MAKING DECISIONS: A three-year ethnographic study of child health student nurses

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Table of Content

Abstract ... **5**

Chapter 1: Significance of decision-making ... **6**

Definition of Terms ... 8
An overview of the study ... 9
State of the literature ... 12
Conclusions ... 21

Chapter 2: Decision-Making ... **23**

Neurological basis of Decision Making ... **24**
Empiricist Viewpoint ... **28**
Naturalistic Decision-Making ... **35**

Chapter 3: Methodology ... **44**

Proposal Development and the redefinition of the research statement ... 44
Choosing Ethnography ... 50
Critical Ethnography ... 56
Weaknesses of the methodology ... 59
Sampling ... 61
Ethical Considerations ... 63
Methods employed ... **67**
Interviews ... 67
Interviewing as a method ... 71
Observation Strategies ... 81

Chapter 4: Qualitative Data Analysis ... **91**

Content Analysis ... **91**
Inductive or Deductive ... 94
Content Analysis – The inductive approach ... 95
The Immersion Process ... 97
Coding ... 98
Categorisation and Abstraction ... 99
Thematic Analysis ... **102**
Longitudinal Data Analysis ... **104**
Member checking ... 106
Document Analysis ... **109**

Chapter 5: Results ... **113**

Document Analysis: The results ... **114**
Standards of Proficiency for Pre-registration Nursing Education ... 115
The Tuning Project 2009 ... 117
The Code: Standards of conduct, performance and ethics for nurses and midwives ... 121
Standards for Pre-registration Nursing Education (N.M.C., 2010) ... 122
Definitive Document – Validation Document ... 124
Review of Timetables for cohort studied ... 126
The All Wales On-going Record of Achievement of Practice Competence (2012) ... 129
The Pre-test results ... **132**
Results of Phase 0 Data Collection ... 134
The Results - Phases 1-3 ... **142**
Results ... **146**
Knowledge and making a decision ... **147**
Knowledge - The first Year ... 147
Knowledge - The second year ... 160

Knowledge – The third year 165
The Process of Reflection and Decision-making 171
Reflection – The first year 171
Reflection - The second year 176
Reflection – The third year 180
Confidence to make decisions 183
Confidence – the first year 185
Confidence – The second year 190
Confidence – The third year 199
Competence and the decision-making process 204
Competence – The first year 204
Competence – The second year 207
Competence – The third year 211
The role of the mentor and decision-making 218
The Mentor – The first year 220
The Mentor – The second year 232
The Mentor – The third year 239
The process of making a decision 243
Decision Making – The first year. 243
Decision-making - The second year 246
Decision-making – The third year 256
Observation of simulated practice 265
Analysis of the Field Notes for second year observation 267
Analysis of the Field Notes for third year observation 284
Chapter 6: Discussion 292
Discussion summary: Implications for curricula development. 327
Conclusion 334
Reference List 339
Appendix 373

Table of Figures

Figure 1	Progression Points	10
Figure 2	The Timing of Data Collection	10
Figure 3	Literature Review	12
Figure 4	A three-phased decision-making model	31
Figure 5	Satisficer – Maximizer	37
Figure 6	How clinical decisions are made	39
Figure 7	Cognitive Dissonance theory	41
Figure 8	Categorising the decision-making literature	42
Figure 9	Simplistic decision-making model	52
Figure 10	The interview process	71
Figure 11	Induction/Deduction	95
Figure 12	The inductive content analysis process	96
Figure 13	Process of Thematic Analysis	102
Figure 14	Data collection at progression points	104
Figure 15	Direct references to decision-making	130
Figure 16	Characteristics of a good decision-maker	137
Figure 17	Characteristics of a poor decision-maker	137
Figure 18	Development of an Interview Schedule	140
Figure 19	Decision-making model	144
Figure 20	Chaining	293
Figure 21	Knowing That/ Knowing How	299
Figure 22	Theory of Planned behaviour	301
Figure 23	Confidence Attributes	307
Figure 24	Levels of competence	313
Figure 25	Characteristics of a toxic mentor	316
Figure 26	Phases of mentorship	316
Figure 27	Decision-making development	321

Statement on confidentiality

In line with guidance offered by the Nursing Midwifery Council and University of South Wales (USW) Faculty Ethics Committee every care has been taken to ensure the confidentiality of the participant is maintained. The researcher has used pseudonyms throughout this thesis so no statement can be directly attributed or traced to a participant. Transcribed texts have been coded and field notes contain abbreviated and modified names or initials only known to the researcher.

Abstract

This thesis examines the maturation of decision-making in a cohort of child health students. At strategic stages during their three-year nurse education programme, students gave consent to be formally interviewed about the way they make decisions and observed undertaking simulated practice. This rich data set is supplemented by critical analysis of key papers from European Government, professional bodies and university documents to provide context and show the drivers for curriculum development. Utilising ethnographic principles the researcher explores decision-making development and presents the students' view on how nurse education, clinical practice and the role of the mentor moulds a novice practitioner in the first year into a safe and competent decision-maker at registration.

The participant's interpretation of their developing world and how, at times, it deviates from the curriculum provides interesting reading for the educationalist. The movement from a dependent, subservient neophyte into a confident, competent decision-maker in clinical practice is more, the data suggests, through the fortitude of the participant rather than the skills and tools provided through the timetable. Like many ethnographic studies that examine familiar topics, the results are not always palatable. This study gives insight into the world of the developing decision-maker and highlights how this vital nursing skill of decision-making has been neglected and is deserving of greater prominence in the curriculum. In today's highly pressurised healthcare system we require skilled nurses able to assimilate, analyse and synthesise information to formulate competent decisions in a time-limited environment.

Chapter 1: Significance of decision-making

Nurse education is structured to produce a competent, safe practitioner at the end of three years of nursing studies. The Nursing Midwifery Council [NMC] produce guidance linked to professional competence/standards and these are assessed academically and professionally at key progression stages at the end of years 1, 2 & 3 (NMC, 2010). The NMC standards have been informed by the European Tuning Project (Tuning, 2005) adopting it's definition of a nurse in 2003:

"A professional person achieving a competent standard of practice at first cycle level following successful completion of an approved academic and practical course. The nurse is a safe, caring, and ***competent decision maker*** *willing to accept personal and professional accountability for his/her actions and continuous learning. The nurse practices within a statutory framework and code of ethics delivering nursing practice [care] that is appropriately based on research, evidence and critical thinking that effectively responds to the needs of individual clients [patients] and diverse populations." [Page 20]*

Decision-making is key to this definition and the modern day nurse needs to possess a number of decision-making tools to be able to navigate the diverse nature of healthcare provision witnessed on a day-to-day basis (Clack, 2009). Nurses need to critically review, reflect, be flexible and most importantly 'know what they don't know' whilst they make clinical decisions that may fundamentally influence health outcomes for their client group (Lewenson and Truglio-Londrigan, 2008). The making of a decision is so central to the everyday practice of a nurse yet little personal conscious thought is put into the strategies utilised by the individual. Upon entering the clinical arena the nurse is assessing and prioritising care, meeting the personal needs of his or her client group, managing the clinical environment or liaising with the multiprofessional team (Lofmark, Smide & Wikblad, 2006). Each activity requires the accumulation of information and analytical strategies to bring order to the data prior to the formulation of a decision-making action. The child health nurse is faced with the

added complexity of a client group who is often preverbal, immature or frightened by their illness, situation or environment. The nurse needs to make decisions on the information they collect and select interventions appropriate to the child's age and implement that action in an ever changing and potentially time limited, life threatening scenario constantly under the scrutiny of the family (de Castro, Hagan & Nelson, 2006).

Although decision-making strategies may have similar processes, the way an individual computes the multitude of variables surrounding every issue is unique (Beach and Connoll, 2005). Nurse education teaches skill acquisition, the art and theory of nursing alongside the principles of care but the ability to react and make decisions in particular scenarios is not given the attention required for practitioners to take stock of their developing expertise (Karni, 2009). Understanding the way an individual assimilates and acts on information has been the focus of a number of authors and these have been incorporated into the nursing curriculum (Heath, 1998; Carper, 1992; Silva, Sorrell & Sorrell, 1995; Benner, 1984). Reflection is a common tool used to promote active, structured thinking about the experiences student nurses encounter day-to-day (Johns, 2009) but the effectiveness of these paradigms and it's influence during the decision-making process requires further investigation. There is a need to explore the development of decision-making alongside the maturation of child health students as they move from a novice task-orientated 'doer' into registered analytical, critical thinkers. The student's personal construct of decision-making and how this develops over the three years of nurse education fascinates this researcher. This provides the motivation to gain a deeper understanding of the evolution of clinical decision–making over the three years of their nurse education from the student nurses perspective.

Definition of Terms

The complexity of this topic is made all the more difficult for the reader because the terms used in the literature have a number of differing expressions to describe very similar phenomena of making a decision (Dowding & Thompson, 2003). Clinical Judgement is seen as a taught concept where the individual has the ability to observe and recognise relevant information (Tanner, 2008). The individual gathers the information and applies reasoning and critical thinking skills to arrive at a logical deduction to identify the need or problem (Phaneuf, 2008). Clinical reasoning can be defined as the cyclic process of collecting cues, assimilating and understanding the information whilst planning and implementing interventions constantly evaluating and reflecting on outcome (Atkinson & Nixon-Cave, 2011). Linked closely to clinical reasoning is the concept of probabilistic reasoning that correlates the likely outcomes of disease based on identifying clinical variables termed diagnostic reasoning (Hamm, Beasley & Johnson, 2014). Clinical inference is based on an assumption or a conclusion that has been logically constructed from the available information (Wolf, Ambrose & Dreher, 1996). All these terms could easily be applied throughout the dissertation. There is a suggestion that a judgement and a decision can be separated with judgement being the assessment of alternatives (Polkinghorne, 2004), whilst a decision is the choosing of alternatives (Bate et al. 2012). Whilst critical thinking is the logical, systematic interconnection of thoughts and ideas allowing the individual to construct a viewpoint based on one's knowledge, values and beliefs (Krupat et al. 2011). In practice, these terms are used interchangeably with the subject rarely making a distinction between the process and the outcome of a judgement/decision when making a clinical choice in practice (Standing, 2008). For clarity, decision-making or maker is the nomenclature of choice throughout this thesis.

An overview of the study

Individuals start nurse education with life skills and possibly an awareness of working within the clinical environment as health care support workers. Entrants to the profession may be school leavers, those wishing a career change or the more mature applicant who postponed a career development. Regardless of background, embarking on a nurse education programme sees a dramatic transformation from an individual with little to no experience working within a clinical environment at the start of the course, into a safe and competent practitioner satisfying NMC requirements to gain entry to the Nurse Register (NMC, 2010).

This ethnographic research projects aims to satisfy the following statement:

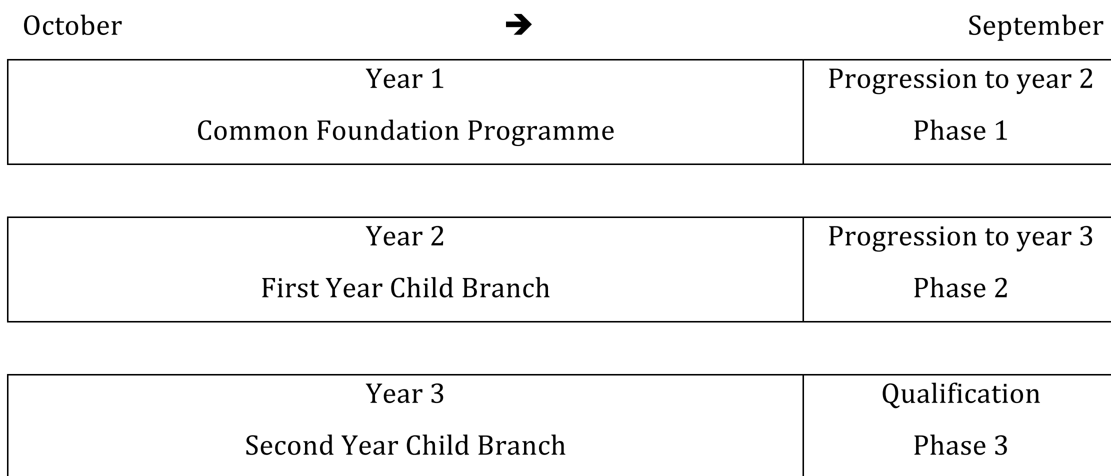
'To identify how child health student nurses explain, develop and mature their decision-making strategies during key stages of the three years of their nurse education programme."

Based upon this statement the researcher developed a number of questions that formed the philosophical underpinnings of the research project whilst giving structure to the study:

- What influences the development of clinical decision-making and how does the participant perceive this?
- What key events occur during the three years that makes the participant realise that they are now developing into a competent decision-maker?
- What is the relationship between education and clinical practice in the development of decision-making and how does the participant interpret this?
- How important are mentors/peers in the development of the decision-making process?
- What is the participant's understanding of decision-making strategies they employ in the clinical environment – are participants consciously aware of the development of clinical decision-making skills?

Understanding how decision-making strategies develop through the three years of nurse education programme gives insight into the developing professionalism of child health student nurses and the decision-making skillset they obtain whilst satisfying the educational curiosity of this academic.

Data is collected at a number of key points during the student nurse training. These have been termed 'phases' and generally match the progression points of the course that the students are enrolled on.


