the workplace via access to established
employees (Kristof, 1996; Reichers, 1987). As described in chapter seven, Reichers (1987)
argued that social interaction is one of the main avenues through which newcomers are
able to associate meaning to events, practices, and procedures. For example, through
opportunities to discuss experiences, a student may learn that the reason for working
extended hours is based upon the organisations goal to ‘go the extra mile’ for patients. Thus, one line of argument is that people come to understand and adopt preset values and norms espoused within the organisation when they are provided with social support.

Early literature often reported that social support improves perceived person-organisation fit, a relationship which has remained unexplored until recently. In response to this shortcoming, Cable and Parsons (2001) investigated the relationship between social support and person-organisation fit for 129 new graduates and found that social support significantly improved new graduates subjective person-organisation fit perceptions (β = .49). The researchers concluded that supportive interactions helped newcomers to overcome the uncertainly and ambiguity within the environment, and assisted them to overcome the reality shock associated with organisational entry. More recently, Cooper-Thomas, van Vianen and Anderson (2004) longitudinally investigated the relationship between social support and two dimensions of person-organisation fit: namely, subjective and objective fit. The researchers found that the discrepancy between subjective and objective person-organisation fit decreased over time, and identified that social support predicted higher levels of subjective person-organisation fit. This seminal research study demonstrated that social support improved newcomer’s person-organisation fit, and that these perceptions became more consistent with reality over time. The fact that subjective and objective fit perceptions become more closely related over time supports the proposition that social support helps newcomers learn about the culture of the organisation.

Only one study has investigated the relationship between social support and person-organisation fit perceptions within the WIL context. Specifically, Gruman et al. (2006) found that social support helped improved interns perceived person-organisation fit. However,
one limitation of Gruman et al.’s study was that social and structured support were combined under a global construct representing institutionalised socialisation. Therefore, one of the aims of the current research was to extend these results by investigating the influence of social and structured support separately. Given the theoretical and empirical support, it was expected that social support would improve WIL nursing students’ perceptions of person-organisation fit.

**Structured Support**

The review of the literature identified that structured support may improve students' perceived organisational fit. As described earlier, the goal of a structured learning environment is to provide students with access to meaningful work assignments in order to improve learning outcomes; such activities are argued to not only foster skill development, but help the student to learn about the values and goals of the organisation (Gruman et al., 2006). For example, a structured learning activity in safe sterilisation practices not only helps the student improve their skills and abilities and it also communicates core organisational goals of patient safety. By contrast, in an unstructured environment students may not have access to such experiences, which may limit their opportunities to learn the guiding principles that characterise the culture of the organisation.

The reality shock hypothesis may also have utility in describing the relationship between structured support and person-organisation fit. Specifically, structured support provides students with a clear framework that reduces uncertainty in the environment, and encourages them to accept preset organisational norms, values and goals (Van Mananen & Schein, 1979; Cable & Parsons, 2001). Cable and Parsons (2001) concluded that the absence of a formalised structure “creates ambiguity and encourages newcomers to question the status quo” and in a structured learning environment, newcomers “receive a common
message about the organisation’s values and how they should interpret and respond to situations” (p. 15). For these reasons, one strong line of argument is that structured support improves person-organisation fit by reducing the impact of reality shock and uncertainty, while facilitating students’ learning.

Indeed, empirical evidence has supported the notion that structured support helps the newcomer learn about the day-to-day practices, and reduces the impact of the reality shock. For example, Gruman et al. (2006) investigated the relationship between structured and systematic socialisation practices and perceptions of person-organisation fit for WIL students and found that positive socialisation experiences, which comprised both social and structured support, improved perceptions of subjective person-organisation fit (r = .27). In a similar study, Cable and Parsons (2001) found that providing newcomers with a structured timetable of learning events significantly improved subjective person-organisation fit perceptions. In summary, the current body of literature supports the expectation that structured support will improve perceived person-organisation fit. However, despite the support for the proposed relationships, more research is needed within the WIL context. Therefore, the following study seeks to extend upon the research by investigating the dual impact of both structured and social support on perceived organisational fit.

Environmental Differences and Person-Job Fit

The next series of relationships to be explored in the final study are those between environmental differences in socialisation (viz. social and structured support) and person-job fit (viz. both needs-supplies and demands-abilities fit dimensions). Early research conducted by Saks and Ashforth (1997) demonstrated that WIL improves person job fit (r = .29; Saks & Ashforth, 1997). Similarly, in a separate stream of research from the WIL
literature, qualitative evidence reinforced the notion that WIL improves perceived job fit (Calway, 2001). Nevertheless, one limitation to the current body of literature is that very little research has investigated the antecedents of person-job fit within the WIL setting. A greater understanding of the antecedents of person-job fit may suggest additional means of influencing student’s future job choice. Therefore, the goal of the following section is to provide a summary of the literature regarding the relationship between socialisation (viz. social and structured support) and person-job fit within the WIL context.

**Social Support and Person Job Fit**

Although limited, the empirical literature has identified that social support may improve person-job demands-abilities fit for two reasons. The first reason is that social support may help students overcome the uncertainty, stress, and anxiety associated with workplace entry and improves their learning experience (Louis, 1980). This proposition is consistent with the body of empirical evidence that demonstrates that stress and anxiety reduce learning performance (Warr & Downing, 2000; Sonnentag, Neissen & Ohly, 2004; Fisher, 1985; Lepine, Lepine & Jackson, 2004). For example, Warr and Downing (2000) investigated the effect of a structured training program to increase mechanics’ ability to meet the demands of the role. The researchers found that anxiety had a negative effect on participants’ learning performance. Similarly, early research conducted by Fisher (1985) found that social support helped to improve newcomers’ adjustment to organisations through reducing the adverse effects of organisational entry stress. Collectively, these finding suggest that stress and anxiety reduce learning performance, and that social support may improve learning outcomes through helping students to avoid feeling incompetent and insecure during the entry process into a new learning environment.
The second reason is that social support may foster students’ learning beyond organisational entry and throughout the WIL placement. Sonnentag et al. (2004) argued that a supportive environment is conducive of feedback-seeking behaviours and helps students build and refine their skills. The researchers contended that a supportive environment helps students to feel comfortable to ask questions and to seek feedback. Consistent with this, a supportive environment has been argued to improve learning through positive reinforcement of the skills that are required to meet the demands of the role (Smith-Jentsch et al. 2001; Sonnentag et al. 2004); empirical research supports this proposition (Allen et al., 1999; Colquitt et al., 2000; Smith-Jentsch et al., 2001; Warr et al., 1999). For example, meta-analytic findings demonstrated that supervisor support is positively related to knowledge acquisition and skill development (Colquitt et al., 2000). Based on this substantive rationale, it was anticipated that social support in a practicum would improve nursing students’ person-job demands-abilities fit.

In addition to demands-abilities fit, the literature identified that social support may improve students’ person-job needs-supplies fit. As described earlier, needs-supplies fit occurs when what the newcomers desires are met by the allocations of the organisation. In the early stages of one’s career, responding to novel challenges places increased pressure on student’s cognitive and emotional resources (Ng & Feldman, 2007). Thus, one line of argument is that students rely on social support during the early stages of career development to help them meet the challenges of the role. Indeed, a stream of qualitative research from the WIL field has highlighted that a lack of social support is a common cause of student dissatisfaction (Garavan & Murphy, 1991; Eames, 2000; Nelson & Quick, 1991; Anderson, Lennox, & Petersen, 2004). For these reasons, it was predicted that social support would improve nursing students’ person-job needs-supplies fit.
Despite these theoretical propositions, only one study has investigated the relationship between social support and person-job fit. Riordan et al. (2001) demonstrated that social support predicted higher levels of person-job needs-supplies and demands-abilities fit; however, the researchers collected data at one time point only, which limits the conclusions that can be made regarding causality. Thus, a key goal of the final study described in this thesis was to extend the current body of research by investigating the relationship between social support and person-job fit using a longitudinal design.

**Structured Learning and Person-Job Fit**

The review of the literature also identified that structured support may improve person-job demands-abilities fit. As described earlier, a structured learning environment comprises goal-directed activities, which aim to improve students’ knowledge and abilities through facilitating the application of theory to practice. The literature shows that a structured learning environment gives students a greater understanding on how specific experiences will contribute to their development, and are provided with opportunities to reflect and to ask questions (Van Mannen & Schien, 1979; Jones, 1986; Kim et al., 2005; Billet, 2005). By contrast, in an unstructured environment, the learner may be unclear about what they are trying to accomplish, and their efforts may be misdirected. Certainly, this line of reasoning is consistent with the notion that a structured WIL experience reduces ambiguity and uncertainty, thus improving learning outcomes. Such propositions are also consistent with Kolb’s (1984) experiential learning theory, which emphasises the role of learning through the combination of grasping and transforming meaningful experiences. For these reasons, it can be argued that a structured WIL placement will improve nursing students’ perceived person-job demands-abilities fit.
While numerous studies have supported the role of structured support in increasing individuals’ knowledge and skills (Jones, 1986; Sonnentag et al., 2004 Wong & Coll, 2001), the review of the literature identified only one study that explicitly investigated the relationship between structured support and person-job demands-abilities fit. Riorden et al. (2001) found that structured and sequential learning activities improved individuals’ perceived person-job demands-abilities fit; however, the researchers conducted the study on established employees rather than WIL students, thus limiting the generalisability of the results. Therefore, the current research program offers an extension to the literature through examining the proposed relationships within the WIL context in the final study.

The literature also suggests that structured support may improve person-job need-supplies fit; specifically, qualitative research has demonstrated that student’s consider structured support to be an essential requirement for a successful WIL placement. For example, Allen (2007) found that unstructured WIL placements resulted in higher levels of dissatisfaction, and Coll, Pinyonatthagan, and Pramoolsook (2003) demonstrated that students often recommended that the WIL experience could be improved through the use of more goal-directed activities. Consistent with this discourse, one line of argument is that a structured WIL program helps to meet students’ learning and development needs. Therefore, it was predicted that structured support would improve WIL nursing student’s perceptions of person-job needs-supplies fit.

*Individual Differences, Person-Job and Person-Organisation Fit*

Despite the attempt in the workplace to improve students’ perceptions of person-environment fit, numerous individual differences are likely to influence individuals’ adjustment and learning within the WIL context (Kristof, 1996; Crant, 2000). However, a review of the current body of literature revealed limited research into the relationship
between individual differences and person-environment fit (Kristof-Brown et al., 2005). This is particularly true within the WIL context, where a review of the literature identified very little research into the role of individual differences on person-environment fit. Therefore, the goal of the following literature review was to extend the current body of research by investigating the role of three variables (viz. task negotiation, positive framing, and general self-efficacy) in the prediction of perceived fit (i.e., person-job demands-abilities, person-job needs-supplies, and person-organisation fit).

**Task Negotiation**

As described earlier, the construct of task negotiation describes an individuals’ attempts to change their learning environment by obtaining learning activities that suit their needs. Task negotiation was proposed to improve students’ perceived person-organisation fit through minimising the negative effects of reality shock, uncertainty, stress and anxiety. Specifically, when students negotiate mutually beneficial placement activities, they actively reduce the uncertainty within their environments through clarifying their role within the workplace (Ashford & Black, 1996; Fisher, 1985; Wanberg, 2000). Additionally, as described by Reichers (1987), social exchanges with established organisational insiders help newcomers to learn about the culture of the organisation. Therefore, one line of argument is that the task negotiation provides an avenue for the student to uncover information concerning the values and goals of the organisation.

Consistent with this line of thinking, Gruman et al. (2006) recently explored the relationship between task negotiation and person-organisation fit. Contrary to expectations, the researchers found that task negotiation did not improve WIL students’ organisational fit perceptions; however, the researchers found that task negation was significantly correlated with social integration. One limitation of this study was that the research was conducted
with WIL students completing a management program, thus the extent to which these results generalise to other occupational streams requires further research. Although task negation was not studied directly, Kammeyer-Mueller and Wanberg (2003) argued that those with higher levels of proactive personality improve their adaptation to a new workplace through acquiring greater control of the environment. The authors found that proactive personality predicted higher levels of work group integration and political knowledge. Although person-organisation fit was not studied directly, these results suggested that proactive individuals may uncover more information regarding the culture of the organisation. Taken together, the mixed results and limited empirical research, no hypotheses regarding the relationship between task negotiation and person-organisation fit were proposed. Thus, one aim of this study was exploratory – to provide further research into the relationship between task negotiation and person-organisation fit.

The review of the literature also indicated that task negotiation may increase students’ perceptions of person-job fit (viz. demands-abilities and needs-supplies fit; Ashford & Black, 1997; Martin & Leberman, 2005; Wong, Coll, & Harris, 2001). As described by Ashford and Black (1997) individuals who negotiate their WIL activities improve their adjustment to a new role through reducing uncertainty and gaining access to better learning opportunities. Certainly, one line of argument is that students who participate in learning activities that are aligned with their developmental needs should improve their ability to meet the demands of the role (viz. person-job demands-abilities fit). Also, as described by Ashford and Black, “individuals attempts to negotiate job changes not only adjust the task set to more favourably suit their skills and abilities but also alter the means by which that task set is to be accomplished” (p. 202). Thus, students who negotiate job changes may also modify the role to better suit their needs (viz. person-job needs-supplies fit). These
propositions are consistent with qualitative research findings demonstrating that task negotiation is associated with higher levels of learning and placement satisfaction (Beard, 2001; Martin & Leberman, 2005; Wong, Coll & Harris, 2001). Therefore, it was expected in the current research program that task negotiation would improve nursing students’ person-job fit perceptions (demands-abilities and needs-supplies fit).

Positive Framing

The literature review identified that positive framing may improve students’ person-organisation fit perceptions (Kim et al., 2005). First, as described by Folkman (1984), the appraisal of stressful encounters in a more positive manner improves individuals’ coping abilities. It can be argued that as a result of interpreting the initial encounters with an organisation favourably, positive framing may help students cope with the stress and anxiety that is associated with organisational entry (Folkman, 1984; Louis, 1980; Ashford & Black, 1996). Second, as described by Kim et al. (2005) “when employees prepare themselves with a positive frame, they are likely to be receptive to the organisation’s norms and values” (p. 234). Thus, positive framing can be argued to facilitate students’ enculturation within the organisation. Few studies have investigated this proposition, but Wanberg and Kammeyer-Mueller (2000) found a significant relationship between positive framing and social integration ($r = .30$), and Kim et al. (2005) demonstrated that positive framing improved individuals person-organisation fit perceptions. Consistent with this line of research, it was expected that positive framing would improve WIL nursing students’ perceived organisational fit.

Positive framing was also proposed to improve students’ perceived person-job fit (viz. demands-abilities, needs-supplies). As described by Saks and Ashforth (1996), positive framing may improve skill development because it reduces negative arousal in stressful
situations. Specifically, through interpreting challenges favourably, students may avoid the negative impact of stress and anxiety has on learning performance (Lepine et al., 2004; Warr & Downing, 2000), and via a more effective WIL placement improve their ability to meet the demands of the role. Those students who frame events in a more pessimistic manner may require higher levels of support within the WIL context (e.g., social support, encouragement, positive feedback). For example, a student who interprets the task of applying a dressing to a wound as an opportunity to fail may require more help, support, and guidance to successfully complete the activity compared to a student who frames this experience in a positive manner. While the relationship between positive framing and person-job fit has not been studied directly, research has demonstrated that positive framing predicts higher levels of job satisfaction (Ashford & Black, 1996; Wanberg & Kammeyer-Mueller, 2001). Therefore, although empirical research is limited, it was expected that positive framing would improve nursing students’ perceptions of person-job fit (viz. needs-supplies and demands-abilities).

General Self-Efficacy

The literature review suggested that GSE may improve student’s perceived organisational fit. As described earlier, those with higher levels of GSE tolerate increased stress and pressure through actively engaging in strategies to reduce it. This characteristic can be argued to improve perceived organisational fit, as such students may more readily overcome the ‘reality shock’ of workplace entry and engage in activities to overcome the challenges of learning in an unfamiliar setting. Despite these theoretical linkages, research investigating the relationship between GSE and person-organisation is limited; however, in two closely related studies, DeRue and Morgeson (2007) reported that GSE was significantly correlated with person-team fit ($r = .20$), and Saks (1995) found that self-efficacy improved
students’ adjustment to the workplace. Consistent with this pattern of results, it was expected that GSE would improve nursing WIL student’s organisational fit perceptions.

The literature also indicated that GSE may improve perceived person-job fit (viz. demands-abilities and needs-supplies fit). Specifically, those with high levels of GSE view their abilities to meet the demands of the environment favourably, and those with low levels of GSE may perceive their abilities to be insufficient to meet the performance requirements of the role. In addition, the theory suggests that those with high GSE will demonstrate increased effort and persistence to overcome challenges within the WIL environment (Chen et al., 2001; Saks, Wiesner & Summers, 1994). Therefore, through a more successful WIL experience, such students are likely to build their capability to meet the performance expectations of the role (viz. person-job demands-abilities fit). In addition, students with low GSE beliefs may have greater needs within the WIL context, thus requiring higher levels of support and encouragement in order to overcome negative preconceptions surrounding their ability to meet the demands of the role (Eden, 1988). Despite these logical linkages, more research is needed to define the relationship between GSE and person-job fit. Therefore, one goal of the final study was to extend the current body of research regarding the causes of person-job fit.

The preceding review identified a paucity of research that has investigated the relationships between individual differences and person-environment fit. In response to this shortcoming, three individual difference variables were reviewed and proposed to influence students’ perceived fit perceptions. The final study was designed to extend the current body of literature through exploring the dual effects of both environmental and individual upon nursing student’s person-environment fit perceptions. The next section of this chapter
describes the relationship between person-environment fit and the relevant outcomes of this research program.

Outcomes of Person-Organisation and Person-Job Fit

Organisational and Job Attraction

The first outcome investigated within the literature was attraction (viz. organisational and job attraction). Two theoretical models that explain the relationship between person-environment fit (viz. person-job and person-organisation fit) and attraction. The first is based on the propositions of the attraction-selection-attrition model, which describes the relationship between person-organisation fit and organisational attraction. Specifically, the model proposes that over time, organisations tend to become homogeneous in terms of the values and goals shared between employees. Schneider (1987) argued that this forms a unique organisational culture which is distinguishable from other workplaces (Giberson, Reisick, & Dickson, 2005), and that individuals are attracted to organisations that display similar characteristics to their own (viz. person-organisation fit).

The second model is based on the theory of work adjustment, which describes the relationship between person-job fit (viz. demands-abilities and needs-supplies) and job attraction. Broadly, the theory of work adjustment describes the factors that are important when facing a career-related decision (Dawis, 2005). The model suggests that those with the ability to meet the demands of a particular role (viz. person-job demands-abilities fit) will be more attracted to, and satisfied by, that particular job role. Furthermore, the model suggests that when a particular job provides what the individual needs (viz. person-job needs-supplies fit), the individual will be more attracted to, and satisfied by, that particular job. Taken together, both models suggest that student’s with higher levels of person-
environment fit (viz. person-organisation and person-job fit) will also report higher levels of attraction to that particular environment (organisational and job attraction).

The literature to date is predominantly focused on the outcomes of person-environment fit, rather than the antecedents, and there is a plethora of research on the relationship between perceived fit and attraction. This body of research has largely supported the proposed relationships in this thesis. For example, early empirical research conducted by Tom (1971) showed that participants were more attracted to organisations that resembled similar characteristics to their own. In a similar study, Bretz, Ash and Dreher (1989) investigated the relationship between person-job needs-supplies fit and organisational attraction. The researchers found that graduates with a high need for achievement were most attracted to environments that encouraged, and rewarded, competition and accomplishment. More recently, Carless (2005) longitudinally investigated the relationship between person-organisation and person-job demands-abilities fit with organisational attraction. The scholar found that both dimensions held a moderate relationship with organisational attraction. In addition, two seminal meta-analyses provide further evidence for the proposed relationships (Chapman, Uggerslev, Carroll, Piasentin & Jones, 2005; Kristof – Brown et al., 2005). Supporting the attraction-selection-attrition model, Chapman et al. (2005) found that person-organisation fit was strongly related to attraction ($r = .40$). One limitation of these results was that the authors combined job and organisational attraction into a single higher order construct. However, as demonstrated in study one, both dimensions of attraction are meaningfully distinct. Therefore, one goal of this final study was to investigate the unique relationship between perceived fit and each dimension of attraction (viz. job and organisational attraction).
The second meta-analysis conducted by Kristof-Brown et al. (2005) found that person-job demands-abilities and person-organisation fit were significantly related to organisational attraction ($r = .40$ and $r = .52$ respectively). However, the researchers did not investigate the relationship between person-job needs-supplies fit and attraction due to the lack of empirical data. Therefore, the final study in this research program was designed to extend the literature through investigating the relationships between all three dimensions of person-environment fit and attraction. Finally, the review of the literature identified that few previous researchers have explored the relationship between person-environment fit and attraction within the WIL context. In response to this limitation, the following study extends mainstream research by investigating the proposed relationships with nursing students within the WIL setting. Given the theoretical and empirical support described above, it was expected that the final study would show that higher levels of person-environment fit would predict higher levels of job and organisational attraction.

Organisational and Job Choice Intentions

Job and organisational pursuit intentions are the final two constructs to be investigated within this research program, and the theory of reasoned action describes how perceptions of person-environment fit and attraction influence these outcomes. The theory contends that behavioural intentions are a function of individual’s attitudes and perceptions towards a particular object (Ajzen, 1991, Ajzen & Fishbein, 1977). Within the WIL context, the theory of reasoned action posits that those who have positive attitudes and perceptions to a particular job (i.e., person-job fit, job attraction), will form an intention to engage in a behaviour to acquire that particular job. Likewise, those who have positive attitudes and perceptions towards a particular organisation (i.e., person-organisation fit, organisational
attraction) will form an intention to engage in a behaviour to secure a position in the organisation.

A plethora of empirical research supports the propositions of the theory of reasoned action by linking person-environment fit to a variety of behavioural intentions. For example, person-organisation fit has been found to predict higher levels of job pursuit intentions (Chapman et al., 2005), job choice intentions (Cable & Judge, 1996), and intentions to quit (Kristof-Brown et al., 2005). Similarly, several studies support the relationship between person-job demands-abilities fit, job choice intentions (Cable & Judge, 1996), intentions to accept a job offer (Carless, 2005), and intentions to quit (Kristof-Brown et al., 2005). This pattern of results highlights the importance of person-environment fit and attraction, and strengthens the expectation that these variables can be shown to predict future job and organisational pursuit intentions of nursing students following the WIL placement.

Despite the widespread support the relationship between perceived fit and intentions, Carless (2005) proposed that the relationship between person-environment fit and behavioural intentions was better explained through attraction. Specifically, Carless (2005) proposed a fully mediated model where person-environment fit influenced behavioural intentions through attraction. The scholar investigated the proposed model at different stages of the selection process. Midway through the selection process, the scholar found that person-job demands-abilities fit perceptions predicted job choice intentions via its effect on organisational attraction; however, at the completion of the selection process, the fully mediated model was not supported. Instead, the researcher found that intentions to accept a job offer were directly predicted by person-job demands-abilities fit. More recently, Chapman et al. (2005) compared several competing models of the relationship between person-environment fit and actual job acceptance intentions. The seminal meta
analysis which comprised the vast majority of published research, provided strong support for the fully mediated model. Consistent with these results, it was predicted that person-environment fit (viz person-organisation, person-job demands-abilities, person-job needs-supplies fit) would influence future job and organisational pursuit intentions through its impact upon attraction (viz. organisational and job attraction).

Alternative Research Model

As theory and empirical evidence supports the direct and mediated relationship between person-environment fit and behavioural intentions (Carless, 2005), this study will compared the hypothesised research model to a partially mediated model (presented in figure 9.2). Specifically, path ‘a’ is freely estimated within the model, and compared to the hypothesised model discussed earlier (see figure 9.1), and the chi-square difference test was used to identify the model that best represents the data.

Figure 9.2
The alternative research model representing the direct effects between person-environment fit and future behavioural intentions.
One limitation of the current body of literature is the dearth of research investigating the relationship between person-job needs-supplies fit and future behavioural intentions. Therefore, the goal of the final study is to extend the literature through investigating three variations of person-environment fit simultaneously for their relationship with job and organisational choice intentions. Furthermore, the study conducted by Carless (2005) investigated organisational attraction in isolation to job attraction, and similarly, the study conducted by Chapman et al. (2005) combined job and organisational attraction to represent one unified construct. In response to this limitation, the final study will investigate each construct independently to identify the direct and indirect relationships between the variables.