October ➔ September

Year 1 Common Foundation Programme	Progression to year 2 Phase 1
Year 2 First Year Child Branch	Progression to year 3 Phase 2
Year 3 Second Year Child Branch	Qualification Phase 3

Fig 1: Progression Points

Figure 3 below outlines the dates, in months, of data collection and how it relates to the student's progression through the nurse education programme. Phase 0 has been used as a pre-test interview to formulate a schedule for Phase 1. Subsequent data collection occurs at strategic stages of the course ensuring that students have had enough clinical experience and theoretical input prior to data collection. The timing of data collection also allows the individual time to reflect on the previous years development as a decision-maker with each year of their nurse education programme ending in an interview.

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Yr 1		Phase 0								Phase 1		
Yr 2						Ob 1				Phase 2		
Yr 3						Ob 2				Phase 3		

Figure 2: The Timing of Date Collection

On closer examination of Figure 3, the reader will notice that observation (ob) is included in year 2 & 3 but excluded from the first year of the project. It was

decided at the start of the research project that the clinical simulation on offer in the first year would not contribute to the research aims and objectives of this project. The simulation sessions seen in the first year focus on the mastery of skills and tasks and are driven by procedures involving manual dexterity and the building of knowledge and skill through repetitive action such as infection control procedures and vital signs. Rather than a true simulation, as seen in year two and three, the first year is more station based, procedure orientated skill acquisition. Simulation in the second and third year of training is more focused on the student caring for a predefined clinical case whilst incorporating the individual mastery of nursing skills learnt in the first year. Clinical simulations planned in the second & third years are devised to utilise the skills acquired during the first year and applied these to an unpredictable simulated clinical event. Replicating a clinical scenario is more likely to elicit a reflective experience necessary for this project. These simulations are tried and tested and have been used for a number of years by the child health team. They are not specifically designed for the research project but decision-making is at the heart of the simulations allowing the participant to showcase their nursing ability in a safe environment.

State of the literature

Before embarking on this research project, the researcher assumed that the way a student nurse makes a decision would be a well researched with a wealth of published literature, yet as the following table demonstrates that this is not the case.

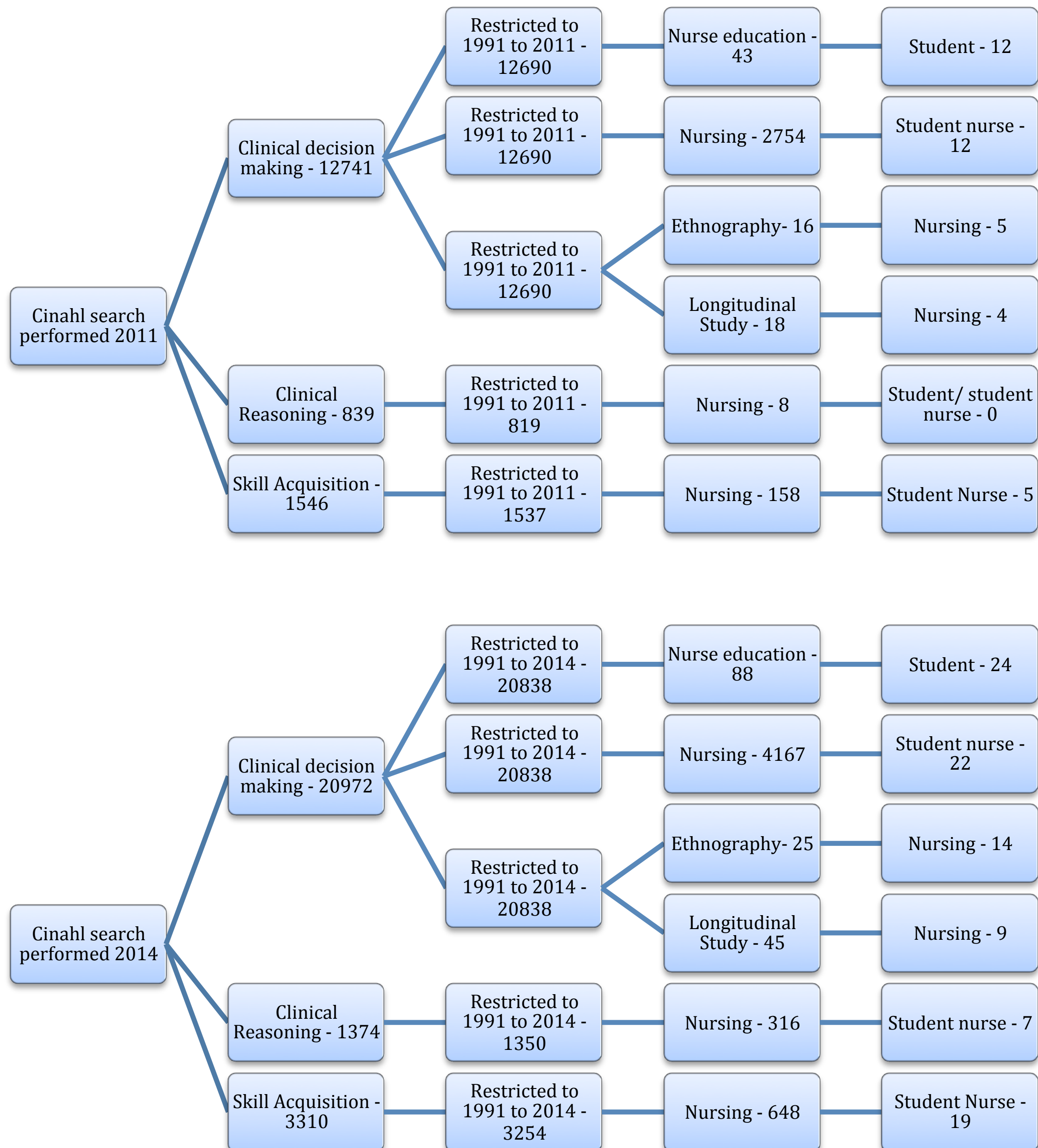


Fig 3: Literature Review

The concept of decision-making is well published with decision-making models and strategies found in all areas of business and management as well as healthcare. There appears to be a reasonable amount of decision-making literature focused on single events or on experienced practitioners. The number of research articles significantly reduces when the search strategy narrows its focus on nurses as a specific group and is further reduced when keywords such as 'education' and 'student' are applied. The remaining literature can be divided as follows:

- Research that explores the barriers of utilising research in the decision-making process (McCaughan et al. 2002),
- The quality and classification of the decision-making process (Harbison, 2001).
- Decision-making strategies employed by nurse practitioners (Spain, DeCristofaro & Smith, 2004) and the effects of education on this process (Taylor-Seehafer et al. 2004).
- Critical thinking abilities longitudinally explored utilising Benner's stages of skill acquisition (Maynard, 1996; Benner, 1984)

Later in this thesis the author provides a comprehensive account of the decision-making process and the related theory but before this discussion it is useful to review the literature surrounding decision-making and the student nurse. Research exploring the complexities of the decision–making process within nursing can be increasingly found in the nursing literature from the 60's. Studies utilising both qualitative and quantitative design highlights the complexity of the decision-making process with an increase in interest into this subject with the publication of Patricia Benner's work (Benner, 1984; Benner & Tanner, 1987). It is evident that the bulk of the decision-making articles available focus on the qualified nurse. Literature that offers insight into the development and maturation of the decision-making process prior to registration is in its infancy. The literature that is available generally isolates a particular year of nurse education and/or attempts to investigate the decision-making process through scenarios either within the simulation laboratory (Cioffi, 2012), utilising computer software (Guhde, 2010) or performing exercises/group work within the classroom setting (Gers, & Niemer, 2009). Much of the research attempts to

isolate variables or quantify aspects of the decision-making process to make sense of the phenomena, and there is a common theme of researchers advising caution of over simplifying the decision-making process (White, 2003). The author will utilise the limited knowledge available in this area and explore the wider decision-making literature relating to the student nurse and the newly qualified practitioner to explore the development and evolution of the decision-making process from an education and clinical perspective.

Etheridge (2007) suggests that to become skilled as a decision-maker a practitioner needs to learn how to think as a nurse. Having completed a longitudinal qualitative study into the complexity of decision-making undertaken by first year registrants studied at one, three and nine months post preceptorship period, it became clear to the research team that the complexity of thinking and ultimately any decisions made are based on a number of pre-requisites such as confidence, the acceptance of responsibility and the belief in the practitioner's ability and competence. Thompson (2008) criticised the decision-making abilities of registrants purporting that the strategies employed by the newly qualified are no more sophisticated than that of a member of the public. It is easy to come to this conclusion as the student nurse deems the whole process of making a decision as complex and anxiety provoking. The ability to communicate how decisions are made, developed and subsequently applied within the clinical setting appears conceptually challenging for the neophyte (Knipe, 2013).

Nurse education has an essential role to play in decision-making development. The diversity of teaching strategies linked to decision-making are clear by performing the simplest Internet search. The literature covers all professions such as business and teaching yet the manner in which decision-making is taught within the nurse education curriculum and the strategies to apply this knowledge in practice is in comparison underrepresented in the literature. McCallum et al. (2012) found that the teaching of clinical decision-making is perceived as difficult in the classroom setting and as a result this vital clinical skill is generally left to the clinical mentors to develop. The decision-making

process within the curriculum is stripped back and portrayed as a linear problem-solving schema (Gillespie, 2010). Problem solving is a useful tool and one easily applied to the clinical environment (Garrett, 2005) but ultimately this simplistic paradigm, that is so appealing to the neophyte, hides the complexity of the decision-making process. Baxter & Boblin (2008) suggests that as a learnt skill the decision-making process should be more explicitly evident within the nurse education system. Decision-making is evident in every action performed by a practitioner and distinguishes the highly trained professional from ancillary staff. Despite being the foundation on which all actions are based it is an implicit element of the nurse curricula and it is assumed that this skill will develop over time within the clinical setting (Dawes, 2000).

There appears to be two distinctive discourses whilst critically reviewing the literature that ultimately influences the understanding and teaching of clinical decision-making. It appears from first glance that these theoretical stances are on the opposite poles of the decision-making continuum yet in essence there is overlap and slurring of theoretical principles seen in practice. The humanistic intuitive perspective is based upon an ever expanding personal knowledge base and a wealth of clinical experience that allows effective utilisation of pattern recognition to assist the decision-making process. Benner & Tanner (1987) describe the notion of intuition in their work but today this concept remains allusive to test and is further hindered by the definitions available such as "understanding without rationale" and "common sense understanding" offered by these esteemed authors. Alternatively the systematic positivistic perspective promotes deductive, inductive and abductive reasoning where goal directed, problem-solving principles are applied to ensure an effective decision is made (Aliev, Pedrycz & Huseynov, 2012). In practice, the student nurse is likely to freely move between the two discourses utilising key concepts, dictated by the student's knowledge and experience to make a decision. As the models of decision-making critically explored later in this thesis show, whatever philosophical discourse is applied to the decision-making process it is essential to possess the ability to assimilate and analyse information, learn from experience and have the confidence to act.

To become an effective decision-maker requires a thinking and proactive practitioner, the NMC (2004) produced a document titled 'Standards of Proficiency for Pre-registration Nursing Education' that sets minimum standards tested through competences. There are a number of standards that facilitate the observation and assessment of the decision-making process although the statements are not explicit in process but favour outcome with many focusing on collaboration. This is fine when the student nurse is supported through the mentorship process but once newly qualified, nurses find themselves in a situation where they have no mentor to act as a proxy decision-maker. Even where there is a post registration preceptorship programme, the registrant is required to decision-make collaboratively or in isolation without the safety net of an over seeing mentor to verify decisions seen during the pre-registration period. This increases practitioner stress and subsequently the risk of clinical errors. As educators, we must promote collaboration whilst also ensuring the individual has the skillset to act autonomously when required (Baxter & Boblin, 2008). Saintsing, Gibson & Pennington's (2011) review of the literature suggests that of the errors made in drug dosage calculation or administration, 30% are due to errors in decision-making process coming to the conclusion that registrants are inadequately prepared for decision-making post qualification. This is supported by additional research performed by Greenwood (2000) and Morrow (2009) who proposed that the protected environment encountered by the student nurse changes at registration and if not suitably prepared the newly qualified practitioner will adopt poor decision-making strategies suggesting that a lack of experience and an increase in the number of clients cared for at qualification, influences the quality of the decisions made. Time limitation is described as a real factor in a study of new registrants demonstrating a correlation between the number of clients allocated to the practitioner and the number of reported nursing errors. Ebright et al. (2004) suggests that with only a small rise from 4 to 5/6 clients increases pressure on time and affects decision-making performance. Baxter & Rideout (2006) set out to explore the development of this skill by investigating the type of decisions second year student nurses make, how they determine the need to make a decision, and how they respond to the patient care request. Data was collected through a research

journal kept by the student nurse over a two-week period and a semi structured interview following analysis of the student's journal. A key encounter in this study and others published before and after this event is the pivotal role of the mentor. Much has been made of the supportive mentor and their positive role modelling but when the mentor is stressed or lacking full commitment to create a constructive learning environment, it appears that this stifles the student confidence to make decisions. This undermines student nurse confidence, creating dependence rather fostering an open, facilitative atmosphere where decisions are explored through discussion.