**Longitudinal Relationships**

The review of the literature identified that researchers have predominantly used cross-sectional designs to investigate causation. Cross-sectional research can lead to inaccurate estimation of the causal relationships between constructs. Therefore, given that one of the broad aims of this study was to investigate how the WIL experience predicts changes in person-environment fit and career-related outcomes (viz. job and organisational choice intentions), the research model accounts for the cross-lagged, and autoregressive relationships (Mc Ardle, 2009). The model will account for the autoregressive relationships pre and post-WIL person-environment fit perceptions (Cooper-Thomas et al., 2004). The model will also account for the cross-lagged relationships between pre-WIL fit perceptions and post-WIL outcomes (viz. job and organisational attraction, job and organisational pursuit intentions).
Summary and Purpose of the Current Study

The literature review summarised the theories and empirical research that relate to the causes and consequences of person-job and person-organisation fit. Despite recent research highlighting the importance of both individual and environmental differences, there was found to be a lack of research investigating these dual effects. Therefore, one of the aims of the final study was to extend the current body of research through investigating both sets of variables concurrently for their relationship with both person-job (viz. demands-abilities and needs-supplies) and person-organisation fit. Furthermore, the review identified that since Munchinsky and Monahan (1987) originally conceptualised two dimensions of person-job fit (viz. needs-supplies and demands-abilities), the majority of the literature has investigated each dimension in isolation (Kristof-Brown et al., 2005). Therefore, the aim of the final study was to extend the current body of research through investigating three variations of person-environment fit simultaneously.

The literature review also identified limited research investigating the causes and consequences of job attraction. As demonstrated in study one, both constructs are meaningfully distinct, indicating a need for research that investigates each construct independently. Certainly, understanding the causes and consequences of job attraction may offer additional means to attract qualified applicants to nursing roles affected by the skills shortage. Therefore, this study will extend the current literature through examining both dimensions of attraction independently.

The preceding review also implied that a gap exists within the WIL and industrial / organisational psychology literatures concerning how these early career experiences influence attraction and behavioural intentions. Indeed, many researchers have claimed that WIL has important career-related outcomes (Lin et al., 2004; Robinson, et al., 2008), yet
limited research has investigated theoretically derived models that attempt to explain how
WIL influences these outcomes. This is an important limitation, given the current skills
shortage within different occupational roles and workplaces within the nursing profession.
Therefore, the broad aim of the final study was to provide a greater understanding of how
WIL influences attraction and future behavioural intentions to guide the development of
future retention strategies.
CHAPTER 10

STUDY THREE: THE CAUSES AND CONSEQUENCES OF PERSON-JOB AND PERSON-ORGANISATION FIT

Overview

The purpose of this study is to investigate the causes and consequences of person-job (viz. demands-abilities and needs-supplies) and person-organisation fit for nursing students in the WIL context. That broad purpose was met by pursuing three specific aims. The first aim of this study is to extend the current body of research by investigating the dual effects of individual (i.e., positive framing, GSE, task negotiation) and environmental differences (i.e., social and structured support) on each dimension of perceived fit. Through investigating both environmental and individual differences concurrently, this study aimed to provide a more detailed understanding of the causes of perceived fit within the WIL context. The second aim of this study is to extend upon a finding from study one that job and organisational attraction are distinct constructs, by investigating their relationships with perceived fit and future behavioural intentions. As discussed in the previous chapter, past research either focused organisational or job attraction (Carless, 2005), or combined both dimensions into a higher order construct (Chapman et al., 2005), which has subsequently limited the conclusions regarding their unique causes and consequences. Therefore, one goal of this study is to provide additional evidence surrounding the utility of investigating each construct independently. The final aim of this study is to investigate how the WIL experience influences students’ future job and organisational pursuit intentions.

Two research models were investigated in the current study. The first model presented in figure 10.1 reflects the broad prediction that perceived fit (i.e., person-job
demands-abilities fit, person-job needs-supplies fit, and person-organisation fit) improves future job and organisational pursuit intentions through its impact upon attraction (i.e., job and organisational attraction). The second model presented in figure 10.2 reflects the alternative proposition that perceived fit directly predict students’ future behavioural intentions.

Figure 10.1. The hypothesised model reflecting the causes and consequences of person-organisation and person-job fit within the WIL context.

The proposed relationships to be tested for the model in figure 10.1 are as follows:

**H3.1.** Structured support will predict higher levels of person-job demands-abilities, person-job needs-supplies, and person-organisation fit.

**H3.2.** Social support will predict higher levels of person-job demands-abilities, person-job needs-supplies, and person-organisation fit.

**H3.3.** Positive framing will predict higher levels of person-job demands-abilities, person-job needs-supplies, and person-organisation fit.
H3.4. General self-efficacy will predict higher levels of person-job demands-abilities, person-job needs-supplies, and person-organisation fit.

H3.5. Task negotiation will predict higher levels of person-job demands-abilities, person-job needs-supplies, and person-organisation fit.

H3.6. Person-job needs-supplies and person-job demands-abilities fit will predict higher levels of organisational attraction.

H3.7. Person-job needs-supplies and person-job demands-abilities fit will predict higher levels of job attraction.

H3.8. Person-organisation fit will predict higher levels of organisational attraction.

H3.9. Person-organisation fit will predict higher levels of job attraction.

H3.10. Organisational attraction will predict higher levels of organisational pursuit intentions.

H3.11. Organisational attraction will predict higher levels of job pursuit intentions.

H3.12. Job attraction will predict higher levels of organisational pursuit intentions.

H3.13. Job attraction will predict higher levels of job pursuit intentions.

H3.14. The relationship between perceived fit (i.e., person-job needs-supplies, person-job demands-abilities, and person-organisation fit) and future job and organisational pursuit intentions will be partially mediated by attraction (i.e., job and organisational attraction).
In addition to the proposed relationships presented above, the alternative hypotheses investigated for the model in figure 10.2 are as follows:

**H3.15.** It is hypothesised that person-job needs-supplies and person-job demands-abilities fit will predict higher levels of organisational pursuit intentions.

**H3.16.** It is hypothesised that person-job needs-supplies and person-job demands-abilities fit will predict higher levels of job pursuit intentions.

**H3.17.** It is hypothesised that person-organisation fit will predict higher levels of organisational pursuit intentions.

**H3.18.** It is hypothesised that person-organisation fit will predict higher levels of job pursuit intentions.
Method

Participants

Participants comprised third year bachelor of nursing undergraduate students from nine Australian universities. Data were collected from students prior to and following their final placement. This resulted in three samples for use within the research program. The first sample comprised data collected from Australian undergraduate nursing students prior to their final placement ($N = 399$). The second sample comprised data collected from students following their final placement ($N = 538$). The final sample represents the matched, longitudinal data set ($N = 264$). The participants are described in detail in chapter 4.

Measures

General self-efficacy

General self-efficacy was measured using the new general self-efficacy (NGSE; Chen et al., 2001) scale. A sample item from the NGSE scale is “I believe I can succeed at most any endeavour to which I set my mind”. The scale was calibrated over a six point scale ranging from (1) strongly disagree to (2) strongly agree. Detailed information on the scale is presented in chapter four.

Transition to practice self-efficacy

The 10 item measure of transition to practice self-efficacy was calibrated over a six-point scale ranging from (1) strongly disagree to (6) strongly agree. Sample items include, “I am confident in my ability to locate a graduate program / employment that suits me,” “I am confident in my abilities to communicate effectively with patients when I graduate,” and “I believe in my abilities to deal with stress and challenges in the ward or the team when I graduate”. Detailed information on the scale is presented in chapter four.
**Person-organisation fit**

Person-organisation fit was measured using the modified three-item scale developed by Cable and Judge (1996). An example of a modified item includes, “Do you expect the values and personality of this workplace reflect your own values and personality.” Each item used was calibrated over a six-point scale ranging from (1) not at all to (6) completely. Detailed information on the scale is presented in chapter four.

**Person-job fit**

Person-job fit was measured with six items developed by Cable and DeRue (2002), which was calibrated over a six-point scale ranging from strongly disagree (1) to strongly agree (6). An example of a modified scale item includes “there is a good fit between what this speciality will offer me and what I am looking for in a speciality.” The multidimensional scale constitutes both person-job needs-supplies fit and person-job demands-abilities fit. Detailed information on the scale is presented in chapter four.

**Structured and Social Support**

The structured structure offered within placement was assessed using a measure designed for this research program. A sample item of the newly developed scale includes, “This placement was structured so that I had the opportunity to discuss experiences and ask questions with experienced staff members”. A modified version of Jones’ (1986) scale of investiture / divestiture socialisation was used to capture social support. Sample items for the social scale include “almost all of the staff on this placement were supportive of me personally” and “staff went out of their way to help me fit in within the workplace.” Both scales were calibrated across six-point scale ranging from strongly disagree (1) to strongly agree (6). Detailed information on the scale is presented in chapter four.
Positive Framing

Positive framing was measured using a four-item scale developed by Ashford and Black (1997) and was calibrated across a 6-point scale ranging from ‘to a very little extent’ (1) to ‘to a very large extent’ (6). Sample items for the scale include “on placement to what extent did you try to see your situation as a challenge rather than a problem” and “on placement to what extend did you try to look on the bright side of things?” Detailed information on the scale is presented in chapter four.

Task Negotiation

Task negotiation was measured using a four-item scale developed by Ashford and Black (1996) and was calibrated across a six-point scale ranging from ‘to a very little extent’ (1) to ‘to a very large extent’ (6). Sample items for the scale include “on placement to what extend did you negotiate with others (including your supervisor and/or coworkers) about your task assignments” and “on placement to what extend did you negotiate with others (including your supervisor and/or coworkers) about their expectations of you”. Detailed information on the scale is presented in chapter four.

Job and organisational attraction

Scale items for organisational attraction included, “next year, working within this hospital/workplace is a very attractive option for me”, “this hospital/workplace will be one the best hospital/workplace to work for”, and “this hospital/workplace will offer me everything I am looking for in a hospital/workplace to work with.” Scale items for job attraction included “next year, working in this speciality / area of nursing is a very attractive job option for me” and “this speciality / area of nursing is one of the best speciality / area of nursing to work in”. Both scales were calibrated across 6-point scale ranging from strongly
disagree (1) to strongly agree (6). Detailed information on the scale is presented in chapter four.

**Job and organisational pursuit intentions**

Scale items for organisational pursuit intentions included “after graduation, I am going to pursue a job within this hospital/workplace”. Further, job pursuit intentions were assessed using the item “after graduation, I am going to pursue a job within this specialty area”. Participants were asked to respond to the items using a six point scale ranging from strongly disagree to strongly agree. Detailed information on the scale is presented in chapter four.

**Procedure**

In addition to the general procedure discussed in chapter four, unit weighted composite variables were calculated for each of the constructs. Specifically, parameters were manually calculated using the factor weights and squared multiple correlations gained from each single-factor congeneric analyses. In place of Cronbach’s alpha, composite reliability was estimated using the formula proposed by Werts, Rock, Linn and Jöreskog (1978). Following this, the composite reliability for each construct was used to calculate the regression coefficient and residual variance, which were set as fixed parameters within the model (see Munck, 1979 or Holmes-Smith, 2005, for examples). The matched dataset \( N = 232 \) was used to estimate the variance-covariance matrix and examine the proposed structural relationships.

**Descriptive Statistics and Zero Order Correlations**

The first step involved calculating the parameters associated with the composite variables. As presented in table 10.1, each scale had acceptable composite reliability
coefficients indicating modest reliability across all of the scales. The mean for each composite fell slightly above the midpoint on a six-point scale, and the standard deviation for each scale indicated that each construct had a moderate degree of variability. The factor loadings and error variance estimates within the following table were set as fixed parameters within the structural equation model.

Table 10.1

**Means, Standard Deviations and Composite Scale Parameters for the Constructs Examined in Study Three.**

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<th>Construct</th>
<th>M</th>
<th>SD</th>
<th>r&lt;sub&gt;c&lt;/sub&gt;</th>
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N.B. r<sub>c</sub> is the composite score reliability based on the factor score weights; λ<sub>c</sub> is the estimate of the variance in the items that is explained by the composite measure; Θ<sub>c</sub> is the estimate of the remaining variance not explained by the composite; and α is Chronbach’s alpha. No scale parameter estimation for Organisational Pursuit Intentions as it is a one item measure.

The next step involved an investigation into the relationships between the demographic variables and the outcomes to be examined in the study. This initial screening of the data helped to identify significant relationships between the demographic variables
and the outcomes investigated, which can be then introduced as control variables in the structural equation analysis. The results of a one-way ANOVA identified that those who had previous experience with the team had higher post-WIL perceptions of person-job demands-abilities fit ($F (2,12) = 4.96, p < 0.05; M= 4.44$) than those who had no previous experience ($M= 4.11$). However, prior team experience was unrelated to pre-entry person-job demands-abilities fit perceptions. The results also identified that students who received a WIL placement in their preferred specialty had higher pre-entry perceptions of person-job needs-supplies fit ($M=4.2$) compared with those who did not ($M=3.73, p<0.05$). However, preferred specialty was unrelated to post-entry person-job needs-supplies fit perceptions. No difference in the outcome variables with respect to the location of the placement (viz. rural vs. city), gender, weekly placement activities (full time vs. part time), past general work experience, prior experience in the workplace, and whether students were allocated a placement within their preferred workplace. The demographic variables that were significantly related to the outcomes to be examined within this study were included as control variables in the structural equation model.

Relationships between the variables were initially examined using a zero-order correlation analysis, which is presented in table 10.2. The proposition that social and structured support would be associated with students’ perceived fit (viz. person-job demands-abilities fit, person-job needs-supplies fit, and person-organisation fit) was supported, providing initial support for hypotheses 3.1 and 3.2. Positive framing was significantly correlated with perceived fit (viz., person-job demands-abilities fit, person-job needs-supplies fit, and person-organisation fit), providing initial support for hypothesis 3.3. While GSE was significantly correlated with person-job demands-abilities and person-organisation fit, it was unrelated to person-job needs-supplies fit. Thus, hypothesis 3.4 was
only partially supported. Similarly, task negotiation was significantly correlated with person-organisation fit, yet was unrelated to both dimensions of person-job fit (viz. needs-supplies and demands-abilities), and thus hypothesis 3.5 was only partially supported. Perceived fit (viz. person-job demands-abilities fit, person-job needs-supplies fit, and person-organisation fit), was significantly associated with attraction (viz., job and organisational attraction), as well as future job and organisational pursuit intentions, providing initial support for hypotheses 3.6, 3.7, 3.9, 3.15, 3.16, 3.17 and 3.18. Finally, job and organisational attraction were significantly correlated with job and organisational pursuit intentions which provided support for hypotheses 3.10 through to 3.13.

**Structural Equation Model**

As described earlier, several models were examined and compared using the chi-square difference test. Model one represented the proposition that each dimension of person-environment fit predict job and organisational pursuit intentions through its impact on attraction (i.e., job and organisational attraction). Model two represents the alternative proposition that perceived fit directly influences students’ job and organisational pursuit intentions. The results presented in table 10.3 demonstrate that hypothesised model one was unsupported by the data; the chi square difference test identified that the alternative model provided a better fit of the variance-covariance matrix. While the AGFI value of .91 was slightly below the cut-off criterion, the remaining fit indices provided strong support for the alternative model, which is presented in figure 10.3.
Table 10.2.

Study Two Correlation Matrix

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N.B. ** Denotes values significant at $p<0.001$

* Denotes values significant at $p < 0.05$
Table 10.3

**Goodness of Fit Statistics for the Hypothesised and Alternative Models**

| Model 1    | 77.53 (44) | .03 | .89 | .06 | .95 |
| Model 2    | 50.46 (38) | .26 | .91 | .04* | .98 | 26.90 | .00 |

N.B. * denotes RMSEA PCLOSE level > .05; $\chi^2$ denotes chi squared; df denotes degrees of freedom; $p$ denotes probability level associated with chi squared; AGFI denotes Adjusted Goodness of Fit Index; RMSEA denotes Root Mean Square Error of Approximation; TLI denotes the Tucker Lewis Index; $\Delta \chi^2$ denotes the difference in chi squared between the models; sig denotes the statistical significance of the difference between the models with NS indicating no significant differences between the models.

The results of the structural equation model revealed that approximately 79% of the variance in person-organisation fit was explained by the predictor variables. In order of magnitude, social support was the strongest predictor of post-WIL person-organisation fit perceptions ($\beta = .47$, $p<0.01$), providing support for H3.2. The results also revealed a significant autoregressive relationship between pre- and post-WIL person-organisation fit perceptions ($\beta = .24$, $p<0.01$). Providing partial support for H3.1, structured support predicted higher levels of person-organisation fit ($\beta = .25$, $p<0.01$). Finally, providing partial support for H3.3, positive framing was significantly related to person-organisation fit perceptions ($\beta = .16$, $p<0.01$).

Approximately 81% of the variance in person-job needs-supplies fit was explained by the predictor variables presented in figure 10.3. The strongest predictor of post-WIL person-job needs-supplies fit was students’ pre WIL person-job needs-supplies fit perceptions ($\beta = .30$, $p<0.01$). In addition, both structured and social support improved students’ perceptions of post WIL person-job needs-supplies fit, which provided support for H3.1 and H3.2 ($\beta = .35$, $p<0.01$ and $\beta = .24$, $p<0.01$ respectively).
Figure 10.3. Supported model representing the cause and consequences of person-job and person-organisation fit within the WIL context

N.B. Correlation paths between the exogenous variables and non significant paths are not included in the model for clarity. Each square represents the construct based on maximally weighed factor scores. Non-significant direct effects are also excluded for clarity.
The results of the SEM showed that approximately 50% of the variance in person-job demands-abilities fit was explained by each of the predictor variables presented in figure 10.3. The autoregressive relationship between pre- and post-WIL person-job demands-abilities fit was positive and significant ($\beta = .35$, $p < 0.01$). Providing support for H3.1 and H3.2, structured and social support were both positively related to person-job demands-abilities ($\beta = .23$, $p < 0.01$ and $\beta = .21$, $p < 0.01$ respectively).

Both social and structured support significantly improved all three dimensions of person-environment fit. However, the results of the structural covariance analysis showed that neither task negotiation or GSE were related to perceived fit, and thus H3.4 and H3.5 were not supported.

Approximately 33% of the variance in organisational attraction was explained by person-organisation fit ($B = .39$, $p < 0.01$), and person-job needs-supplies fit ($B = .30$, $p < 0.01$). While H3.8 was fully supported, H3.6 was only partially supported, as person-job demands-abilities fit was unrelated to organisational attraction. Providing partial support for H3.7, approximately 67% of the variance in speciality attraction was explained by person-job needs-supplies fit ($B = .93$, $p < 0.01$). Person-job demands-abilities fit and person-organisation fit were unrelated to job attraction. Thus H3.7 and H3.9 was not supported.

An exploratory analysis of the indirect effects showed that structured support improved organisational attraction through its effect on both person-organisation and person-job needs-supplies fit ($BCCI = .09 - .46$, $p = 0.01$). Structured support also improved students’ attraction to the specialty through person-job needs-supplies fit ($BCCI = .17 - .35$, $p = 0.02$). While the indirect effect between social support and job attraction was unsupported, social support improved organisational attraction through its effect upon both person-job needs-supplies fit and person-organisation fit ($BCCI = .10 - .74$, $p = 0.01$).
Approximately 80% of the variance in future organisational pursuit intentions was explained by the predictor variables presented in figure 10.3. Providing support for H3.11, organisational attraction was positively related to future organisational pursuit intentions ($B = .92$, $p < 0.01$). Only person-job needs-supplies fit was directly related to students’ future organisational pursuit intentions ($B = .26$, $p < 0.01$). Thus, H3.15 was partially supported. Providing support for H3.13, approximately 83% of the variance in future specialty pursuit intentions was explained by job attraction ($B = .68$, $p < 0.01$). Organisational attraction, person-job needs-supplies fit, person-job demands-abilities fit and person-organisation fit were unrelated future specialty pursuit intentions. Thus H3.11, H3.16 and H3.18 were not supported.

The results of analyses revealed that the relationship between person-job needs-supplies fit and specialty pursuit intentions was partially mediated by specialty attraction ($BCCI = .78 - .95$, $p = 0.01$). Similarly, the relationship between person-job needs-supplies fit and organisational pursuit intentions was mediated by organisational attraction. Finally, organisational attraction partially mediated the relationship between person-organisation fit and organisational attraction ($BCCI = .07 - .75$, $p = 0.04$). Taken together, these results provided partial support for H3.14.

Discussion

The purpose of study three was to investigate the causes and consequences of person-job (viz. demands-abilities and needs-supplies) and person-organisation fit within the WIL context for nursing students. It extends the current body of research by investigating the dual effects of individual and environmental differences on each dimension of perceived fit. This study extended the findings of study one - that job and organisational
attraction are distinct constructs - and investigated their relationships with perceived fit and future behavioural intentions. Finally, this study investigated how the WIL experience influences students’ future job and organisational pursuit intentions.

**Autoregressive Relationships**

In order to gain a more accurate estimation of the change attributable to the WIL experience, the autoregressive paths between pre- and post-entry fit perceptions were statistically controlled within the model. While the results supported these longitudinal relationships, the effect sizes were only moderate. These findings suggest that while early perceptions are important, meaningful changes occurred in students’ perceived fit following the WIL experience. This is an important finding, as it suggests that WIL is an important factor that influences students’ fit with the job and organisation.

**Person-Organisation Fit**

Results from the current study supported the proposition that there would be a significant relationship between social support and person-organisation fit. Consistent with past research, these results suggest that social support helps to reduce uncertainty and ambiguity within a new workplace context, and helps students to feel valued by other organisational members (Cooper-Thomas et al., 2004; Kristof-Brown et al., 2005; Louis, 1980; Fisher, 1985; Cable & Parsons, 2001). These results are also consistent with the logic that social support provides students with access to social exchanges that help them attribute meaning to events, practices, and procedures (Reichers, 1987). The fact that social support was the strongest predictor of person-organisation fit suggests that workplaces should focus on providing access to supportive insiders to facilitate students’ enculturation within the workplace.
Results from the current study supported the prediction that structured support would improve person-organisation fit perceptions. This finding supports Cable and Parsons’ (2001) proposition that a structured learning environment provides newcomers with common and consistent messages on how to read and respond to different events within the organisation. This finding is also consistent with the notion that a structured learning environment helps students to adapt to the new learning context through reducing the ambiguity and uncertainty within the environment (Cooper-Thomas et al., 2004; Kristof-Brown et al., 2005; Louis, 1980; Fisher, 1985; Cable & Parsons, 2001). This is an important finding as it suggests that workplaces should place emphasis on structuring WIL activities to help integrate students within the organisation.

These results have several practical implications. First, there is a growing body of research that supports the utility of “on-boarding” employees prior to their entry into the workplace (Saks et al., 2007; Reese, 2004). These results suggest that WIL offers an additional method for improving future candidates’ fit with the workplace prior to organisational entry. The second implication is based upon research findings that employees with high levels of person-organisation fit are more committed to the workplace, and are less likely to turnover (e.g., Kristof-Brown et al., 2005). Thus, one major conclusion of these findings is that workplaces should place importance on structured and social support within the WIL context to build a more committed workforce.

Results from this study also supported the prediction that positive framing would improve students’ person-organisation fit perceptions. These results suggest that when students’ view early encounters with others in a positive way, they are better placed to cope with the uncertainty and ambiguity of organisational entry (Folkman, 1984; Ashford & Black, 1996). These results also support Kim et al.’s (2005) proposition that individuals who
prepare themselves with a positive frame are more receptive to the values and norms of the organisation. One implication of this result is that researchers investigating the role of environmental differences independently of individual differences may gain an incomplete picture of the causes of person-organisation fit. Although GSE and task negotiation were significantly correlated with person-organisation fit, this relationship was not sustained within the structural equation model. Further research is required to determine the generalisability of these results to other disciplines beyond nursing.

Person-Job Demands-Abilities and Needs-Supplies Fit

Results from this study also revealed strong support for the prediction that social and structured support would improve students’ perceived person-job demands-abilities fit. These results supported the notion that social and structured support may help to reduce the stress and uncertainty of organisational entry, and facilitate learning through providing students with access to goal-directed activities and supportive employees (Kristof-Brown et al., 2005; Louis, 1980; Fisher, 1985). This is an important finding, as one criticism of new nursing graduates is that they lack the clinical competence to meet the demands of the role (Nash et al., 2008). One conclusion from this study is that in order to increase students’ fit with the job, workplaces should plan activities that support students to apply theory to practice. Future research is encouraged to investigate the types of support that may benefit students the most (e.g., mentoring, reflective activities).