More recently there appears to be a modest increase in the number of decision-making research projects using the method of observation during a simulated clinical event as the means of data collection. Seen originally as a sound media for teaching and developing decision-making, simulation is often portrayed as a second best option to the clinical environment albeit a teaching tool where decisions could be made in a safe controlled quasi-clinical setting. Clinical simulation is used to teach clinical skill and self-efficacy (Perry, 2011) competence (Cant & Cooper, 2010) and patient safety (Bellefontaine, 2009). Designed around a proactive learner, simulation promotes experiential learning grounded on sound constructivist principles (Onda, 2012) although there is little evidence that skill acquisition is comparable to that taught in the clinical environment or that it assists with the subtitles of the art of nursing such as prioritisation or decision-making (Waldner & Olson, 2007). Cooper et al. (2010) observed third year nurses undergoing simulated clinical scenario. In their findings they report that third year students had the ability to identify physiological cues but were less likely to recognise deterioration in clinical condition, having poor skill performance and situational awareness. The authors suggest that the student nurse is affected by the lack of mentor support with the study encouraging the student to role play a qualified practitioner and so make decisions in collaboration with their peers or in isolation. The notion of situational awareness is an issue that has been reported in the literature and can be attributed to a number of differing professions. Elstein & Bordage (1991) refers to "cue acquisition" where the student has the ability to identify

physiological changes but has difficulty assessing the subtle psychosocial changes that occur as the child compensates prior to full deterioration of condition. This is supported by Tanner (2006) labelling the concept "noticing" and further explains the fragile nature of the concept that can be influenced by peers, personal bias and the individual's ability to recall knowledge. This perceptual grasp of the moment and the student's ability to recognise client needs are an early stage of the decision-making process. The inexperienced student needs to acquire skills that allow interpretation through sound analytical schema, determining the most appropriate action before reflecting in and on action (Schön, 1983). When working independently the student nurse is required to recall facts, relive past experiences, synthesise data and apply it to the current situation in real time. Thompson (2008) adds that expert practitioners formulate pathways that allow quick instinctive decisions to be made utilising multiple cues that are performed at speed; a luxury aspired to by the neophyte practitioner. Gillespie (2010) goes one step further suggesting that the student nurse is a junior partner, a peripheral player with limited influence in the gaining of experience, competence and ultimately responsibility. Without belief in their knowledge base, ability, level of experience and competence some student nurses find the acceptance of responsibility a challenge. Etheridge (2007) suggests that these reasons account for the student nurses' inability to deviate from planned care or think in their feet in time limited clinical situations.

Educationalists continue to struggle to find an effective teaching strategy to develop and mature decision-making. A teaching tool that has been successfully utilised in many disciplines such as education, sciences and policy studies has been applied to the nursing curricula in an attempt to make the student more situationally aware. Concept mapping is not a new idea and has been used within the nursing profession to identify process and criteria for action planning (Clayton, 2006). This concept has its philosophical underpinnings enshrined in the work of Ausubel who developed the Assimilation Theory of Learning (Ausubel, 2000). This theory explores the belief that meaningful learning occurs when new is integrated with acquired knowledge. The manner in which knowledge is rearranged and reordered when effectively structured allows the

learner to gain true meaning and develop a deep understanding of the topic under investigation. Gerdeman, Lux & Jacko (2012) applied concept mapping to the nursing curriculum to examine how effective this learning strategy is for the development and maturation of clinical decision-making. Described as a pilot study with a small sample of 8 third year nursing students, the researchers built a rubric utilising Tanner's (2006) clinical judgement model to allow participants to self assess themselves and to score the decision-making process. Although viewed with caution due to the small sample size, the researchers suggest that the use of concept mapping assists proactive, discovery learning, giving greater insight into the integration and application of theory into practice, but more importantly promotes the learner's appreciation of the relationship between organised, rational thought and its influence on planning and prioritising care. The interrelationship of a number of problems is commonly seen in the clinical setting but studies by Guhde (2010) suggest that most student nurses even in the latter years of their nurse education seem to focus on one problem at a time. Educational strategies such as concept mapping creates a learning environment to promote cognitive strategies that could ultimately reduce the risk of errors by ensuring the student seek answers and be proactive rather than react and problem solve. Croskerry (2002) and Tanner (2006) suggest that learning and ultimately safe practice can be facilitated through a concept termed 'failure expectation' allowing the student to learn through their mistakes in a controlled and safe simulated clinical environment. It has been recognised that the pressures of clinical placements, the unpredictability of clinical experience and the time constraints experienced by mentoring staff fundamentally affects the development of clinical decision-making and skill acquisition of the student workforce (Schreuders et al. 2012). To elevate the pressure on the clinical environment the Nursing Midwifery Council (2007) in circular 36/2007 allows Higher Education Institutions (HEI) to

"use up to a maximum of 300 hours of the 2300 hours practice component to provide clinical training within a simulated practice learning environment in support of providing direct care in the practice setting."(P.2)

This is a contentious ruling in the light of evidence as a review by Lapkin et al. (2010) deduced that there is inconclusive evidence that the use of Human Patient Simulation Manikins (HPSM) in a simulated event equates to the demands of the clinical environment when measuring the efficiency of decision-making. There is a suggestion however that the use of high fidelity simulation improves knowledge acquisition, assists critical thinking and importantly improves the students ability to recognise deterioration and reduces “failure to rescue” (Aiken et al. 2013). Boon et al. (2014) supports this finding in their study on House officer’s assessment of neonatal heart rate prior to resuscitation showing that without good data collection and assimilation then practice outcomes deteriorate.

This review demonstrates that research into the decision-making maturation and the strategies employed by the student and educators are evolving but far from extensive. Research is required to gain an understanding of student’s perception of this vital clinical skill and explore what works for them within the clinical setting. To date, only one paper explores clinical decision-making longitudinally in the student nurse population (Standing, 2007). Standing’s paper explores how nursing students acquire clinical decision-making skills and investigates how prepared they feel regarding their responsibilities as Registered Nurses. This study uses a longitudinal hermeneutic phenomenological method, utilising interviews, reflective journals, care studies, critical incident analyses and document analysis between 2000-2014. A sample of twenty students participated in the study but the population includes student nurses from a number of differing branches of nursing. Standing identified that students found difficulty in ‘thinking on their feet’ when not under the supervision of mentors. Recommending closer links between education & clinical partners to facilitate the development of decision-making skills through teaching and learning strategies that are problem-based, reflective and interactive.

This research project differs from Standing’s study by choosing ethnography as a method and using a single cohort of child branch students. Standing suggests that the main weakness of her study is the retrospective nature of the data

collected through interview. This issue has been addressed during year 2 & 3 with the addition of two observed simulated scenarios to assist triangulation of data. Isolating the child branch for examination is particularly interesting to the researcher for the following reasons:

- The researcher is a children's nurse/educator and so this area is of particular interest as the emerging conclusions from this investigation may influence curriculum development in the future.
- The ethos of child health nursing is very specific and exploring the child health student nurses' perspectives linked to decision-making in this diverse yet unique setting may help develop the child health curriculum for future cohorts. The researcher is not attempting to explore or extrapolate meaning from a phenomenological perspective but seeks to describe and report the respondent's understanding of the decision-making strategies they employ and how they develop over time.
- The decision-making strategies employed in this challenging environment will give an insight into the confidence felt by child health student nurses at the point of qualification (Twycross and Powls, 2006).

Conclusions

To conclude, the knowledge base on the process and outcome of decision-making is vast yet the focus of this research proposal has identified an area that is under researched and needs closer investigation. The nurse educator has an important role to ensure neophyte child health nurses are truly prepared for life as a clinical decision-maker. This research project will explore the merits of utilising the methodology of ethnography. This qualitative approach will promote an understanding of decision-making maturation from the participant's perspective. A number of differing methods have been used including interviews, observation of simulated practice and in-depth analysis of documentary evidence pertinent to nurse education, curriculum development and timetabling. The data collected was analysed using content and thematic analysis techniques and finally through a critical review of the literature the results from this study will be compared

and contrasted to the wider body of knowledge to present the participant's perspective on the evolution of clinical decision making and how through recommendations this could influence curriculum development. The researcher will compare and contrast this with the current thinking and seek to make recommendations on how we as nurse educators can assist the development of a critical decision-maker facilitating the child health student nurse in his or her quest to become the healthcare professional he/she aspires to be. Curriculum development is informed by current thinking and policy development. The production of a three-year programme is based on best evidence, academic experience, professional guidance, course and module evaluation supplied by previous cohorts. It is proposed that the results from this study could be used to give a differing perspective, the student voice, on an essential nursing tool, the act of decision-making. It will give insight into the real world of the child health student and how they feel nurse education supports them whilst making a decision. It would be folly for the researcher to believe that decision-making could be isolated from other key events that occur during the child health students' progression through the nurse education programme. What must be remembered is that the participant does not see the act of decision-making as a single quarantined act and as a result participants explore a variety of differing factors as they make sense of their decision-making journey.

What follows in the next chapter is an extensive review of the decision-making models and theories available to practitioners and educators to critically understand the key components of the decision-making process.

Chapter 2: Decision-Making

Decision-making dominates our lives; every task we perform requires a decision. Some decisions seem trivial, such as what clothes to wear to work whilst others may be life saving, but in all cases the way we make a decision is guided by our experiences, physiology and education. Every decision made is a conscious or a sub-conscious act and the effectiveness of the decisions we make is dependent on a multitude of interrelated factors that could ultimately affect the outcome and quality of the decisions we make (Bate et al. 2012).

This section will explore a number of differing trends in the decision-making literature. The section starts with a review of the neurophysiology literature linked to decision-making. Following this, the decision-making theories will be presented giving the empiricist and the naturalistic perspective of the decision-making process. It is clear, whilst reading the literature that a complete account of the decision-making process in humans is far from fully understood. It can easily be seen how many theories give plausible explanations to a number of pre-set problems when the research is based in a laboratory setting (Godson, Wilson & Goodman, 2007). When applied to time limited, variable and fluid environments found in the healthcare setting many of the theories are less than rigorous (Gold & Shadlen, 2011). This section will give an insight into the current thinking on this topic area and sets the scene for the research process.

Neurological basis of Decision Making

The researcher considered the utility of including a section on physiology in a qualitative study. The literature on decision-making in healthcare is orientated towards the more humanistic experience of making a decision that neglects the biological function that drives the decision-making process. The literature abounds with decision-making models that explore the relationship between environmental awareness, information searching and analysis, comparisons with past experiences and actions to enact the decision. Understanding these complex neural interactions gives context to the decisions made by the participants in this study. Educators would not consider teaching the nursing management of a client with a cardiac problem without first exploring the anatomy of the cardiovascular system. Similarly, if you understand the physiology of decision-making it gives context to the actions taken by participants (Christoff, Ream & Gabrieli, 2004). It provides insight into the way the participant contextualises the unfamiliar environment in which they find themselves during clinical placement. It offers explanation about the lack of confidence participant's feel during the decision-making process and provides evidence that supports the rationale of their actions or clarifies their reflective retrospection of the decision-making encounter (Cools, Nakamura & Daw, 2011). Clarity of thought, processing speed and the development of intuition have their foundations in neurology (Simmons, Hetrick & Jorm, 2010).

Neuroscience is based on data gained through vivisection, in particular rat and monkey research (Long, Kuhn & Platt, 2009). When humans are involved, studies are either laboratory orientated and controlled or based upon case studies of individuals who have either undergone surgery or trauma to specific areas of the brain that ultimately affect their decision-making capabilities (Nenner, 2011). Redish's (2013) text formed the backbone of the initial reading assisting the author in tackling the more complex neurological articles included in this work. It would be folly to suggest that there is a simplistic explanation that would truly encompass the neurological basis of decision-making. Indeed a thesis could be written on any one aspect covered in this neurological account. This section will

explore the anatomical structures and chemicals that are known to play a role in the decision-making process.

Although often likened to a super computer the brain is infinitely more complex (Snell, 2010). Even the most advanced computers serially process information yet the interconnections of neurons possess the ability to co-ordinate and process data in parallel giving perception, awareness, context and emotions seen primitively in primates but in the main unique to humans (Kunio, 2010). To make a decision the individual needs sensory or external information provided by centres in the cortex. The cortex, in humans, is larger than other mammals and has an advanced ability of interpreting incoming data (Frith and Frith, 2011). The cortex is particularly important in the interpretation of visual and sensory data that allows the host to make sense of social interactions. The ability to understand and appreciate the needs of others through analysis of a variety of sensory and non sensory cues is difficult to capture experimentally due to the complexity of the phenomenon (Lee, 2008).

Covering the outer aspects of the brain the cortex ranges from 1.5 to 5mm thick and is the intellectual centre of the brain (Bailey, 2013). Sometimes referred to as grey matter as the neurons in this area are unmylinated. The cortex lies superiorly to the cerebellum, pons and medulla oblongata and is divided into lobes each with a specific function (Snell, 2010). Decisions based upon sensory data gathers information from the Visual [sight], Auditory [hearing], Parietal [location of objects] and Temporal lobes [recognition of where objects are] of the cortex (McCaffrey, 2009). The wide complexity of data obtained from these lobes require processing and interpretation and with the aid of the Thalamus, Caudate and Putamen the host is able to take action based on these sensory cues. These associated centres are highly innervated by dopaminergic neurons and are closely aligned as they are associated with learning, memory, emotions, language development and threshold control or control of functions through positive feedback (Graybiel, 2005). Internal or visceral information is delivered to and directed towards the hypothalamus allowing the body to perceive the physical state through interpretation of this information in the ventromedial prefrontal

cortex termed interoception (Cameron, 2002). Together external and visceral information is interpreted and directed to a number of differing areas of the cortex and ancient centres of the brain (Hampton and O'Doherty, 2007). The dorsal prefrontal cortex gives the ability to plan (Andersen and Cui, 2009); whilst the Hippocampus combined with the prefrontal cortex promotes imagination hypothesising what may happen in the future through abstract thought (Heekeren, Marrett & Ungerleider, 2008). The basal ganglia is involved in procedural thinking and associated with repetitive actions or habit-forming events. This system is particularly influenced by experience and practice to ensure clarity of decisions or expert action that maybe performed almost subconsciously when mastered (Christoff, Ream & Gabrieli, 2004). No decision-making process would be complete without the host returning to that decision to ensure new learning or clarification that the event was successful (Shea-Brown, Gilzenrat & Cohen, 2008). The ventral stratum and the orbital frontal cortex are particularly active in this area and involved in evaluation and comparing options (Gold and Shadlen, 2007). The ventral stratum looks at how an event or a decision has value to the host, whilst the orbital frontal cortex looks at the experience as a commodity or how the action is likely to reward the host (Rolls and Grabenhorst, 2008).