The current results support the relationship between social and structured support and person-job needs-supplies fit, suggesting that it is an important component of the learning experience. While the conventional approach has been to use qualitative methodology to investigate person-job needs-supplies fit (Coll et al., 2003), this research
provides quantitative evidence that social and structured support are considered important factors of WIL placements. This result is consistent with the argument in the literature that students are more reliant on support during the early stages of career development to help them meet the challenges of the role (Billett, 2004; Gruman et al., 2006; Schein, 1971; Shaf, 2002).

Despite the prediction that task negotiation, positive framing and GSE would improve students’ person-job fit (viz. demands-abilities and needs-supplies) perceptions, these relationships were unsupported within the successful model. Given that limited research has investigated the dual effect of individual and environmental differences on person-job fit, more research is required to investigate the generalisability of these results. One plausible explanation of the current results is that general self-efficacy may moderate the relationship between structured support and person-job fit perceptions. Specifically, a structured WIL experience may be more beneficial and improve perceived job fit for students who have low levels of GSE.

Organisational and Job attraction

The results of the current study revealed a strong level of support for the relationship between person-organisation fit and organisational attraction. This finding is consistent with the recent meta-analysis conducted by Kristof-Brown et al. (2005) who demonstrated that person-organisation fit was a strong predictor of organisational attraction. Consistent with the propositions of the attraction-selection-attrition model, nursing students who perceive higher levels of congruence with the values and goals of an organisation, view that workplace as attractive. This study may, therefore, be viewed as the successful extension of the attraction-selection-attrition model to the WIL context. For
students within the early stages of their careers, this finding suggests that the attractiveness of a workplace is based on the students’ perceived similarity to others within the workplace. Therefore, an implication of this result is that workplaces need to place importance on strategies to improve student’s perceived organisational fit to attract future applicants to the workplace through the WIL experience.

This study also found that person-job needs-supplies fit was significantly related to organisational attraction. This is an important finding, as the conventional approach has been to investigate the demands-abilities dimension of person-job fit in isolation to the needs-supplies conceptualisation. One contribution of this study is the demonstrated utility of needs-supplies dimension in the prediction of organisational attraction with the WIL context. Future strategies that aim to attract new graduates to particular workplaces should consider their early-career needs. Furthermore, the fact that the person-job demands-abilities fit was unrelated to organisational attraction suggests that Australian undergraduate nursing students’ place greater emphasis on finding jobs that meet their needs, rather than those that match their abilities.

Consistent with expectations, the results of the current study demonstrated that person-job needs-supplies fit was significantly related to job attraction. This result provides support for the theory of work adjustment (Dawis, 2005), and suggest that when the student perceives a high level of congruence between the rewards of the role (e.g., pay, learning opportunities, recognition) and their needs, they are more attracted to the particular role. This is an important finding, as research that has investigated the relationship between person-job needs-supplies fit and job attraction is sparse. The finding that person-job needs-supplies fit, and not person-organisation fit, predicts higher levels of
job attraction, suggests that organisations need to be focused on matching job characteristics to individuals’ needs in order to attract applicants to particular specialties.

Furthermore, while person-job demands-abilities fit was significantly correlated with job attraction, this relationship was not sustained within the structural equation model. These results contrast with the findings of Carless (2005) who identified that person-job demands-abilities fit was a significant predictor of organisational attraction at multiple stages of the selection process. One explanation of this result is that the construct of person-job needs-supplies fit was not included within Carless’ (2005) study. Specifically, it can be argued that the current study may have provided a more accurate estimation of the proposed relationships by investigating all three dimensions of fit simultaneously. A second explanation is based upon the sample used within this research program. Specifically, these results may reflect the fact that Australian undergraduate nursing students are trained to meet the demands of multiple specialties, and thus place more emphasis on psychological need fulfilment when evaluating the attractiveness of different job roles.

The hypothesised cross-lagged relationships between pre-entry perceived fit (i.e., person-job demands-abilities, person-job needs-supplies, and person-organisation fit) and attraction (i.e., job and organisational attraction) were not supported, which demonstrated that pre-WIL perceived fit is unrelated to post-WIL organisational and job attraction. These results provide further confirmation of the importance of WIL for shaping students’ attitudes, and demonstrate that students’ initial perceptions are strongly influenced by the placement experience.
Job and Organisational Pursuit Intentions

The hypothesised model, which predicted that job and organisational attraction would mediate the relationship between perceived fit and future job and organisational pursuit intentions, was not supported. Instead, the alternative model, which estimated both direct and mediated paths, was supported by the data. Further examination of the structural relationships revealed that person-job needs-supplies fit was the only variable directly predicted higher levels of specialty pursuit intentions. This result was consistent with Carless (2005) who found both direct and mediated effects between perceived fit and behavioural intentions. However, person-job demands-abilities fit and person-organisation fit were unrelated to job pursuit intentions. Given that behavioural intentions are often described as a proxy for actual behaviours (Chapman et al., 2005), these results suggest that person-job needs-supplies fit is an important consideration in students’ specialty choices. Specifically, these findings suggest that final year nursing students may place a high level of emphasis on the rewards and supplies of the role, rather than their ability to meet the demands of the position, when considering what specialty to pursue. One implication of this finding is that strategies aiming to match the job to an individual’s needs are likely to yield a greater applicant pool, which will benefit specialities that are impacted by the skills shortage. Indeed, this study has demonstrated through a review of the indirect effects, that one strategy for improving nursing student’s person-job needs-supplies fit is by providing a supportive WIL placement. Therefore, workplaces should be encouraged to provide students with a positive WIL experience characterised by high levels of social and structured support in order to attract new talent to those specialities that require qualified applicants.

Consistent with predictions, organisational attraction was strongly related to organisational pursuit intentions. This result is consistent with past research that has found
that attraction is a strong predictor of future behavioural intentions (e.g., Chapman et al., 2005). These results suggest that the attractiveness of the workplace is one of the key factors nursing students take into consideration when choosing future organisations. The results also highlighted that person-organisation fit and person-job needs-supplies fit predicted organisational pursuit intentions indirectly through organisational attraction. This is an important finding as it suggests that providing a structured and socially supportive WIL placement is likely to result in a greater number of qualified applicants willing to pursue a position at the workplace.

**Conclusion**

The final study investigated the causes and consequences of person-environment fit within the WIL context. Contrary to predictions, this study provided limited support for the prediction that individual differences influence students’ person-job (viz., needs-supplies, demands-abilities), and person-organisation fit perceptions. However, environmental differences in social and structured support were found to be important predictors of perceived fit. This study also demonstrated the importance of analysing both job and organisational attraction independently. While person-job needs supplies and person-organisation fit were important predictors of organisational attraction, only person-job needs-supplies fit predicted higher levels of job attraction. One major conclusion of this study is that WIL is an important experience that influences students’ future job and organisational choice. Future research is recommended to examine the generalisability of this research model to other disciplines that use WIL.
CHAPTER 11
INTEGRATIVE DISCUSSION

Overview

The research described in this thesis had two components all aimed at understanding how WIL influences career-related outcomes by utilising a person-environment fit perspective. The first section of this thesis dealt with the first study which was concerned with demonstrating the validity and reliability of the measurement models used in studies two and three. The second section of this thesis focused on the causes and consequences of person-environment fit (viz. professional fit, person-job fit, and person-organisation fit). Overall, the pattern of findings demonstrated the utility of nursing students’ perceived fit in predicting career-related outcomes (i.e., occupational commitment, job and organisational attraction, job and organisational pursuit intentions) following the final WIL practicum.

Person – Environment Fit

Along with confirming the measurement models to be used in this research program, an important finding of the first study was that all four variations of person-environment fit (viz. person-job needs-supplies fit, person-job demands-abilities fit, person-organisation fit, and professional fit) were distinct constructs. This result supported the propositions of person-environment fit theory by demonstrating the applicability of each construct for nursing students’ in a WIL setting.

Professional Fit

The first distinctly identified construct was professional fit. Career theorists often argue that individuals’ congruence between their values and goals and those espoused
within the culture of the profession are an important component of career development (Schien, 1971; Hall, 1971; Cochran, 1983; Judge & Bartz, 1992; Meglino, 2005; Super, 1965). Despite the theorised importance of professional fit, one omission of the person-environment fit rubric has been the measurement of individuals’ subjective fit with the values and goals of the profession. This was considered to be an important shortcoming as the various dimensions of person-environment fit (i.e., vocational interest fit; person-organisation fit; person-job fit; person-team fit) have significant utility in understanding individual and organisational outcomes (Holland, 1985; Tom, 1971; Carless, 2005; Cooper – Thomas et al., 2004; DeRue & Morgenson, 2006; Kristof, 1996; Kristof-Brown et al., 2005; Hoffman & Woehr, 2006; Cable & Parsons, 2001). Therefore, one major contribution of the first study was the validation of a short scale that can be used to capture individuals’ subjective fit with the profession.

Study two extended these results by examining the causes and consequences of professional fit within the WIL context. Past research has demonstrated that the nursing profession is characterised by a unique set of values and goals that guide day-to-day interactions and practices (Fagerberg, 2004; Fagermoen, 1997; OeHlean & Sgesten, 1998). Qualitative research has found that the challenge for nurses in the early stages of their career includes understanding these guiding principles and successfully integrating within the culture of the profession (Duchscher & Cowin, 2006). The WIL literature describes how placements provide students with professional socialisation opportunities that help improve their fit with the profession (Beard et al., 2001; Eames, 2001). However, one limitation identified in the current body of literature is the absence of quantitative research investigating how the WIL experience might improve students’ professional fit. Study two helped address this omission, and demonstrated that workplaces should be concerned with
providing social support to facilitate students’ enculturation and to improve their fit with their profession.

A common thread that binds work from the industrial-organisational psychology (e.g., socialisation theory; Van Maanen & Schein, 1979; Ashford & Black, 1997; Crant, 2000; Kim et al., 2005) and WIL literatures (e.g., Billett, 2004) is the emphasis on both individual and environmental differences and learning. For example, they both suggest that individuals are active agents within the adjustment process, and place importance on how newcomers proactively respond during their adaptation to new environmental contexts. However, the literature contains few investigations into the dual effects of both individual and environmental differences on students’ fit with their profession. One contribution of study two was the finding that individual differences in task negotiation and transition to practice self-efficacy predicted higher levels of professional fit. Collectively, the findings of the second study demonstrated the utility of examining both individual differences in task negotiation and environmental differences in social support for their relationship with students’ professional fit perceptions.

Study one demonstrated that professional fit and occupational commitment are distinct constructs, while study two identified that increases in students’ perceived professional fit predict higher levels of occupational commitment. With the exception of a few studies (e.g., Arnold, 1990; Goulet & Singh, 2002; Carless, 2005), the review of the industrial-organisational psychology literature revealed that limited research has investigated the antecedents of occupational commitment. Therefore, a major contribution of this research program is its extension of knowledge on the predictors of occupational commitment.
The finding that professional fit improves Australian undergraduate nursing students’ occupational commitment has important practical implications for the nursing profession. As described in chapter one, the current skills shortage in nursing has placed additional pressure on the health care system (Oulton, 2006; Cowin & Jacobson, 2003; Shields, 2004); therefore, one practical implication of this research is that WIL can improve students’ commitment to the occupation. Universities and workplaces need to actively manage students’ early experiences as they are likely to provide additional avenues to improve the retention of new graduates. For example, pre-placement programs designed to build students’ proactive task negotiation skills are likely to help the student make the most of the WIL practicum. Likewise, providing supportive mentoring programs to help the student reflect and understand day-to-day events are likely to help socialise students in the profession. The research model presented in chapter eight demonstrated that such interventions should help to produce a committed workforce through acculturating nursing students within their profession.

*Person – Job Fit*

Research conducted by Cable & DeRue (2002) supported Kristof’s (1996) proposition that person-job fit was best represented by two specific dimensions that include both needs-supplies and demands-abilities fit. However since this seminal study, research within the industrial-organisational psychology literature has continued to evaluate person-job fit under the polarity of demands-abilities fit. One contribution of study one was that it provided further support for the two-dimensional conceptualisation, and demonstrated that WIL students place importance on how their abilities meet the demands of the job and the returns they can expect for their effort.
Only one study in the industrial-organisational psychology literature has investigated the antecedents of person-job demands-abilities fit. Specifically, Riordan et al. (2001) demonstrated that institutionalised socialisation practices improved newcomers’ person-job demands-abilities fit. Study three extended this line of research, demonstrating that the provision of goal-directed learning activities, along with positive social support, significantly increases students’ subjective person-job demands-abilities fit perceptions. This is an important finding, as it provides additional support for the role of social and structured support within WIL placements to improve students’ skill development (Davey, 2003; Redmond & Sorrell, 1996; Billett, 2004; Eames, 2006).

Recent research has supported the utility of person-job demands-abilities fit, and demonstrated that it is related to a variety of individual and organisational outcomes such as organisational attraction, commitment, and job satisfaction (Carless, 2005; Kristof-Brown et al., 2005). Nevertheless, the results of study three demonstrated that person-job demands-abilities fit was unrelated to attraction (i.e., organisational and job attraction) and future job and organisational pursuit intentions. Indeed, the omission of the needs-supplies dimension in past research may have contributed to this discrepancy. Specifically, Cable and DeRue (2002) found that after controlling for person-organisation fit perceptions and needs-supplies fit perceptions employees’ demands-abilities fit perceptions were unrelated to occupational commitment, future job performance, and future raises. One argument is that the effect of demands – abilities fit may disappear when these dimensions are examined simultaneously. Therefore, in order to gain a more accurate estimation of the relationships between the variables, future research is encouraged to examine both dimensions of person-job fit concurrently.
Qualitative research has found that a socially supportive and structured WIL placement helps to meet students’ learning needs, and poorly managed placements contribute to higher levels of dissatisfaction (Coll et al., 2003; Allen & Peach, 2007). Consistent with this, the current research program found that a socially supportive and structured WIL placement helps to meet nursing students’ learning and development needs. Perhaps this is one of the more important findings in this research program, as a review of the literature revealed that no published studies have investigated the antecedents of person-job needs-supplies fit. Thus, an important finding of this research program is that students place importance on jobs that facilitate their learning and development.

Although research into the outcomes of person-job needs-supplies fit remains sparse, Cable and DeRue (2002) found that after controlling for person-organisation fit and demands-abilities fit, employees’ needs-supplies fit perceptions were related to job satisfaction, career satisfaction, occupational commitment, and decisions to stay at an organisation. Similarly, the recent meta-analysis conducted by Kristof-Brown et al. (2005) demonstrated strong support for the needs-supplies dimension of person-job fit and showed that it predicted a variety of individual and organisational outcomes. However, the literature to date includes little research on how needs-supplies fit influences job attraction. Furthermore, the research has generally been concerned with established employees, or new recruits, rather than the outcomes of students’ needs-supplies fit perceptions in a WIL setting. This research program has addressed an important limitation through demonstrating that needs-supplies fit predicts higher levels of job attraction, and is the primary driver in nursing students’ future job pursuit intentions.
Person – Organisation Fit

Person-organisation fit has attracted a great deal of attention since Tom (1971) originally proposed that individuals would be most satisfied in organisations that reflect their own personalities (see Hoffman & Woehr, 2006; Kristof-Brown et al., 2005). In her seminal review of the research, Kristof (1996) argued that more research is required to investigate the discriminant validity of person-organisation fit. Cable and DeRue (2002) subsequently investigated a series of alternate measurement models and demonstrated that person-organisation fit was a unique dimension under the person-environment fit umbrella. The first study in this research program replicated these findings, and contributed to the research by conducting both paired construct and shared variance tests to investigate discriminant validity. Results from study one provided additional evidence for the utility of the construct within the WIL setting, and demonstrated that Australian undergraduate nursing students place importance on how well the organisation matches their values and goals.

Past research has demonstrated that both individual and environmental differences influence individuals’ perceived fit with an organisation (Cooper-Thomas et al., 2004; Kim et al., 2005; Cable & Parsons, 2001). For example, Cable and Parsons (2001) found that a structured and socially supportive orientation to the workplace improved individuals’ subjective person-organisation fit. Similarly, Cooper-Thomas et al., (2004) revealed that socialisation practices improved newcomers’ pre-entry organisational fit perceptions. One limitation of the current body of research is that it has primarily focused upon newcomers who are established in their careers, rather than how WIL may influence students’ perceived organisational fit. This research program has addressed this important gap through
demonstrating that social and structured support during the WIL experience can improve students’ fit with the organisation.

The attraction-selection-attrition model posits that individuals will be attracted to, and will choose organisations that display similar characteristics to their own (Schneider, 1987). One of the most common operationalisations of perceived similarity is person-organisation fit. A plethora of empirical evidence has supported the model by demonstrating its relationship with organisational attraction, organisational pursuit intentions and commitment (Kristof-Brown et al., 2005; Carless, 2005; Chapman et al., 2005; Hoffman & Woehr, 2006; Cable & DeRue, 2006). Despite the current level of support for the model, limited research has investigated the relationship between person-organisation fit, organisational attraction, and future organisational pursuit intentions within a WIL context. Addressing this important limitation, study three demonstrated that person-organisation fit significantly improved students’ attraction to the organisation. Furthermore, consistent with research conducted by Chapman et al. (2005), the findings revealed that the relationships between person-organisation fit and future organisational choice intentions were mediated by organisational attraction. Taken together, along with demonstrating the utility of the model within the WIL context, the results demonstrated the importance of managing nursing students’ early experiences within the workplace in order to attract future talent following graduation. This was considered an important finding, as it suggested that one strategy to reduce the nursing skills shortages at particular locations is through providing a supportive WIL placement.
Self-Efficacy

Transition to Practice Self-Efficacy

The nursing literature has placed importance on WIL for helping students to successfully make the transition to practice (Nash et al., 2008; Clare & van Loon, 2003; Cowin & Hengstberger-Sims, 2006; Duchscher & Cowin, 2006; Delaney, 2003). Nevertheless, despite the prevalence of WIL within the nursing discipline, the literature suggests that new graduates report feeling considerably unprepared to meet the challenges of the occupation (Ellerton & Gregor, 2003). One shortcoming within the literature is that there is limited established measurement to evaluate the effectiveness of WIL for improving students’ self-efficacy. One contribution of the first study was the validation of a transition to practice self-efficacy scale, which can be used to evaluate the effectiveness of WIL strategies for improving students’ confidence. This study also demonstrated that transition to practice was distinct from self esteem and GSE, which provided additional evidence for the validity of the scale within the Australian context.

Empirical research has supported the notion that training can help to improve individuals’ self-efficacy (Saks, 1995; Gist, 1989; Cantrell, et al., 2005); however, limited research has investigated the relationship between environmental differences in social and structured support and transition to practice self-efficacy within the WIL context. One contribution of this research program is its demonstration that through organising the WIL placement around goal-directed activities helps students to improve their transition to practice self-efficacy. This is an important contribution to the WIL, industrial-organisational and nursing literatures as it demonstrates the utility of structuring students’ early experiences in order to improve their efficacy beliefs.
Wood and Bandura (1989) originally proposed that self-efficacy is influenced by the way that experiences are interpreted and reconstructed in memory; this contention has been supported by empirical evidence (Silver et al., 1995; Thomas & Matheiu, 1994). For example, Silver et al. (2005) found that individuals’ attribution of past performance was significantly related to their efficacy beliefs. Study two found support for these findings with nursing students within the WIL setting, and demonstrated that individuals who interpret challenges as opportunities to succeed reported significantly higher levels of transition to practice self-efficacy. These results highlighted the importance of establishing interventions to help students reflect on WIL experiences in a positive manner in order to build their confidence. Collectively, the findings of this research program have demonstrated that changes in students’ efficacy beliefs are predicted by the dual effects of both environmental forces and individual differences.

Empirical research has demonstrated that self-efficacy: improves newcomers’ adjustment to organisations (Saks, 1995); is predictive of performance (Hysong & Quiñones, 1997); and is related to longer term career satisfaction and success (Abele & Spurk, 2008). Nevertheless, limited research has investigated the relationship between self-efficacy and person-environment fit. The research described in this thesis helped to address this gap, and demonstrated that transition to practice self-efficacy improves nursing students’ fit with the profession. These results suggest that helping students to increase their confidence concerning the transition to practice is a useful strategy for facilitating their integration within the culture of the profession.
Implications of this Research Program

Implications for WIL

One of the major contributions of this research program is the successful integration of person-environment fit theory within the WIL context. Despite past research demonstrating that WIL influences career-related outcomes (Wilson, 1989; Dressler & Keeling, 2004), limited quantitative research has attempted to investigate the underlying causal relationships. In response to this limitation, the current research program offered increased specificity through demonstrating that changes in students’ subjective person-job (viz. needs-supplies), person-organisation, and professional fit perceptions explain how WIL influences career-related outcomes. The second contribution concerns the methodology used within this research program. Through implementing a cross-lagged longitudinal design, this research program has found strong evidence to suggest that WIL contributes to positive changes in career-related attitudes and perceptions. This finding can be considered to be of significant practical importance for those wishing to demonstrate the utility of WIL as a beneficial educational strategy within the higher education context.

Implications for the Industrial – Organisational Psychology literature

The study of how early work experiences influence students’ career-related perceptions and attitudes is one of the most neglected topics in the industrial-organisational literature. Despite the importance of individuals’ early career experiences, the current body of empirical evidence is limited to a handful of studies (i.e., Lubbers et al., 2005; Taylor, 1988; Lin et al., 2004; Gruman et al., 2006; Loughlin & Barling, 2001; Ng & Feldman, 2007; Knouse et al., 1999). One major implication of this research program is that it has successfully integrated the two major theoretical streams of socialisation and person-
environment fit theory to help explain how early work experiences influence individuals’ future job and organisational choice intentions and their occupational commitment.

Implications for Nursing

As discussed earlier, the nursing profession is currently experiencing a global skills shortage which has had a serious impact on workforce numbers in particular specialties (e.g., theatre, geriatric nursing) and at particular locations (e.g., rural and remote). One major implication of this research program is that it has demonstrated the utility of WIL for improving student’s fit with different job roles, organisations and the nursing profession more broadly. The fact that perceptions of fit can be improved through the WIL experience is important, as it highlights one strategy to influence nursing students’ commitment to the occupation and future career pursuit intentions (i.e., job and organisational pursuit intentions). These results suggest that it is important for universities, workplaces, and peak industrial bodies to actively manage students’ early WIL experiences in order to help combat the Australian and global nursing skills shortage.

Limitations and Future Research

There are several limitations of this research program that need to be acknowledged. The first limitation is that this study collected data on students’ future job choice intentions rather than their actual job and organisational choices. Although empirical evidence has demonstrated that behavioural intentions can be regarded as a proxy of future behaviours (Chapman et al., 2005), actual job and organisational choice may be influenced by a variety of other factors (e.g., geographic location, remuneration, etc). Therefore, conclusions regarding the relative effect of WIL on students’ decision-making need to be
regarded tentatively. Future research should extend the models examined by collecting data on students’ actual decisions following graduation.

While the repeated measures longitudinal design helped to control for the effects of common method variance, the research program collected data from one source only. Thus, the impact of common method variance cannot be ruled out. Future research should address this limitation though adapting a multi-source research design. For example, data on the WIL environment (i.e., structured and social support) could be collected from placement supervisors to reduce the impact of common method variance.

The third limitation of this study was that the interaction between individual and environmental differences was not explored. In order to gain a more complete understanding of the relationships examined within this research program, future research should investigate the presence of moderation. For example, the plasticity hypothesis suggests that GSE may buffer the effect of a negative WIL experience on students’ transition to practice self-efficacy (Eden & Aviram, 1993). Although it was beyond the scope of this research program, one interesting avenue for future research would be to investigate the presence of moderators.

A fourth limitation within this research program was that existing measurement and scale validation was limited. Despite the fact that study one conducted a vigorous assessment of the reliability and validity of some of the measures used, the applicability of the measurement models may be limited to the sample of investigation. Therefore, future research should investigate the validity of measurement models on alternate samples.

The final limitation of this research program was the limited theory and empirical evidence available to guide model development within the WIL context. Conclusions regarding causality cannot be conclusively made using structural equation modelling (Kline,
2005); however, given the cross lagged design and that several competing models were compared, the research methodology helped to reduce the possibility of erroneous conclusions concerning cause and effect.

**Areas for Future Research**

Future research is encouraged to validate these findings and test additional models that explain the link between WIL and outcomes. For example, research has demonstrated that other individual difference variables such as learning motivation, cognitive ability, information seeking and networking may also affect individuals’ adaptation to the workplace (Kim et al., 2005; Gruman et al., 2006; Sonnentag et al., 2004). More research along these lines would help to understand the unique role of individual and environmental differences on WIL outcomes.