Alongside the structural components of the brain there are a series of neurotransmitters that influence the decision-making process. Dopamine is involved in the 'pleasure system' and has a role in planning and problem solving (Rushworth & Behrens, 2008). Serotonin is key to the emotional state of the individual and has been implicated in the modulation of risky behaviour and quality of decisions made (Koot et al. 2012). Noradrenaline has a link to attention, concentration, subconscious thought and intuition by providing cognitive feedback that makes or modulates memory (Jepma et al. 2010). The role and function these neurotransmitters possess have great similarity and the site of production and area of function influences the decisions made or affect the mood of the individual.

This section outlines the physiological response to the decision-making process. The emotional state that is attached to a decision hard wires memory and allows the host to recall and adapt to new experiences encountered. It is these memories that are stored and called on in times where rapid decision-making is required alongside more subtle emotions such as concentration, attention, mood and motivation to explore the environment and learn from surroundings. The next section of this chapter builds on the neuroscience and explores the theoretical modelling of making a decision. It has long been the hope to be able to predict a host's response to an experience or event and the following pages attempt to explain this complex phenomenon.

Empiricist Viewpoint

Taken from the Greek word 'εμπειρικός' is the Latin translation 'empiricus' from which the words 'experience' and the closely related term 'experiment' derives (Johannes, 2009). Researchers who utilise this philosophy like to have concrete evidence to formulate theories and as a result may isolate variables to test one action against another. This following section shows how the theory of probability and quantitative techniques have been utilised to further the understanding of the decision-making process.

The Bayesian theory is applied in a number of ways and is seen by psychologists and mathematicians as a systematic way to make sense of human decision-making. Bayesian Theory assumes that if all probabilities are known to the individual the expected outcome of any action can be predicted (Bradley, 2007). For this to hold true Bayesian Theory suggests that probability relates to the frequency or the potential frequency evident in the natural world. Bayesian Theory works from four key principles believing that the individual works from a coherent set of probabilistic beliefs that comply with the laws of mathematics, for example the prediction of chance when rolling of a dice or the tossing of a coin (Thompson et al. 2001). The individual is immersed in a complete set of probabilistic beliefs and there is no uncertainty or little risk. Beliefs are based on certainty although these could be based on either subjective or objective characteristics that are understood by the individual. As evidence evolves the individual has the ability to adapt as information changes and becomes available. Finally, the individual is likely to choose an option with the highest expected utility. Expected utility is where a proposition is given weight or assigned a value based on the state of nature or scenario, in other words the individual is looking for maximum benefit from every given situation (Cerreia-Vioglio et al. 2013; Djulbegovic et al. 2012).

These principles are abstract and need further investigation to show how Bayesian theory could be applied to everyday decision-making. An example offered in the literature of how Bayesian theory mathematically predict events utilising subjective and objective information can be summed up by a formula

proposed by Hansson (2005). In this example, a way of calculating the probability of talking to a woman on a train using observational data of hair length is suggested and aptly demonstrates this principle. This example demonstrates that there are a number of probabilities known to the researcher [for the case of clarity approximations will be used rather than epidemiological accuracy]. Firstly, it can be proposed that roughly 50% of the population are female. When dealing with probability this is represented in a fraction of one so this equates to 0.50. So the probability of speaking to a woman on a train can be represented as P[W] = 0.5. Similarly speaking to a male could be represented as P[M] = 0.5. It could be argued that whilst considering hair length that a woman's hair length is likely to be longer than that of a man. For this example, let's assume that only 15% of men are likely to have hair longer than shoulder length, leaving 85% of women likely to have a longer cut. If long hair is denoted as (L) then the probability of a longer haired men could be presented as P[L/M] = 0.15 whilst women with long hair could be represented as P[L/W] = 0.85. Using the Bayesian formula this could be calculated by:

$$P[W/L] = \frac{P[L/W] \times P[W]}{P[L/W] \times P[W] + P[L/M] \times P[M]}$$

$$P[W/L] = \frac{0.85 \times 0.5}{0.85 \times 0.5 + 0.15 \times 0.5}$$

$$P[W/L] = \frac{0.425}{0.425 + 0.075}$$

$$P[W/L] = \frac{0.425}{0.5} = 0.85 = 85\%$$

It could be suggested that all things being equal there is an 85% chance that if you sit next to an individual on a train with hair over shoulder length then that individual is likely to be a woman.

Theorists utilising the Bayesian approach believe that the options we action when making a decision are performed in a non-random way. Theorists believe in two goal directed categories, normative theory that examines how decisions

should be made or their outcome (Maffei, 2012) and descriptive theorists that are more interested on how the decisions are made (Molewijk et al. 2004). In either category, variables are identified to ensure the core principles of decision-making can be statistically measured. In the early stages of decision-making research, many of the theories available followed a sequential paradigm. Dewey (1910) suggests a five phase theory starting with the felt difficulty or encountered problem. The individual moves to identify the character of the difficulty before making suggestions for possible solutions. It is at this stage that Dewey suggests that an evaluation of the solution occurs ensuring the decision is workable before acceptance prior to the action being initiated or rejection requiring the individual to further observe or investigate an event. Simon (1978) developed this concept further and condensed the five phases into three intelligence, design and choice. This model has its conceptual underpinnings in business and this is reflected in some of the terminology utilised. The first phase is categorised as intelligence and uses the military connotation of the word - seeking data or information rather than the mental capacity of the individual. Brim (1962) utilises a similar five phases to that of Dewey and adds a further stage, termed 'implementation' later in his publications. Regardless of the model structure what is common in all areas is the use of stages. It is assumed that decisions take a logical step-by-step pathway before establishing an outcome. For the individual to make a decision the sequential process always comes in the same order. This sequential ordering is particularly useful for empiricists who wish to statistically explore the likelihood of an outcome. The underlying principles of Bayesian theory that underpins sequential decision-making fails to perform efficiently in a time constrained, clinical environment. Theorists quickly realised that individuals make decisions by combining phases or working or thinking in parallel.

One of the major advocates of this non-sequential pathway was proposed by Mintzberg, Raisinghani & Théorêt (1976). Although strongly influenced by Simon these theorists redefined, refined and expanded Simon's work into a cyclical framework.

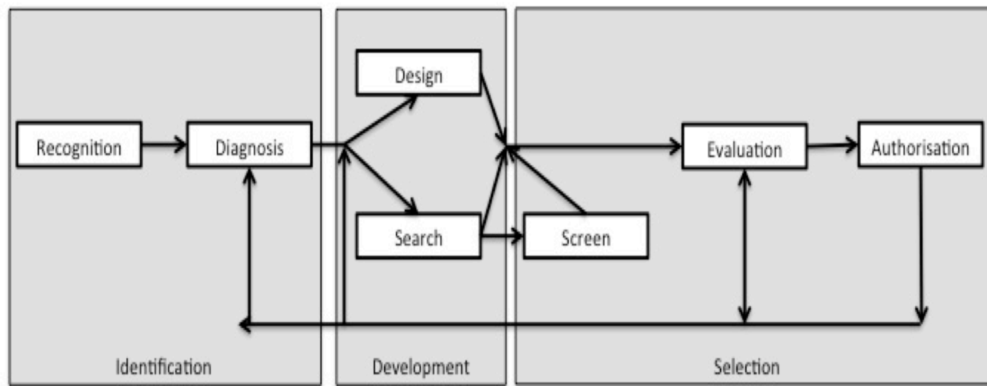


Fig 4: A three-phased decision-making model

Mintzberg, Raisinghani & Théorêt (1976) describe a three-phase model that is further divided into seven interlinked routines. The initial phase is termed identification; this is further divided into two routines, decision recognition that identifies problems and opportunities usually utilising verbal cues or data. The second routine is named diagnosis and either taps into old memories or creates new channels if the problem has not been encountered in the past. The development phase has two routines associated with it; the search routine looks for ready-made solutions encountered from the past. The design routine creates new solutions or modifies ready-made solutions. There is a direct link between the search routine in the development phase and the screen routine in the selection phase. The screen routine is only evoked in the final selection phase when the search routine presents this phase with a ready-made solution. It is the selection phase and the evaluation choice routine that allows selection of decision-making alternatives. Mintzberg and colleagues suggests that this is the phase where intuition is utilised and this is based upon judgement, bargaining and analysis. The final routine in this phase is authorization, as the name suggests approval is given to action that facilitates the decision. Although there are many areas where the sequentialist and non-sequentialist differ, one area

that there is agreement is the time spent during decision-making is normally expended at roughly the same stage of the process, during the intelligence/design phase in Simon's theory and the development phase of Mintzberg's. The speed of a decision is influenced by experience and knowledge previously obtained by the host, the more new information required the slower the decision.

The quest for a mathematical model to give clarity to the decision-making process could be described as as the Holy Grail (Harbison, 2006). The ability to predict but more importantly understand the decision-making strategies employed by humans provides insight into the workings of the human mind. These theories also informed education and training of individuals in a variety of roles. The development of care pathways and algorithms are based in the notion that if you can predict outcome then the healthcare practitioner is able to provide consistent, high quality care at all times (Feeny, 2014). The multiple pathologies presented by many clients' means that any pathway or procedure can only deal with the norm and represents a narrowly defined set of criteria (Barrett, Woolland & Wilson et al. 2009). The speed and convenience of trying to systematically compartmentalise the decision-making process detracts and, at times, overlooks the complexity of assessment and the variability of presentation seen in day–to–day practice and could ultimately deskill if the practitioner is not used to thinking 'outside the box' (Harbison, 2006). Whilst trying to objectify the subjective, it should be remembered that the premise of Bayesian Theory is probability; with all things being equal, measured or predicted a projection can be made. The sequential, empirical models presented have a tendency to become less efficient once unpredictability and time restraint are factored into the equation, common variables seen in clinical practice.

The collapsing choice theory proposed by Stibel, Dror & Ben-zeev (2009) is almost counter intuitive when first encountered. Traditional decision-making models would suggest that if you increase information load and have reduced cognitive capacity then the individual is likely to take short cuts and decision-making performance is likely to reduce and poor quality (Wang et al. 1988).

Although tested in a number of ways, the 'Monty Hall Dilemma', a conundrum that first appeared in the Marilyn vos Savant's column in the Parade magazine (1990), presents subjects with the following problem

Suppose you're on a game show, and you're given the choice of three doors: Behind one door is a car; behind the others, goats. You pick a door, say No. 1, and the host, who knows what's behind the other doors, opens another door, say No. 3, which has a goat. He then says to you, 'Do you want to pick door No. 2?' Is it to your advantage to take the switch? (p.15)

Intuitively, subjects stick with their original choice stating a 50:50 probability of success. The correct answer would be to switch door as it would increase the probability of winning and this is easily explained using Bayesian Theory. Collapsing choice theory suggests that reasoning is affected by the fear of making the wrong choice, sometimes termed the theory of regret (Gilovich & Medivec, 1995), removing regret alongside an increasing working memory capacity forces the individual to reduce the number of choices available to them and hence increases the probability of making a good decision (Dror, 2007). This is an interesting concept from a healthcare perspective as decisions may be hampered or even irrational as a result of fearing a negative outcome in practice, for example aggressively managing a fever in an attempt to reduce a febrile convulsion.

Prospect theory originally developed to explain the irrational buying powers of consumers explores the concept of unpredictability in human decision-making and gives context to the irrationality seen in Stibel's theory. Conceived by Kahneman & Tversky (1979) following thirty years of adaptation, prospect theory provides an alternative to the more classical decision-making theories such as Expected and Subjective Utility Theory (Cerreia-Vioglio et al. 2013). These theories work from the premise that individuals are motivated by self-interest and on whole, think and act rationally. The rationality of utility theory is based on the ability of the individual to consistently update beliefs and have the ability to subjectively assign and manage probability to each outcome (Bradley,

2007). Prospect Theory explores the individual's attitude towards risk with the suggestion that reactions to risk are inherently biased and irrational (Glöckner & Pachur, 2012). It is suggested that there is general risk aversion when the individual feels that they are likely to gain from a decision. What is interesting from a healthcare perspective is the greater the likelihood of loss; the more bold and risk seeking the behaviour (Attema et al. 2013). It is as if the individual focuses on the problem (framing) rather than the risk when events are going well. This makes the individual more likely to risk seek and gamble (Verma, Razak & Detsky, 2014). Risk seeking differs from one individual to another and is controlled by the emotion centre, the amygdala and controlled by the frontal lobe. What is interesting from a healthcare perspective is that as outcomes deteriorate the individual could, according to the prospect theory, resort to ever more irrational decisions to resolve a negative outcome.

The next section in this chapter looks at a naturalistic paradigm. These theorists try to explore the complexity of the decision-making process rather than manipulating the environment.