One interesting avenue for future research involves the application of latent growth curve modelling. Specifically, through capturing data at multiple time points, one could investigate intra-individual changes in WIL outcomes based on inter-individual and environmental differences. Such research would help to answer questions concerning the rate and magnitude of change in WIL outcomes based on individual and environmental differences. This research would also help to address unanswered questions concerning the optimal length of placements for improving WIL outcomes, and the optimal organisation of placements within higher educational programs. Future research should also investigate the types of support that are most beneficial. For example, such research may investigate what constitutes optimal amounts of contact with other staff to help students’ apply theory to practice. Research along this line may also address the applicability of structured and social support within different job roles. For example, a structured WIL placement may be highly applicable for students working in an operating theatre that requires adherence to
particular guidelines and standards. However, a structured WIL placement may stifle creativity in contexts where the student is required to develop innovative solutions to organisational problems.

Conclusion

WIL is an important component of nursing students’ education experience and career development. Broadly, this research program demonstrated that both individual differences and environmental forces influence students’ fit with the culture of the profession, the job and particular organisations, which in turn impacts on their commitment to the occupation, and future job and organisational pursuit intentions. This research program also found that students’ confidence to make the transition to practice can be improved through structured WIL programs, and that individual differences in positive framing predict high levels of self-efficacy. This pattern of findings showed that researchers who study the effect of individual or environmental factors in isolation may obtain an incomplete picture of the causes of WIL outcomes. To build the quality of research in the area, it is recommended that researchers extend these results, by further integration of the existing literature and the examination of theoretically driven models within the WIL setting.
REFERENCES


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*Journal of Managerial Issues, 13*, 159–176.


Thank you for agreeing to participate in this project. This important project will help determine strategies to support nurse transition to practice in their final semester of education.

The following survey will take approximately 15 minutes of your time to complete.

Please fill in the forms like this not like this

The following code is important as it helps match your data between pre and post placement.

Please enter the first three letters of your mother’s maiden name and your year of birth:

<table>
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Please answer the following as openly and honestly as possible:

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please indicate what age group you are in:</td>
<td>18-25, 26-34, 35-50, 50+</td>
</tr>
<tr>
<td>Please indicate your gender:</td>
<td>Male, Female</td>
</tr>
<tr>
<td>Did you complete this questionnaire before starting placement?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Is this one of your preferred workplaces / hospital to complete a placement?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Is this one of your preferred specialties / areas to complete a placement?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Have you ever been in a position or placement within this workplace before?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Have you ever been in a position or placement within this team before?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Have you worked in another area/profession before studying nursing</td>
<td>Yes, No</td>
</tr>
<tr>
<td>If yes, how many years did you spend in this area/profession?</td>
<td>0-1, 2-3, 4-5, 5+</td>
</tr>
<tr>
<td>How many years experience have you had in the healthcare industry including your studies at university?</td>
<td>0-4, 5-7, 8-10, 10+</td>
</tr>
<tr>
<td>Is this placement full time or part time?</td>
<td>Full Time, Part Time</td>
</tr>
<tr>
<td>How many weeks does this placement go for?</td>
<td>3, 4, 5, 6, 7</td>
</tr>
<tr>
<td>Is your placement in a rural or city based workplace/hospital</td>
<td>City, Rural</td>
</tr>
<tr>
<td>In years, what is your age?</td>
<td>Age</td>
</tr>
<tr>
<td>Please select the speciality / area of nursing you will be completing your placement in:</td>
<td></td>
</tr>
</tbody>
</table>

- Mental Health
- Community Health
- District
- Midwifery
- Oncology
- Paediatrics
- Geriatric
- Surgical Ward
- Theatre
- Emergency
- Intensive Care Unit
- Rehabilitation
- Other:_______________________
- Medical / Surgical
On a scale of one to six please answer the questions according to what you expect right now, with the information you have regarding the speciality / area of nursing only. Even if you don’t know much about the following statements, please use your current expectations and perceptions.

<table>
<thead>
<tr>
<th></th>
<th>There is a good fit between what this speciality / area of nursing will offer me and what I am looking for in a speciality / area of nursing when I graduate.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The attributes that I look for in a speciality / area of nursing will be fulfilled very well by this speciality / area of nursing when I graduate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>The speciality / area of nursing I am about to enter on placement will give me just about everything that I want from a speciality / area of nursing after I graduate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>So far, the match is very good match between the demands of my speciality / area of nursing and my personal skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>So far, my abilities and training are a good fit with the requirements of this speciality / area of nursing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>So far, my personal abilities and education provide a good match with the demands that this speciality / area of nursing will place on me</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tbody>
</table>

Please think about the speciality / area of nursing only that you are about enter on placement when answering these questions.

<table>
<thead>
<tr>
<th></th>
<th>Next year, if I was offered a job in this speciality / area of nursing, I would take it.</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td>8</td>
<td>Next year, working in this speciality / area of nursing is a very attractive job option for me.</td>
<td>1</td>
<td>2</td>
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<tr>
<td>9</td>
<td>This speciality / area of nursing is one of the best speciality / area of nursing to work in.</td>
<td>1</td>
<td>2</td>
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<tr>
<td>10</td>
<td>I will be actively looking for a job to advance my skills in this speciality / area of nursing after I graduate</td>
<td>1</td>
<td>2</td>
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</tbody>
</table>

On a scale of one to six please answer the questions according to what you expect right now, with the information you have regarding the team only. Even if you don’t know much about the following statements, please use your current expectations and perceptions.

<table>
<thead>
<tr>
<th></th>
<th>To what degree do you expect your values, goals, and personality match or fit with this team and the current employees within the team?</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</tr>
</thead>
</table>
To what degree do you expect your values and personality prevent you from fitting in this team because they are different from most of the other employees' values and personality in this team?

<table>
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<tr>
<th>Rating</th>
<th>1</th>
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</table>

Do you expect the values and 'personality' of this team reflect your own values and personality?

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<tr>
<th>Rating</th>
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</table>

Please think about the **nursing profession as a whole** when answering the following statements.

To what extent do you identify with the values of the nursing profession?

<table>
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<tr>
<th>Rating</th>
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</table>

To what extent do your goals fit within the nursing profession?

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</table>

To what extent do you feel that the nursing profession represents your own personal values?

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</table>

To what extent do you feel like you fit with the nursing profession at large?

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</table>

On a scale of one to six please answer the questions according to what you expect right now, with the information you have regarding the workplace/ hospital only. Even if you don’t know much about the following statements, please use your current expectations and perceptions.

To what degree do you expect your values, goals, and personality match or fit with this workplace and the current employees within the workplace at large?

<table>
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<tr>
<th>Rating</th>
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<th>3</th>
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<th>6</th>
</tr>
</thead>
</table>

To what degree do you expect your values and personality prevent you from fitting in this workplace because they are different from most of the other employees' values and personality?

<table>
<thead>
<tr>
<th>Rating</th>
<th>1</th>
<th>2</th>
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</thead>
</table>

Do you expect the values and 'personality' of this workplace reflect your own values and personality?

<table>
<thead>
<tr>
<th>Rating</th>
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</table>

Please think about the **workplace / hospital as a whole** that you are about to enter on placement when answering these questions.

Next year, if I was offered a job to work with this hospital/ workplace I would take it.

<table>
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<th>Rating</th>
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<th>6</th>
</tr>
</thead>
</table>
Next year, working with this hospital/workplace is a very attractive option for me.

This hospital/workplace will be one the best hospital/workplace to work for.

This hospital/workplace will offer me everything I am looking for in a hospital/workplace to work with.

After graduation, I am going to pursue a job within this hospital/workplace.

Please indicate on the scale from one to six how much you agree with the following statements:

<table>
<thead>
<tr>
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<th>Statement</th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Next year, working with this hospital/workplace is a very attractive option for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>23</td>
<td>This hospital/workplace will be one the best hospital/workplace to work for.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>24</td>
<td>This hospital/workplace will offer me everything I am looking for in a hospital/workplace to work with</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>25</td>
<td>After graduation, I am going to pursue a job within this hospital/workplace</td>
<td>1</td>
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Please indicate on the scale from one to six how much you agree with the following statements:

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<tr>
<td>26</td>
<td>I am constantly on the lookout for new ways to improve my life.</td>
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<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>27</td>
<td>Wherever I have been, I have been a powerful force for constructive change.</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>28</td>
<td>Nothing is more exciting than seeing my ideas turn into reality.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>29</td>
<td>If I see something I don’t like, I fix it</td>
<td>1</td>
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<td>6</td>
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<tr>
<td>30</td>
<td>No matter what the odds, if I believe in something I will make it happen</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>31</td>
<td>I love being a champion for my ideas, even against others’ opposition</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>32</td>
<td>I excel at identifying opportunities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>33</td>
<td>I am always looking for better ways to do things</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>34</td>
<td>If I believe in an idea, no obstacle will prevent me from making it happen</td>
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<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
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<tr>
<td>35</td>
<td>I can spot a good opportunity long before others can</td>
<td>1</td>
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<td>6</td>
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Please indicate on the scale from one to six how much you agree with the following statements:

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</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>I will be able to achieve most of the goals that I have set for myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>37</td>
<td>When facing difficult tasks, I am certain that I will accomplish them.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>38</td>
<td>In general, I think that I can obtain outcomes that are important to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>39</td>
<td>I believe I can succeed at most any endeavor to which I set my mind.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>40</td>
<td>I will be able to successfully overcome many challenges.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>41.</td>
<td>I am confident that I can perform effectively on many different tasks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>42.</td>
<td>Compared to other people, I can do most tasks very well.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>43.</td>
<td>Even when things are tough, I can perform quite well.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Please indicate on the scale from one to six how much you agree with the following statements:

| 44. | I feel that I am a person of worth, at least on an equal plane with others. | 1 | 2 | 3 | 4 | 5 | 6 |
| 45. | I feel that I have a number of good qualities. | 1 | 2 | 3 | 4 | 5 | 6 |
| 46. | All in all, I am inclined to feel that I am a failure. | 1 | 2 | 3 | 4 | 5 | 6 |
| 47. | I am able to do things as well as most people. | 1 | 2 | 3 | 4 | 5 | 6 |
| 48. | I feel I do not have much to be proud of. | 1 | 2 | 3 | 4 | 5 | 6 |
| 49. | I take a positive attitude toward myself. | 1 | 2 | 3 | 4 | 5 | 6 |
| 50. | On the whole, I am satisfied with myself. | 1 | 2 | 3 | 4 | 5 | 6 |
| 51. | I wish I could have more respect for myself. | 1 | 2 | 3 | 4 | 5 | 6 |
| 52. | I certainly feel useless at times. | 1 | 2 | 3 | 4 | 5 | 6 |
| 53. | At times I think that I am no good at all. | 1 | 2 | 3 | 4 | 5 | 6 |

When making a job choice decision when you graduate, **how important to you** are the following organisational factors:

| 54. | Development and Education Opportunities | 1 | 2 | 3 | 4 | 5 | 6 |
| 55. | Pay Level and Employee Benefits | 1 | 2 | 3 | 4 | 5 | 6 |
| 56. | Belongingness and Team Cohesion | 1 | 2 | 3 | 4 | 5 | 6 |
| 57. | Psychological Security Within the Workplace | 1 | 2 | 3 | 4 | 5 | 6 |
| 58. | Fairness Within the Workplace | 1 | 2 | 3 | 4 | 5 | 6 |
| 59. | A Clear Guiding Philosophy | 1 | 2 | 3 | 4 | 5 | 6 |
| 60. | High Social Responsibility | 1 | 2 | 3 | 4 | 5 | 6 |
| 61. | Low Conflict | 1 | 2 | 3 | 4 | 5 | 6 |
| 62. | Information Sharing | 1 | 2 | 3 | 4 | 5 | 6 |
| 63. | Feedback from Colleagues | 1 | 2 | 3 | 4 | 5 | 6 |
| 64. | Psychological Security / Well Being | 1 | 2 | 3 | 4 | 5 | 6 |
| 65. | Work Life Balance | 1 | 2 | 3 | 4 | 5 | 6 |
| 66. | Up to Date Facilities and Practices | 1 | 2 | 3 | 4 | 5 | 6 |
67 Innovative practices
68 Quick to take up new approaches
69 Geographical Location
70 Staff Mentoring and Teaching