Naturalistic Decision-Making

In an attempt to get to the core principles researchers naturally controlled environments and variables to ensure that the phenomenon under investigation truly relates and equates to the way that subject thinks. Animal studies were based on reward or punishment to create a strictly controlled situation to ensure that the subject's response could be statistically calculated (Dayan and Daw, 2008). Alternatively, when fully critiqued a large number of human studies are based on a convenience sample primarily consisting of inexperienced undergraduates or participants taken out of their natural environment and asked to consider a variety of tasks in isolation and out of the normal context of their daily activities (Mellers, Schwartz & Cooke, 1998).

Child health students develop their clinical decision-making strategies during their three-year nurse education programme having little control over the clinical environment or the individual/mentor who influences, guides and ultimately assess their decision-making performance in clinical practice. Student nurses, particularly in the early stages of the nurse education programme, are directed rather than proactive in their actions. This is a dilemma not unique to healthcare professionals and a large body of research has developed looking at individuals who work in dynamic environments with ill-defined tasks (Starcke & Brand, 2012). Military command and control, pilots, fire fighters alongside healthcare professionals all make decisions with constraints on time. The effects of the decisions they make may have consequences for the care or safety of their client or even their own personal safety (Simpson, 2001). In real world situations it becomes clear that individuals fail to follow the classical mathematical models devised using standard quantitative analytical tools such as axioms of sequential and non-sequential pathways, elimination by aspects or Bayesian statistics (Bradley, 2007; Aliev, Pedrycz & Huseynov, 2012).

During the eighties, a strand of research moved away from exploring deviations from optimum performance based on the analysis of a single stimulus to investigating decision-making strategies under time and pressure constraints, in

particular examining how individuals react and experience these events. To this point, it was perceived that individuals utilised complex decision trees whilst constantly evaluating their performance against an internalised set of guiding norms constantly searching for the optimum solution to the problem they encountered (Greicy and Crossetti, 2012). Training methods embraced these guiding principles of the time and individuals working in highly charged environments were educated appropriately. A fundamental review of this decision-making training policy came to prominence in 1988 when the USS Vincennes Aegis cruiser destroyed a civilian commercial airliner, with naval personnel wrongly mistaking the aeroplane as a hostile target (Elstein, 2001). It became clear that methods and understanding more suited to rapid-fire decision-making were required and a new community of decision-making researchers evolved. Research focused on a new concept titled Naturalistic Decision-making [NDM]. This community of researchers described themselves as scientists interested in how humans make sense of the complex world they find themselves in. Early research demonstrated that when under pressure the experienced practitioner is more likely to utilise intuition rather than analytical strategies (Simpson, 2001). One method of naturalistic decision-making came to prominence although many other methods in this category follow similar philosophical underpinnings. Recognition Primed Decision [RPD] offers an explanation of how intuition is used in a highly charged and pressurised environment proposing that the individual formulates subconscious and conscious estimation of the options available and evaluates these against past experience. Subconsciously, the individual categorises and adds value to the incidents experienced as part of their employment or daily living. These are assembled into a repertoire of patterns allowing a comparison of the current event to be matched and compared with patterns that have been learnt (Klein and Klinger, 1991). Where no pattern exists greater information is required, but where a pattern exists it is compared for similarities and a plausible goal and outcome is formulated. Once a decision is made a second process of mental simulation occurs when the individual runs through the decision ensuring that they feel comfortable with the chosen pattern and the subsequent action to be taken (Klein, 2008). In essence, the individual is not looking at a comparison of

maximum or minimum choices to compare and contrast against but looking for a best fit and is termed 'satisficing' because the problem or solution is a best fit or the first workable option in a pressurised time constrained environment (Misuraca and Teuscher, 2013). Misuracia & Teuscher proposed a contrasting style of decision-making based on differing ends of a continuum. Whereas the satisficer adjusts cognitive effort to reflect the complexity and limits of time evident in a clinical decision (Todd and Gigerenzer, 2000). An opposing characteristic would be an individual who considers all options, whilst seeking more information and unaware of time constraints, this is termed a "maximizer" (Schwartz et al. 2002). Interestingly, it is proposed that under pressure the subject may not search for the gold standard option as this perfect solution may be too time consuming and not beneficial to the host.

Fig 5: Satisficer – Maximizer

Pattern recognition is fast and intuitive as the host is not consciously aware of the decision until it is computed through to the slow and deliberative process of mental simulation. Simulation allows the host to play through the decision and compare it to previous experience, knowledge and expected risk allowing minor adaption to occur (Nemeth and Klein, 2010).

Bryant (2002) suggests that the pattern recognition phase of naturalistic decision-making entails three distinct phases, a 'search rule' where cues within the information currently available to or experienced by the host is matched against the repertoire of patterns held in memory. A 'stopping' rule where the host finds a match and presents this as a best matched option. The decision-making process is then moved to conscious awareness where the host develops a speculative framework acting as a scaffold to assist the individual in finding a

solution to a problem. This guiding framework is termed heuristics and assists the host to make minor adaptations whilst becoming familiar with the action or decision made (Aliferis and Miller, 1995). It is at this stage that satisficing occurs and the action is initiated. Rasmussen, Pejtersen & Schmidt (1990) complements this theoretical framework by exploring the relationship between skills based, rule based and knowledge based decision-making in his theory Cognitive Work Analysis. It differs from recognition-primed decision-making in the manner in which it explores the decision-making process. The concept of recognised primed decisions focuses mainly on the learnt behaviour and as such explains how the expert makes a quick and effective decision based on pattern recognition (Ramet, Korppi & Hallman, 2011). Rasmussen provides a framework that explains the decision-making process employed by an inexperienced practitioner and postulates the coping strategies utilised by the expert when encountering unfamiliar events (Rasmussen, Pejtersen & Goodstein, 1994). He purports that decision-making is built on experience and effort, proposing that the neophyte is likely to think in a linear fashion in a similar way a small child might climb stairs when first mobile (Jenkins et al. 2009b). To get a decision actioned, the neophyte needs to climb one step at a time to accomplish their goal. Inexperience or lack of training in an area will require the individual to seek and accumulate more information/knowledge to continue up the stairs and so the decision-making process is likely to be slow and less accurate. Alternatively, the expert practitioner quickly recognised patterns or procedures that needs to be initiated and are able to take shortcuts by jumping two or three steps, termed 'shunts', hence ensuring a speedy decision-making resolution (Jenkins et al. 2009a).

Bate et al (2012) attempts to apply the naturalistic paradigm into clinical practice. For an effective clinical decision the individual utilises two differing models that complement each other - The Dual Process Theory and the Conscious Competence Model. Philosophically similar to the Recognition Prime Decision Theory, Croskerry (2009b) postulates that there is a fast, intuitive, rapid response system that works from mental maps and guiding heuristics, termed system 1 and a careful, rational, analytic system that contemplates a

decision, termed system 2. System 1 is a preferred option when decisions are sought and Croskerry suggests that this can be at times detrimental to the quality of the decision made. This is termed 'dysrationalia override' where despite information to the contrary the individual resorts to the heuristical frameworks of system 1 and fails to recognise the differences in their current experience (Croskerry, 2009a). It is suggested that a good experienced decision maker would take a step back especially if the action stems from system 1 and needs re-evaluate or 'calibrate' before implementation to ensure an effective outcome (Croskerry, 2002). One area that is interesting from a clinical decision-making perspective is the way Croskerry demonstrates how emotions, such as stress, fear and bias influence the decision-making process. As can be seen in figure 6, it is reasonably easy for the uninitiated or the expert practitioner to make strange decisions if they do not calibrate when using system 1.

Bias	Definition
Anchoring Bias	Undue emphasis is given to an early salient feature
Ascertainment Bias	Thinking shaped by prior expectation
Bandwagon effect	"We do it this way here no matter what anyone says!" - Reluctance to change
Search Satisficing	Having found one diagnosis or problem other co-existing problems are not looked for or found.
Blind spot bias	Other people are susceptible to these biases but I am not. This could be summed up as ' don't know what they don't know'

This is selection from a larger list offered by Croskerry (2002) or summarised in Bate at al's (2012) article "How clinical decisions are made"

Fig 6: How clinical decisions are made

The origins of the conscious competence model are a little vague although they can be traced to a training document written by an employee of the Gordon Training International, a corporate training consultancy in the United States (http://www.gordontraining.com). It outlines four stages of skills learning and is particularly important because it links neatly to the issues of conscious and unconscious awareness during the decision-making process. Unconscious

incompetent is a term used when an individual has a poor knowledge base yet fails to realise this deficit. An individual residing in the conscious incompetence stage still has a poor knowledge database but realises their inadequacies. If placed in the conscious competence stage the individual has the knowledge but finds it difficult to communicate, teach or pass on this knowledge to other whilst the unconscious competent practitioner is knowledgeable, highly competent and the task comes as second nature. When this criteria is applied to the Dual Process Theory it can be seen that those individuals deemed unconscious incompetent would have difficulty calibrating and are more prone to making errors being centred in system 1 (Process Coaching Center, 2013). They would be unaware of their deficiencies in other words "they don't know what they don't know" similar to the blind spot bias.

Evans (2006) developed the Heuristic Analytical Model. Structured as a two-phase theory, the heuristic phase provides a selective representation of the problem encountered but embraces bias suggesting that the individual includes or omits bias throughout the decision-making process (Evans, Sharp & Shaw, 2012). Rather than satisficing, Evans suggests that the individual derive inferences or choices based upon the heuristic principles but they have 'bounded reality', suggesting that they are not able to make optimum choices in a time-constrained environment but the analytical phase formulates the building of mental maps that allows mental simulation to forecast future events and think in the abstract but these models are influenced by semantic and epistemic factors such as beliefs and the individual's knowledge base (Evans and Over 2004). Evans, Over & Handley (2003) suggest three main principles that represent the Heuristic Analytical Model. The Singularity Principle suggests the individual is only able to consider one hypothetical problem or perform one mental simulation at a time. Relevance Principle is where the most plausible option is chosen. In the satisficing principle the mental simulations are evaluated against current goals and accepted if satisfactory.

Festinger (1962) describes a characteristic of decision-making that has been felt by all at some stage of their life. Cognitive dissonance or internalised conflict

conceptually describes tension between two opposing thoughts that occur at the same time. This is particularly important from a healthcare perspective, as the participant will constantly encounter new choices, experiences or information. Student nurses will witness poor care or be asked to perform a task they feel uncomfortable to implement. Regardless of the action it contravenes our guiding principles and brings on emotions of foolishness, immorality or even affects self-image if the dissonance is not resolved. Figure 7 outlines the main concepts of the Cognitive Dissonance Theory (Festinger, 1957)

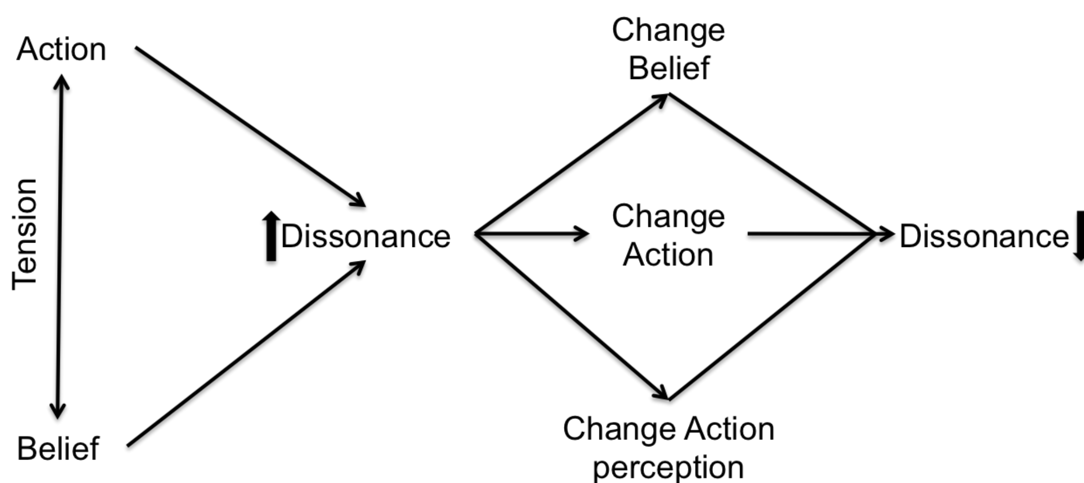


Fig 7: Cognitive Dissonance Theory

When there are tensions between action and personal belief the individual tries to reduce dissonance. The ease at which an individual is able to change beliefs is dependent on how important that belief is held. It can be almost counter intuitive to alter beliefs and in most instances the easier option is to allow an action to influence or manipulate belief – 'action influencing opinion'. By rationalising your perception of the action the individual ultimately changes belief and reduces dissonance.

Naturalistic decision-making theories suffer from detractors in much the same way as qualitative researchers. Theories are not seen as scientific, reliable and reproducible studying a limited range of contexts (Kerstholt and Ayton, 2001). Any experiment devised is likely to be devoid of reality and the stressors of clinical practice and so the theories difficult to quantitatively test. The nature of

the decision-making environment encountered by health care professionals means that controlling variables or reproducing previous experiences is difficult as the situation or environment is likely to consist of:

- Ill-structured problems
- Uncertain, dynamic environments
- Shifting, uncertain or complicated goals
- Multiple events occurring simultaneously
- Time constraints
- High stakes
- Multiple players

The situation or experience encountered by a healthcare professional is transient, fleeting and as such can never be exactly reproduced to give the sort of statistical reliability sought in hard science.

This chapter gives an account of the current thinking linked to the decision making process. The literature, in some respects, segments decision-making into one of the three camps discussed although in reality the decision-making process is an amalgam of elements from all the theories presented.

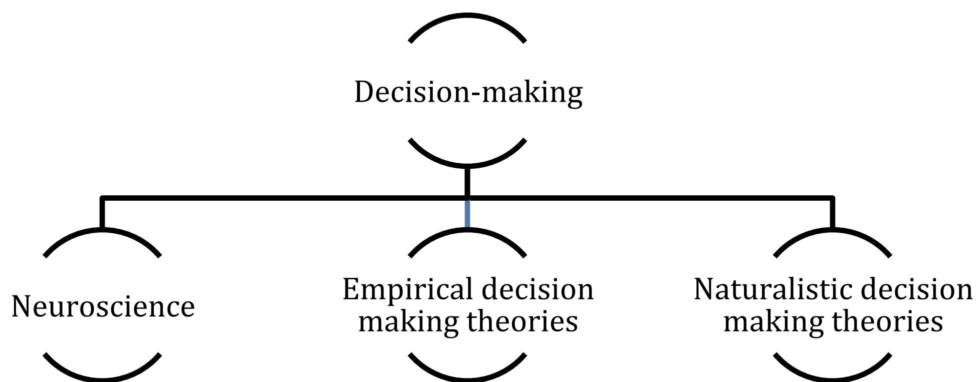


Fig 8: Categorising the decision-making literature

Experience and knowledge are cornerstones in the development of an expert decision-maker. Becoming an expert decision maker requires time, exposure, and familiarity with environment, procedures and client group. The investigation of how the participant understands, relates, assimilates these concepts are essential elements of this study. The ability to make a decision requires the participant to make a choice. Choice is dependent on the individual having the cognitive ability to make the decision, has a full understanding of the implications of any actions and the individual has sufficient time to make the choice. These are areas that will be explored through data collection and analysis as the participant journeys through the nurse education programme.

Having read the theory the researcher is interested to see whether these key concepts are evident in the participant's understanding of their decision-making maturation during the three years of their training. The following section will outline the development of the research proposal and look at the chronological evolution of the study from its early phases through to the completed project.

Chapter 3: Methodology

Proposal Development and the redefinition of the research statement

Having decided on a research statement, the next consideration is the methodology employed. The literature available on decision-making is dominated by a quantitative slant with variables and hypotheses tested in controlled environments or studied through animal studies to propose a theory or model of decision-making but little attention has been given to the student nurse's thoughts, feelings or understanding of the decision-making process as they progress through the nurse education programme. Despite initially having no preconceived feelings or preference about the brand of research favoured for this study, it quickly became apparent, to the researcher, that moving away from the traditional mechanisms of controlling variables seen in the quantitative literature and looking at the individuals' experience of decision-making more fully addresses the research question and moves the researcher towards more qualitative methodologies. Quantitative methodologies are highly structured to ensure validity, reliability and replication (Green & Thorogood, 2009). This involves the quantification of variation, the prediction of causal relationships and the in-depth understanding of characteristics of the population under investigation (Burcka, 2005). The researcher was keen to explore the phenomena of decision-making using a more iterative and flexible methodology that provides an insight into the participant's decision-making experiences. This was the starting point for further investigations into the qualitative methodologies available and how they would meet the research statement set for this project. This section explores how the project evolved during the preliminary stages of the research, how differing qualitative methodologies were considered before finally settling on ethnography as a guiding framework for this study.

The researcher's initial thought was the close observation of qualified child health nurses interacting and managing a child with a fever in their natural setting – the clinical environment. The researcher was particularly interested in how clinical decisions were made and what factors influenced the way the child

health nurse, assimilated, analysed and interrupt the physiological, observed and intuitive information gained during a nursing interaction. Grounded Theory was considered for this project as it gave the child health practitioner the opportunity to discuss the care they prescribed and provide rationale for their action and was the methodology of choice when making the initial application for PhD studies. Fever management was chosen because it was a clearly defined boundary for data collection allowing researcher and practitioner to focus on a specific task, illuminating the full complexity of nursing interaction during the research process. Ethical difficulties and logistical problems associated with clinical access necessitated a different approach. In retrospect, this set back was fortuitous and the project may have been compromised because the healthcare service endured major restructuring with multiple changes in personnel who were important gatekeepers for clinical access. So although disappointing at the time, this re-evaluation of objectives gave an opportunity to explore other areas of interest closer to the researcher's day-to-day role.

A second research proposal was devised substituting qualified child health nurses with child health student nurses. This proposal [although never submitted] maintained the ethos of the original proposal but changed the sample under investigation to student nurses. This raised a number of issues and it was felt that the focus of the research would have to shift because the researcher would have similar problems of clinical access. At the time, the Ethics Committee responsible for the NHS Trust involved in the research project imposed significant safeguards during the observational phase of data collection in the clinical environment. The researcher wished to witness the measurement of a child's temperature using a tympanic membrane thermometer and the non-participant observation of a student nurse/family interaction. In this proposal as the last, the researcher surmised that gaining ethical approval would be equally problematic as this proposal presents similar safeguarding issues as the initial proposal that was rejected.

The researcher is employed in a faculty that invests a significant amount of money developing a simulated clinical environment. Initially, it seemed feasible

to substitute clinical environment with a simulated clinical environment and explore the development of decision-making in the child health student nurse whilst still focusing on fever management. Exploring the process of decision-making would still be feasible using Grounded Theory as it could be applied to any behaviour that has an interactional focus (Goulding 2004), but the researcher felt that watching simulated practice in the place of real life events would not give sufficient depth or quality of data (Knott et al. 2012). The limited time spent by student's in an artificial simulated environment would not create the stressors and reality of practice and it would be difficult to replicate the decisions made within the clinical environment. More importantly, the researcher would need to consider that the students' decision-making strategies maybe different in the clinical environment. Data would be 'grounded' in the simulated environment rather than applicable to the clinical environment making theory generation viable but only applicable in that area. This change in mind-set was unsettling initially as all reading to this time was focused on Grounded Theory. Exploring the decision-making strategies through simulation has its attraction but the researcher was keen to examine how decision-making develops and matures from the participant's perspective.

On reflection, it appeared that a change to a sample inclusive of child health student nurses could offer additional opportunities. To this point the researcher's main thought was an exploration of clinical decision-making processes linked to a single clinical topic – fever management. Student nurses offered a new and exciting dimension to the project, rather than looking at process of making a decision, why not look at the development of clinical decision-making throughout the three years of nurse education programme. The epistemological slant of literature toward decision-making theories and models in a wide variety of applications other than directly applied to the nurse student was a strong motivator. In particular, asking child health students about key events or experiences, they encountered by the end of year progression points, that aid and assist the development of clinical decision-making up to registration. The following section explores the rationale for using an ethnological approach

for this project but there is a need to explore why the researcher dismissed other qualitative methodologies before embarking on the chosen methodology.

In no real order of preference narrative research was one of the qualitative methodologies considered. Narrative investigative approaches deconstruct an individual's perspective of their life experiences utilising a quasi-autobiographical viewpoint (Gregory, 2010). A narrative account of an individual's decision-making journey through the three years would have been an interesting project, pulling together the chronology, predicament, the conflicts and emerging context of decision-making within the confines of the nurse education programme. Narrative research would give context and insight meeting the research aims but narrowing focus as the methodology concentrates on one or two individuals and their experiences (Lindsay, 2006). Allowing the participant to tell the story provides an essence of the experience under investigation from the participant's perspective. Although real to the individual it is difficult for the researcher to move away from the subjectivity of the event (Chan, 2005). Over time, the participant recollection of the experience becomes a social, possibly a romanticised construction of reality. 'Recall distortion' is a term used to describe how the participant may base the narrative account on perceptions rather than on true fact (Sools, 2013). There is no doubt that narrative research would meet the aims of this study but the researcher is predominantly looking for cultural cohesion within the cohort and the ability of a number of participants, in similar clinical placements, to recount the factors that influenced their decision-making experiences rather than a chronicle of events.

The need to explore and understand the decision-making process whilst giving context to this common nursing skill is an important consideration when choosing Grounded Theory as a methodology. Understanding the emic perspective, the cyclic nature of data collection and analysis, plus the need for inductive and, in the later stages, deductive reasoning to build theory/new knowledge within the social constraints of practice gives a robust framework to meet the research aims set for this project (Charmaz, 2006). The interpretative view of empathetic understanding gained through a social constructive

perspective found in Strauss & Corbin (1998) approach to Grounded Theory, is suited to meeting the research aims of this project. The cyclic nature of purposive and later theoretical sampling, data collection and constant comparative analysis allows for an in-depth study of the decision-making process leading to theory development (Charmaz, 2006). The drive for saturation and the need to develop structure out of chaos fits well with the researcher's aims for the study. Indeed the research statement could easily have been met using a Grounded Theory approach but the cultural nuance and common participant goals may be lost as the researcher delves into code, reconstructs to saturation whilst formulating a theoretical model of the decision-making experience. Although grounded in the thoughts and feelings of the participant, observing decision-making within a simulated clinical environment would not capture the evolution of the decision-making process or the lived experience of the participant as they mature and interact with peers and the multiprofessional team in the highly stressed, time limited ward environment.

Ethnography and phenomenology both share a similar ethos in that the researcher wishes to understand the thoughts, feelings and perceptions of the participants employed in the study. Where they fundamentally diverge is in the perspective taken to gain this understanding. Phenomenology explores the essence of an experience, it is a methodology that identifies specifics of an event or situation, investigating how an actor derives meaning from that experience with the phenomenologist describing this from a first person viewpoint (Gearing, 2004). The fundamental principle is that no matter how a person perceives things to be, or regardless of how skewed their perceptions may be, it is their reality (Moran, 2012). The phenomenologist will focus on describing how participants relate to a common experience in this case decision-making. This has interesting connotations as the research aims of this project could easily be met with this methodology. This phenomenological perspective is individualistic looking for personal perceptions and initially there was an attraction in replicating the work of Standing (2007) albeit using a cohesive cohort rather than a sample containing students from a variety of branches. This methodology was discounted on the basis that the researcher was keen to gain the cultural

identity of being a first, second and third year child health student nurse as much as the individual's perspective of the decision-making process they employ.

The methodologies discussed would comfortably meet the research objectives set out by this investigator. The researcher felt that ethnography offers a more eclectic, collective perspective examining the cultural and social development of the area of interest (Speziale and Carpenter, 2007). The ability to look at how a selection of participants view their development over a set period of time is a useful dataset for improving nurse education in this area for future cohorts. This topic will be explored more fully in following sections.

Choosing Ethnography

Ethnography appears to be an ideal methodology allowing the researcher to gain an understanding of the development and maturation of clinical decision-making through observation and self-report. The following section will look at the historical roots of the methodology and how it has evolved in line with sociological changes and it's application into ever wider and more diverse environments, before applying this methodology into this research project.

If viewed from a purely anthropological perspective the choice of ethnography would be seen as an unusual proposition. Seminal works by Malinowski (1922) and Mead (1943) sought to understand practices and norms in cultures alien to the western society of the time. Biressi & Nunn (2013) propose that if the ethnographer wishes to understand culture, there is a need to investigate and interpret the 'ways of life' of the individual and gain an in-depth appreciation on the behaviour and interactions within this cultural group and how they are constructed and transmitted through the generations. Hammersley & Atkinson (2007) take this a stage further and suggest that to gain a complex understanding of society and the actors within that population, there is a need for an ethnographer to truly be immersed. Closely associating themselves with the population under investigation, over an extended period of time, the ethnographer is allowed to become culturally sensitive, by viewing the structure of society objectively, observing and interpreting the way actors regard one another. The ethnographer illuminates the commonplace and facilitates a true understanding of how the actors view themselves (O'Reilly, 2009). Malinowski spent a considerable length of time (4 years) on a New Guinea archipelago called the Trobriand Islands (Malinowski, 1922). Malinowski vigorously emphasized the importance of immersing oneself deeply studying everyday life in all its mundane aspects. Thus for him it was not enough to simply record what tribal members said about their religious beliefs, sexual practices, marriage customs, or trade relationships – it was important to Malinowski to document how these factors were applied in every day life. He was particularly interested in the individual's role in society or as described in his field notes and utilising the

language of the time investigating the 'natives point of view' (Malinowski, 1989). Immersion was an approached adopted by Margaret Mead in her study of the indigenous population of Samoa (Mead, 1943) and alongside a number of like minded anthropologists sowed the embryological seeds of a branch of anthropology termed functionalism. Functionalism believes that the whole is the sum of its parts, likening society to the human body with cells combining role and functions into a collective of tissue, organs and systems that ultimately function as a whole (Nath, 2013). Boas (1922) differed philosophically with this stance and proposed that cultural differences stemmed from natural adaptation to the environment and that there is no superior culture but the fundamental nature of culture is that it is fit for purpose and individual and collective behaviour is a learnt cultural action. In his later work, Boas became influenced by the work of Darwin (Naffine, 2009) and was heavily criticised for what has been termed 'armchair anthropology' and the use of poorly trained researchers in the development of a further branch of anthropology termed 'Evolutionism' due to a lack of immersion (Stocking, 1974). The work of Malinowski and Boas can be readily contrasted to the structuralism of Émile Durkheim (1964), whilst the structural-functionalism of Radcliffe-Brown bridges the two camps of functionalism and evolutionism (Hughes, Martin & Sharrock, 2003). Both place more emphasis on society as a whole, and the ways that its institutions serve and maintain it. In all respects and regardless of the pathway chosen by the researcher experiencing, enquiring and examining the society in-depth to gain a first person account is at the heart of all ethnographical approaches (Atkinson, 2001).