Based on what you currently know, how **important are the following factors for this hospital / workplace you are about to enter on placement:**

<table>
<thead>
<tr>
<th>71</th>
<th>72</th>
<th>73</th>
<th>74</th>
<th>75</th>
<th>76</th>
<th>77</th>
<th>78</th>
<th>79</th>
<th>80</th>
<th>81</th>
<th>82</th>
<th>83</th>
<th>84</th>
<th>85</th>
<th>86</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development and Education Opportunities</td>
<td>Pay Level and Employee Benefits</td>
<td>Belongingness and Team Cohesion</td>
<td>Psychological Security Within the Workplace</td>
<td>Fairness Within the Workplace</td>
<td>A Clear Guiding Philosophy</td>
<td>High Social Responsibility</td>
<td>Low Conflict</td>
<td>Information Sharing</td>
<td>Feedback from Colleagues</td>
<td>Psychological Security / Well Being</td>
<td>Work Life Balance</td>
<td>Up to Date Facilities and Practices</td>
<td>Innovative practices</td>
<td>Quick to take up new approaches</td>
<td>Staff Mentoring and Teaching</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Please indicate on the scale from one to six how much you agree with the following statements:

<table>
<thead>
<tr>
<th>88 I am confident in my ability to locate a graduate program / employment opportunity that suits me</th>
<th>89 I am confident in my ability to enter a new workplace and become part of the team</th>
<th>90 I am confident in my ability to put my knowledge, skills and abilities to practice after I graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
I am confident in my ability to seek help and feedback from staff after I graduate  
1  2  3  4  5  6

I believe in my abilities to deal with stress and challenges in the ward or the team when I graduate  
1  2  3  4  5  6

I am confident in my abilities to communicate effectively with patients when I graduate  
1  2  3  4  5  6

The following statement concerns how much energy or effort you placed into finding out about your placement prior to commencing. Please answer as honestly as possible.

Please indicate the amount of effort you put in finding out information about your placement (workplace, specialty, team etc)  
1  2  3  4  5  6  7

The next question surrounds where you obtained information about the workplace and team that you are about to enter on placement.

For instance, if I used friends at university a great deal I would circle 6. Conversely, if I didn’t gain any knowledge from television, radio or newspaper I would fill in no.

Friend at University  
1  2  3  4  5  6

University Placement Officer / Educator  
1  2  3  4  5  6

Current or former employee  
1  2  3  4  5  6

Television, radio, newspaper  
1  2  3  4  5  6

Previous experience at the workplace  
1  2  3  4  5  6

Word of Mouth (e.g., friends, family)  
1  2  3  4  5  6

Information Packs / Advertisements  
1  2  3  4  5  6

Web Search / Home Page  
1  2  3  4  5  6

Other __________________________  
1  2  3  4  5  6

☺ Thank you for taking the time to complete this questionnaire
APPENDIX C
FOLLOW UP SURVEY

The following survey will take approximately 15 minutes of your time to complete.

Please read the instructions carefully. Try and use the answer that first comes to mind. The answer that first comes to mind usually reflects what is true of you right now.

Please fill in the forms like this not like this

The following code is important as it helps match your data between pre and post placement.

Please enter the first three letters of your mother’s maiden name and your year of birth:

When answering these questions, please refer to your experience in the placement you completed after submitting survey one.

When answering these questions, please refer to your experience in the placement you completed after submitting survey one.
Please answer the following demographic questions:

<table>
<thead>
<tr>
<th>D1</th>
<th>Please indicate what age group you are in:</th>
<th>18-25</th>
<th>26-34</th>
<th>35-50</th>
<th>50+</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>D2</td>
<td>Please indicate your gender:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>D3</td>
<td>Did you complete this questionnaire after completing placement?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D4</td>
<td>Is your placement in a rural or city based workplace/hospital</td>
<td>City</td>
<td>Rural</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D5</td>
<td>In years, what is your age?</td>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please select the speciality / area of nursing of nursing you were about to enter when completing **survey one**:

- Mental Health
- Community Health
- District
- Midwifery
- Oncology
- Paediatrics
- Geriatric
- Surgical Ward
- Theatre
- Emergency
- Intensive Care Unit
- Rehabilitation
- Other:_______________________
- Medical / Surgical

Please refer to the placement you completed **after submitting survey one when answering these questions**. Please indicate the extent to which you agree or disagree with the following statements.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All in all, I am satisfied with this placement</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>2</td>
<td>I am satisfied with the support offered to me on placement</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>3</td>
<td>I am satisfied with the clinical learning environment I was exposed to on placement</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>4</td>
<td>I am satisfied with the tasks and responsibilities offered on placement</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>5</td>
<td>I am confident that my nursing course has prepared me for my career in nursing</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>6</td>
<td>I would be very happy to spend the rest of my career within the nursing profession</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>7</td>
<td>I think that I could easily become as attached to another profession as to this one</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>8</td>
<td>I do not feel emotionally attached to the nursing profession</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>9</td>
<td>The nursing profession has a great deal of personal meaning for me</td>
<td>1 2 3 4 5 6</td>
</tr>
</tbody>
</table>
Please indicate the extent to which you agree or disagree with the following statements. Please refer to the placement you completed *after submitting survey one when answering these questions.*

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>There is a good fit between what this speciality / area of nursing will offer me and what I am looking for in a speciality / area of nursing when I graduate.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>11</td>
<td>The attributes that I look for in a speciality / area of nursing will be fulfilled very well by this speciality / area of nursing when I graduate.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>The speciality / area of nursing I was exposed to on placement will give me just about everything that I want from a speciality / area of nursing after I graduate.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>13</td>
<td>So far, the match is very good between the demands of this speciality / area of nursing and my clinical skills.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>14</td>
<td>So far, my abilities and training are a good fit with the requirements of this speciality / area of nursing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15</td>
<td>So far, my personal abilities and education provide a good match with the demands that this speciality / area of nursing will place on me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>16</td>
<td>To what degree did your values, goals, and personality match or fit with the team on placement and the current employees within the team?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>17</td>
<td>To what degree did your values and personality prevent you from fitting in with the team on placement because they are different from most of the other employees' values and personality in the team?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>18</td>
<td>Did the values and 'personality' of the team on placement reflect your own values and personality?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>19</td>
<td>To what degree did your values, goals, and personality match or fit with the workplace and the current employees within the workplace at large?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20</td>
<td>To what degree did your values and personality prevent you from fitting in the workplace because they are different from most of the other employees' values and personality?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>21</td>
<td>Did the values and 'personality' of the workplace reflect your own values and personality?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>22</td>
<td>To what extent do you feel like you fit with the nursing profession at large</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>23</td>
<td>To what extent do you identify with the values of the nursing profession</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>24</td>
<td>To what extent do your career goals and ambitions fit within the nursing profession</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>25</td>
<td>To what extent do you feel that the nursing profession represents your own personal values</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Please indicate the extent to which you agree or disagree with the following statements. Please refer to the placement you completed after submitting survey one when answering these questions.

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Next year, if I was offered a job in this speciality / area of nursing, I would take it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>27</td>
<td>Next year, working in this speciality / area of nursing is a very attractive job option for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>28</td>
<td>This speciality / area of nursing is one of the best speciality / area of nursing to work in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>29</td>
<td>I will be actively looking for a job to advance my skills in this speciality / area of nursing after I graduate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>30</td>
<td>Next year, if I was offered a job to work with this hospital/workplace I would take it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>31</td>
<td>Next year, working with this hospital/workplace is a very attractive option for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>32</td>
<td>This hospital/workplace will be one the best hospital/workplace to work for.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>33</td>
<td>This hospital/workplace will offer me everything I am looking for in a hospital/workplace to work with</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>34</td>
<td>After graduation, I am going to pursue a job within this hospital/workplace</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

On a scale of one to six please indicate how much you agree or disagree with the following statements

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>I am confident in my ability to locate a graduate program / employment opportunity that suits me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>45</td>
<td>I am confident in my ability to enter a new workplace and become part of the team</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>46</td>
<td>I am confident in my ability to put my knowledge, skills and abilities to practice after I graduate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>47</td>
<td>I am confident in my ability to seek help and feedback from staff after I graduate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>48</td>
<td>I believe in my abilities to deal with stress and challenges in the ward or the team when I graduate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>49</td>
<td>I am confident in my abilities to communicate effectively with patients when I graduate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Please indicate the extent to which you agree or disagree with the following statements. Please refer to the placement you completed after submitting survey one when answering these questions.

<table>
<thead>
<tr>
<th></th>
<th><strong>Strongly Disagree</strong></th>
<th><strong>Strongly Agree</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>54</td>
<td>I have been made to feel that my skills and abilities will be a very important asset to this workplace.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>55</td>
<td>Almost all of the staff on this placement were supportive of me personally.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>56</td>
<td>Staff went out of their way to help me fit in within the workplace.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>57</td>
<td>I was made to feel an important part of the team on placement.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>58</td>
<td>During this placement, I always had someone to turn to for help and support.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>59</td>
<td>This placement was structured so that I had the opportunity to discuss experiences and ask questions with experienced staff members.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>60</td>
<td>Activities and work experiences on the ward were planned for me to watch and apply skills.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>61</td>
<td>This placement was structured so that I could develop my knowledge and skills.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>62</td>
<td>Learning goals were clearly defined throughout the placement.</td>
<td>1 2 3 4 5 6</td>
</tr>
</tbody>
</table>

Please indicate on the scale from one to six the extent to which you engaged in the following activities. Please refer to the placement you completed after submitting survey one when answering these questions.

On placement, to what extent did you:

<table>
<thead>
<tr>
<th></th>
<th><strong>Strongly Disagree</strong></th>
<th><strong>Strongly Agree</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>Seek feedback on your performance after a placement task or exercise?</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>74</td>
<td>Solicit critiques from your nurse educator / supervisor / preceptor?</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>75</td>
<td>Seek out feedback on your performance during tasks?</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>76</td>
<td>Ask for your nurse educator / supervisor / preceptors opinion of your work?</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>77</td>
<td>Negotiate with others (including your supervisor and/or co-workers) about desirable task changes?</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>78</td>
<td>Negotiate with others (including your supervisor and/or coworkers) about your task assignments?</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>79</td>
<td>Negotiate with others (including your supervisor and/or coworkers) about the demands placed on you?</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>80</td>
<td>Negotiate with others (including your supervisor and/or coworkers) about their expectations of you?</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>81</td>
<td>Try to see your situation as an opportunity rather than a threat?</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>82</td>
<td>Try to look on the bright side of things?</td>
<td>1 2 3 4 5 6</td>
</tr>
</tbody>
</table>
Continued from the previous page, on placement, to what extent did you:

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>83  Try to stay positive during your learning experience?</td>
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<tr>
<td>84  Try to see your situation as a challenge rather than a problem?</td>
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<td>85  Start conversations with people from different segments of the workplace / hospital</td>
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<td>86  Try to socialize with people who are not in your work group / team</td>
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<tr>
<td>87  Try to get to know as many people as possible in other sections of the workplace on a personal basis</td>
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<td>88  Try to learn the (official) workplace structure</td>
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<td>89  Try to learn the important policies and procedures in the workplace</td>
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<td>90  Try to learn the politics of the workplace</td>
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</tbody>
</table>

On a scale of one to six please answer the questions according to what you **feel as a result of your placement**. In your opinion, how **important are the following factors for this hospital / workplace**

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>91 Development and Education Opportunities</td>
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<td>92 Pay Level and Employee Benefits</td>
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<td>93 Belongingness and Team Cohesion</td>
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<td>94 Psychological Security Within the Workplace</td>
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<td>95 Fairness Within the Workplace</td>
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<td>96 A Clear Guiding Philosophy</td>
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<td>97 High Social Responsibility</td>
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<tr>
<td>98 Low Conflict</td>
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<td>99 Information Sharing</td>
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<td>100 Feedback from Colleagues</td>
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<tr>
<td>101 Psychological Security / Well Being</td>
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<td>102 Work Life Balance</td>
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<td>103 Up to Date Facilities and Practices</td>
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<td>104 Innovative practices</td>
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<td>105 Quick to take up new approaches</td>
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<tr>
<td>106 Staff Mentoring and Teaching</td>
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</tbody>
</table>
What specialty / graduate year program will you pursue after graduation?

What influences your job choice next year?

What improvements would you suggest to make your placement experience / education program better?

Additional Comments?