There was a consensus in early ethnographic studies, that the only means to understand the culture under investigation was to go 'native' with the suggestion that the ethnographer should be 'cultural strangers' (Holloway, 2005). This is of particular significance to this researcher as the population under investigation in this study could not be defined as 'cultural strangers' and there is little opportunity to be fully immersed in the culture under review due to the researcher's relationship with the participants and the ethical issues surrounding the use of covert observation within education and health settings

(Roberts, 2009). The Department of Sociology at the University of Chicago in the 1920's and 30's facilitated a change of emphasis away from studying far away exotic cultures, societal norms and mores (Chicago University, 2013). Moving the ethnographer from a macroenthnological perspective to refocusing the ethnographic spotlight to sub cultures or distinct groups familiar to the researcher through a microenthnographic approach (Fetterman, 2010). The move to urban sociology/anthropology and the examination of street culture familiar to the researcher gave in-depth insight into contemporary society (Bulmer, 1984). This set the embryologic foundations for the formation of the symbolic interactionism (Harvey, 1987) where the individual's understanding of what they encounter is derived sometimes unconsciously through interaction and being culturally embedded in a social context that comes to light whilst the individual is required to act upon problems as they encounter them (Blumer 1986). The relationship between ethnography and symbolic interactionism is symbiotic. The manner in which both participant and researcher learns from each other during the research process assists the development of new knowledge from a typically overlooked problem (Rock, 2001). The participant's ability to make decisions is based upon knowledge, environment and interactions utilising tried and tested methods yet structuring these through a relatively simple analytical cycle. The full and enhanced portrayal of events [description], recognising patterns and themes [Analysis] and bringing order to the disordered to gain meaning [Interpretation] is anything but simple (Wolcott, 2001).

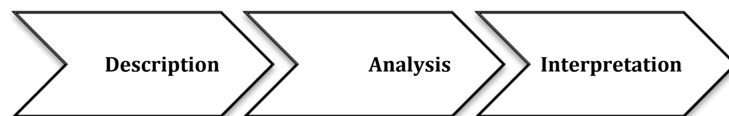


Fig 9: Simplistic Decision-making model

Having made a decision on the methodology of choice, the next stage is to look at what strand of ethnography to use. Ethnography is criticised as being not a true methodology as it has changed and adapted during time and may be regarded as a method rather than a systematic process of research (Holloway and Todre, 2010). In the Handbook of Ethnography, edited by Atkinson et al. (2001), the

editors present a myriad of methodological pathways an Ethnographer can apply to this study. On fuller examination, it appears that the nature of the data collected, the trends and the developing themes gained on analysis, suggests that this research could easily fall into or bridge two camps of ethnography. Descriptive ethnography uncovers patterns, themes and categories to understand the individuals' appreciation and perception of events that surround them (Flick, 2009). Critical ethnography utilises similar methods as the descriptive version but describes to change events and so has an inherently more political or opinionated stance to the methodology (Green and Thorogood, 2009).

As previously mentioned in this section the researcher has a significant issue with immersion and although non-participant observation has been employed it is not the primary source of data. The ability to document, describe & explain the maturation of decision-making and clinical reasoning is suited to a modification and extension of ethnographical methodology principle. Leininger (1985) terms this amalgam of ethnographic ideologies 'ethnonursing or ethnoscience' depending on its application and can be explained as a rigorous and systematic way of interpreting the participant's perceptions and knowledge of their current situation. The ethnographic process of purposive [selective], criterion based and non probabilistic cyclic sampling, repetitive data collection [iterative] and constant comparative reasoned [interpretive] data analysis of classical ethnography remains (Le Compte and Preissle, 1997), but Leininger's interpretation differs by appreciating the environmental boundaries and context of researching health care and healthcare practitioners. Rather than full immersion, Leininger & McFarland (2002) appreciates that the time spent with participants is likely to be limited to the span of duty or the nature of the interactions that they may be undertaking. It would be ethically unsound to witness or collect data that is deemed outside the parameters of the research question (Tingle and Cribb, 2007). With broad general non-participant observation of the clinical environment becoming more difficult to justify to ethic committees due to the lack of participant control and issues of privacy (Lachman, 2006). Ethnonursing takes into account the familiarity of the researcher to the

language, terminology, setting and people under study (Leininger, 1991). The lack of detachment and the cultural sensitivity resulting from this familiarity to the sample and topic area under investigation is seen as advantageous by Leininger but would be of concern to traditional ethnographers (Hoey, 2012). The ability to view the known world objectively to gain new learning from the familiar is a concept that the researcher needs to come to term with early in the study and clearly justify to the reader. The pursuit of the thoughts, emotions, and perceptions and its changing cultural context over time provides a wealth of detailed, rich and thorough descriptions termed 'thick description' (Geertz, 1973). Defining the natural setting and providing cultural context allows the researcher to formulate a schema for conventional and tacit knowledge (Moule and Goodman, 2009) during the decision-making process or as Geertz eloquently describes it as a construction of a 'web of meaning'. This gives the researcher an opportunity to look for patterns and traits that provide sufficient information to allow judgement on contextual similarity through the three years of the participant's nurse education (Holloway and Todre, 2010). Denzin (1989a) outlines the principles of first and second order concepts whereby a common sense perspective is used in the first order and an abstract building of analytical concepts formulated by the researcher are derived from the data in the second order. In all cases, the researcher must be cognisant of their influence on the study to reduce coding error or bias. Alvesson (2011) refers to bias as a conscious or sub-conscious skewing of the information, while as Holloway and Wheeler (2006) take a stronger stance describing bias as a

"A distortion or error in the data collection, analysis or interpretation which has its origins in strongly held values or feelings of the researcher or an individual participant." [Page 284]

The familiarity of the researcher to syntax saves time but caution is required as the researcher's interpretation of the word or phrase may not be that of the participant, similarly it would be easy for the researcher to misinterpret actions and analyse them from their own personal, professional or clinical perspectives.

Researcher bias will be addressed throughout the analysis and discussion sections of this dissertation to include a discussion on reflexion. This is deemed particularly important, as it would be difficult to completely divorce oneself from past experiences and opinions on the topic. Ensuring complete transparency will allow the reader to make a conclusion on whether the analysis and interpretation of the participant's actions and feelings are accurately portrayed.

Critical Ethnography

Critical Ethnography is an ever-changing methodological framework that shares a number of principles with its conventional cousin. The core rules of ethnography such as qualitative analysis, the ethos of symbolic interactionism and the interpretation of cultural meaning fully grounded in the data forms the backbone of critical as much as conventional ethnography (Rock, 2001). By questioning how decision-making develops and matures from the participant's perspective, it ascribes meaning to the events and actions they encounter as they develop relationships, interact with their surroundings and grow as individuals (Blumer, 1986, Lofland et al, 2006). As ethnography developed, the issue of subjectivity and distortion reduction became the adopted mantra of the positivist movement. The need to control, predict and be objective rather than subjective was later superseded by the post positivist movement that embraced the subjective human experience. Critical ethnography falls within this post positivist camp but has a political edge in that the researcher, utilising this approach, critically examines and investigates the glue or cohesive forces that hold together the social fabric that is under investigation rather than looking at the fabric as a whole (Madison, 2012). This means that the researcher is not so much interested in the "What is?" seen in conventional ethnography but looks for the "What could be" in everyday encounters portrayed as either too common place to investigate or too difficult to change or challenge. Frequently compared to critical theory and its Marxist principles, critical ethnography explores the repressed alternates by empowering the participant to share beliefs and provide a medium of expressing those beliefs termed "Symbolic Power" (Yi & Yih, 2004). In fact, critical ethnography has a softer edge than that portrayed in critical theory with the methodology being more about a reflective, reflexive process that gives a voice to those who would either not be asked or feel repressed. It is a critique of the views of the participant sharing a cultural journey rather than a criticism of the locus of power.

Writers such as Thomas (1993) and Madison (2012) outline the use of critical ethnography as a mechanism of using knowledge as a medium of social change. The positivist paradigm of objectivity and generalisation, it has been suggested,

results in the ideological domestication of the qualitative researcher where there has been a loss of critical consciousness as a result of methodological restraint and a loss of the "big picture" with the researcher navel gazing through methodological "rose tinted" spectacles rather than truly examining principles that hold back participants (Dove & Muir-Cochrane, 2014). Seen also in action research, the concept of emancipation is a key tool in the critical ethnographer's toolbox. Promoted, as a process of loosening the social shackles, the ethos embedded in critical ethnography promotes the views, thoughts and feelings of the silent minority. Emancipation gives both researcher and participant a structural framework to explore possibilities or promote the opinions of those individuals who views possibly would not be sought (Smith et al. 2014). This Marxist ideology of balancing the emancipation and repression of groups has been further enhanced to ensure that there is a true understanding or more importantly preventing misunderstanding, termed hermeneutics, so that positive action can be taken to change the world of the participant for the better, grounded in data or at least ensuring that their plight is recognised (Bolis, Brunoro & Sznelwar, 2012).

Critical ethnography is more than looking for the link that emancipates meaning but searches for the key ingredients that when experienced, assimilated and analysed, albeit subconsciously by the participant, to ascribe meaning to the experienced event. The political ideology so often seen whilst reading literature on this subject is sometimes off putting and fails to truly show the balance between the emancipatory principles of the methodology and the hermeneutic ethos that is so necessary to elicit change. Initially, this research wished to tell the story, or a conventional ethnological picture, of factors that influence the development of decision-making in child health student nurses experiencing similar academic and clinical experiences during the three years of their nurse education programme. It quickly became clear that the literature rarely looked at the needs of the participants but saw the needs of the profession or the need to educate, train and deliver a safe and competent practitioner at the end of three-year programme. Although an important objective of any nurse education programme, a curriculum based upon perceived expert opinion without

consulting the user is likely to meet institutional/professional needs rather than truly embracing the developmental needs of the participants. It was this motivating factor that drove the researcher to choose this methodology over the conventional version of ethnography. Critical ethnography provides the philosophical underpinning to allow the researcher to explore the key factors that influence the maturation of a decision-maker. The factors that are commonly experienced by this cultural group demonstrate that once recognised, these factors can enhance the training and education of a critical decision-maker.

Weaknesses of the methodology

The previous section of this chapter outlined the advantages of ethnography in gaining a better in-depth understanding of the phenomena under investigation. Providing cultural insights into what may generally be perceived as understood and giving the researcher the 'how & why' of human behaviour (Walker, 2011). Like all methodologies, ethnography has a number of weaknesses in the way data is collected and analysed. Raising an awareness of these deficiencies ensures that these weaknesses do not creep into the researcher's work whilst processing data and the subsequent write up (Fetterman, 2010). Observation, interviewing, the longitudinal nature of the research alongside the quantity of transcription and analysis of the written word is complex and time consuming and seen as real weakness of the ethnographic process (Roberts, 2009). As an ethnographer, it is important that there is an early realisation that the study will be nonreplicable (Johnson, 2007). The ethnographic process is a snap shot in time, it's the perceptions of the participant at that instant and it is a difficult to recreate the moment, it is lost in time (Burnard, 1996). Linked to this lack of replicability is the care required by the ethnographer to refrain from generalisations during write-up. The themes and categories that arise from data analysis may be compared with similar findings published in the literature but can never be assumed to be directly applicable to other situations (Holloway & Todre, 2010). Claims can only be made if grounded in the data and not directly compared with findings in similar research projects. Anthropology has been battling with the whole concept of being a 'cultural stranger' in contemporary times. This is possibly easier when dealing with a culture you have not encountered before or have little understanding of its structure. This becomes an issue when the population researched is familiar to the researcher. The limited time spent with participants means that the concept of 'going native' is unlikely in this project but what is of significance when researching familiar topics or research subjects is one of 'over rapport' (O'Reilly, 2009). The inability to distance himself or herself from the research subject may result in the researcher looking for the obvious rather than gaining new insight or a fresh perspective on a commonly encountered occurrence (McGarry, 2007). This was

certainly true in the early stages of data analysis where there appeared to little or no emerging themes evident in the transcript until true immersion was achieved. As an ethnographer, the researcher generally works in isolation and is the principle instrument of data collection (Brewer, 2000). The boundaries of ethnography have evolved, so the researcher's role has morphed from an 'impersonal conduit' acknowledged in the ethnological write-up as 'being there' or 'telling like it is' (Van Maanen, 1988) into a more reflexive transparent expression of the researcher's motivations or as Allen (2004) suggests being the 'interpretative lens' into the world of the participant. Caution is required as the ethnographer works with the familiar as there may be a movement into informality that may stifle the objective 'new sight' needed whilst examining an issue that the researcher is well acquainted (Gaglio, Nelson & King, 2006). Having worked with the curriculum and developed the timetable studied by the participants it would be folly to suggest that the researcher is working from a blank sheet. Any mismanagement of the rapport between researcher and participant or a blinkered approach to data analysis may result in seeing things that are not there, filling in gaps or making unwarranted claims, all of which distort the ethnographic process. Researcher bias and altered participant behaviour should be high on the researcher's agenda whilst collecting, analysing and presenting results during an ethnological study (Roller, 2012).

Sampling

A qualitative researcher samples for meaning rather than frequency being not so interested in the how many but the what or why (Munhall, 2007). The rigorous nature of quantitative research seems a distraction to most qualitative researchers and at times is frequently overlooked at their peril (David and Sutton, 2011). O'Reilly (2009) proposes that sampling should be considered at the same time as the development of the research question by the qualitative researcher. This was the first consideration for this researcher as the research proposal and sampling evolved during the early stages of the project. Any sampling technique will be a compromise between representativeness to the population and diversity and this is particularly pertinent in sampling for an ethnographic study (Kearney, 2007). Previously in this thesis, the sample chosen was referred to as a purposive, criterion-based and non probabilistic (Palys, 2009). The sample has been purposively selected and criterion-based to ensure the participants are able to fully engage with the research aims, have the ability to recount events and are able to give an account of their thoughts and feelings. It is purposive as it is targeted and looking for a homogeneous group that have specific characteristics allowing the researcher to meet the requirements of the research question or statement (Trochim, 2006). The sample is criterion-based as the selection of the sample meets the pre-determined conditions of being an enrolled child health student (Patton, 2002). A cohort of newly enrolled child health students formed the focus of this study. The study placed no exclusion criteria and students volunteered their participation by replying to an email offered following an in-class discussion on the main themes of the research. This resulted in the whole cohort of 24 students wishing to participate in the study. Sample size is always a hotly debated topic area in qualitative research ranging from 6 to 18 participants depending on the methodology chosen (Holloway, 2005; Hammersley and Atkinson, 2007; Silverman, 2007). The researcher was keen to get a homogeneous group and this was achieved through cohort identity and participants having one aim – qualification – at the end of the course. It is also clear that participants arrived on the course with differing levels of maturity and clinical experience and the researcher felt it was important to ensure that

although the group could never be truly representative of the child health student population, the sample group could capture this wide range of backgrounds and experiences (Teddlie and Yu, 2007). The researcher purposively selected a total of ten individuals. With probability sampling the researcher is able to predict that the research cohort is likely to represent the target population (Plichta, Kelvin & Munro, 2013). Purposive sampling is non-probabilistic because the researcher is seeking a particular group characteristic that would be difficult to obtain, not practical or not feasible through randomised sampling (Trochim, 2006). Although probabilistic variants of sampling are seen to be more accurate and rigorous having the ability to utilise confidence intervals (Linneman, 2011). The differences between these sampling techniques stem from the notion of chance. In probabilistic sampling every participant has same opportunity to be selected and as a result the researcher ensures, all things being equal, that the sample is large enough to accommodate and representative enough to capture the very essence of the population (Morris, 2012). In non-probabilistic sampling there is an assumption that the main characteristics of the group have been met by the researcher's criteria but it is difficult to justify sampling variability and researcher bias during this process (Silverman, 2007).

Utilising the sampling techniques outlined above resulted in a total of ten participants actively enrolled on the study. One of the total was male, four had worked in healthcare previously; three were deemed mature at enrolment being over thirty years of age, the remaining two participants were school leavers. This eclectic mix gives a blend of young and inexperienced, the more mature who had careers before applying for the nurse education programme and those who had worked as carers. These participants stayed with the study for the three years although sickness caused a slight reduction in size by one during phase 1 of the study

Ethical Considerations

The choice of participant is an important factor when undertaking ethnographic research. The researcher is looking for subjects who are articulate, good portraying their thoughts and feelings and are competent to answer the research question. The convenience of gaining access to a local cohort of child health students is obviously advantageous but a number of ethical considerations need to be addressed to ensure that the participants are willing actors in the research process rather than left with the feeling that they have been coerced or manipulated by the researcher (Clark & McCann, 2005). Student nurses would not be considered to be a vulnerable group from a research perspective (Aycock & Currie, 2013). Age, health and intellectual ability means in practice the student nurse should, with all things being equal, have the capacity to make an informed decision on participation (Bradbury-Jones & Alcock, 2010). On closer examination it is essential that all child health students be offered the same level of support as any other research subject.

One area of immediate concern addressed by the researcher, relates to the students early participation in the study. To record the maturation of decision-making required participants to be involved in the study from the first few weeks of the nurse education programme. This raised a number of ethical issues for the researcher, although altruistic reasons for being involved in the research have been recorded in other papers, it is important that the participant is clear that they will be neither advantaged or disadvantaged during the nurse education programme as a result of participation in the research project (Aycock & Currie, 2013). To promote this ideal, the researcher has not changed the timetable including the simulated events involved in the observational phases of this study and so are available to both participants and non-participants. Termed veracity, it is important that the researcher is clear, honest, open and transparent about the time and personal implications of being involved in the research project (Ridley, 2009). By providing information about research project to the cohort by a lecturer not involved in the study, it was possible to start to distinguish, to the cohort, the dual role of researcher/lecturer to the group from a third party. The researcher would be naïve to think that there would not be

role confusion on the part of the participant, but from the outset the researcher attempts to create two distinct roles, in the classroom a lecturer, at interview or during observation a researcher (King et al. 1999). In this way the participant is aware that the research is separate to the course yet closely examining aspects of the course that may influence their decision-making strategies. This does not offset the inevitable disparity between researcher and participant. This unequal power relationship may result in the participant believing adverse consequences may occur if they do not get involved in the project (Comer, 2009). During the first meeting with the student group the researcher clearly outlined the role of the project, demonstrating the aims and objectives of the study and how it will not impinge on their course, grades or professional integrity. Participants were given a comprehensive account of the research project with the researcher having the general principles of informed consent in mind throughout the meeting. It is not in this researcher's interest to attract participants who feel coerced into a study that lasts for three years. Equally the researcher wanted to make clear the difference between the research role and the teaching role as their course progresses.

The nature of qualitative research means that there is every chance that participants form a close relationship with the researcher that may result in disclosure of personal information related to their every day life or professional ability. Setting out clear guidance for the research project ensures that the principles of beneficence, non-maleficence and justice would be upheld at all times (Ridley, 2009). Withdrawal from the study is the right of all participants and an area that needs close attention by the researcher. Participants may feel reluctant to decline any approach for information and find it difficult to withdraw from data collection (Clark & McCann, 2005). In addition to the normal pathways of gaining access to participants prior to data collection such as email, the researcher also utilised the personal tutors who could act as an advocate if the participant do not feel they can approach the researcher directly. In practice this did not appear an issue and participants were very open and accommodating regarding organising interview sessions ensuring convenient appointment times for both participant and researcher. In the unlikely event

that an unsafe or negligent act is disclosed during data collection, it is important that the participants realise that the researcher would need to act upon this information in accordance with the professional guidance laid down by the Nursing, Midwifery Council (NMC, 2008). One area that the researcher was keen to portray to the participant is that of confidentiality. As an ethnographer it is important that the participant is clear that the information divulged during the intimate process of interviewing is handled sensitively (Clark & McCann, 2005). A series of codes only accessible to the researcher was devised and participants were made aware that there would be discussion about the data collected but all biographical identifiers would be removed when discussed with the research supervision team and the data would not be made available to any member of the academic child health team. The same assurances were given for the write up of the dissertation and any future publications. By ensuring the highest ethical standards for this study the researcher was able to successfully gain ethical consent through the Faculty's Research Ethics Committee whilst also gaining the consent of all cohort members allowing free choice of participants at the start of the project (Gelling, 2010).

The researcher considered using a student group from a different University, as this would give the researcher the distance needed to remedy many of the ethical and methodological weaknesses outlined earlier in this section. Two neighbouring Universities were contacted, the All Wales curriculum for pre-registration nursing means that the learning outcomes are similar and familiar to the researcher but the simulated experience, at the time of this research project, was not as well developed in the other faculties. This meant that a full simulation, seen in this study, would not be possible diminishing the scope of the research project. The Observational phase of the study allows the researcher to triangulate against data obtained through the interview process and document analysis enhancing the rigor of the project and is an important aspect of the ethnographic process (Adami & Kiger, 2005). The ethnographic snap shot is institution based giving insight into the effectiveness of the curriculum to promote effective decision-making strategies. This allows the researcher to

apply any recommendations from the research directly into improving the student experience for future cohorts.

Methods employed

Ethnography promotes the use of diverse research tools to ensure clear meaning and understanding of a problem or issue from the participants' perspective. Sources of information or the ability to explore the research aim from a number of differing perspectives termed triangulation is important to ensure the clarity of participant's message whilst ensuring valid and reliable results (Atkinson, 2001). This section will explore the three data collection tools employed in the study:

- Interviews
- Non-participant observation
- Document analysis

Alongside the evolution of methodology comes a change in prominence of methods used. Traditional ethnographers would rely heavily on observation but the more contemporary version of critical ethnography married with the ethos of Leininger's ethnonursing ideologies shifts the attention toward interviews. Observation is used to give a real practical slant to data collection whilst also allowing the researcher to test the claims made at interview. Document analysis offers context from a current and historical perspective alerting the reader to the political and professional drivers that have influenced curriculum development and the teaching of decision-making strategies.

Interviews

The most common method used in qualitative research is the interview (Polit and Beck, 2010). As an ethnographer the ability to actively listen by interviewing and gaining understanding of the participant's viewpoint appears the most natural social activity next to observation. The two-way conversation between researcher and participant with one asking question and the other preaching wisdom seems simplicity itself (Britten, 1995). Daily life is heavily dependent on the ability to converse, listen, debate, explain, discuss and ask questions and it would be easy for the ethnographer to become swamped in a mass of data that

may be peripheral to the research aims (Reeves, Lewin & Zwarenstein, 2006). This section will look at the planning and development of the interview used in this study and the strategies employed by the researcher to ensure focus, direction and clarity of data collection whilst ensuring the true views of the participant is captured.

There are three categories associated with the technique. Structured interviews, where the researcher predetermines and fixes the questions that become standard to all participants (O'Reilly, 2009). Unstructured where the interview is more fluid, free flowing and conversational in nature (Munhall, 2007) and finally, the method used in this study, semi-structured interviewing that sits between the two techniques, where an interview schedule is produced rather than the fixed questions or the open topics of the previous two techniques (Denzin, 2013). Interviewing is a more complex method than first perceived, to gain what Geertz (1973) describes as the 'thick description' necessary for an ethnographic study, the researcher needs to have deep understanding of the complexity of the method to ensure workable data to analyse. Ponterotto (2006) implies that the gathering of rich, deeply nuanced account provides thick description, thick interpretation and thick meaning rather than the quantitative viewpoint than provides rather thin descriptive account in preference to frequencies, distribution and statistical patterns of relationships. Kvale & Brinkmann (2009) suggests that the method should be described and rewritten as 'Inter Views' suggesting that the process requires a hermeneutic exchange and interconnection of views. This two-way process allows the participant to delve deeply into a situation, reflect, express feelings and possibly expose uncertainties where previously the participant may have held strong concrete views (Dicks, Soyinka & Coffey, 2006). Alternatively, the researcher has a duty to tune-in to the conversation employing active listening techniques to probe and engage in the discussion whilst keeping the process fluid, free flowing, yet focused on the research aims (Webb, 2011). Heyl (2001) goes further to suggest that an unstructured interview, a method that is becoming more popular in Ethnography should start by establishing a trusting relationship with the respondent. Rubin & Rubin (2005) purports that the researcher should be cautious at this stage as

there is always likely to be a 'front-stage persona' in any interaction especially where there is an unequal power relationship as would be the case in this study. Alvesson (2003) in his reflexive review of the interview process, addresses two distinct points of unequal status between researcher and the researched – Political action where the interviewee seldom works without an ulterior motive albeit with a fundamental wish to help the interviewer and play of the powers of discourse that suggest that the individual has knowledge but it is unrefined and needs to be polished and articulated. In the case of this research, the ethnographer should be aware that the participant could be acting in his or her own best interests and this should be upper most in the researcher's mind. Having mentioned the work of Alvesson it would be advisable at this stage to acknowledge the epistemological discussion and perspective surrounding the interview process. Alvesson (2003) presents three distinct categories of interviewing each with their own philosophical perspectives (Hollway and Jefferson, 2000). Neopositivist believes that the participant is a competent truth teller who is able to articulate social reality as perceived by them through internal factors such as emotions, feelings and values and external factors social practice, norms and structures (Schultze and Avital, 2011). To assist the participant there is also a belief that the researcher has the ability to deliver an unambiguous question that is clearly understood throughout the sample of participants (Kvale and Brinkmann, 2009). This is in contrast to the romantic perspective that sees the participant as a conversational partner, where the researcher attempts to get to know the 'inner voice' of those being studied (Alvesson, 2011). It is envisaged that the researcher should take more from the relationship than they give; never the less there is a sense of rapport and trust between all involved in the interview process. Researchers that follows a localist perspective are a little more sceptical of the interview as a 'window on social reality' (Clemmensen, 2004). The localist pathway does not view the participant as an expert suggesting that the participant's conceptual awareness of what is and has happened to them in the past and present is easily influenced by biography and geography. There is a suggestion that the interview process elicits responses from the participant that is no more than a situation where the individual is thinking out aloud and that their beliefs are transient in time

(Alvesson, 2011). Regardless of your perspective on the interviewing process it is important that the researcher is mindful of the advantages and pitfalls of utilising this method. Being aware of the motives of the interviewee and your own preconceived prejudices as an interviewer is an important stepping-stone and assists with the reflexive process. Reflexivity could become a very introspective process of navel gazing by focusing solely on the researcher's influence on the research process. A more holistic, panoramic perspective on all factors that may affect and influence the research process and how this eventually affects the researcher will provide a rich, contextual interpretation of the interview and its outcomes.

Interviewing as a method

Superficially the interview process could be seen as an easy option, a quick method and one that requires little skill or limited research savvy (DiCicco-Bloom & Crabtree, 2006). In reality, even the most unstructured interview requires planning, careful consideration and an in-depth understanding of the research aims to ensure the data collected satisfies the research intent (Kajornboon, 2005). Myers & Newman (2007) propose that there are a number of elements that need to be addressed to ensure the interview collects accurate meaningful data, true to the real world and truthful to the participants' social context.

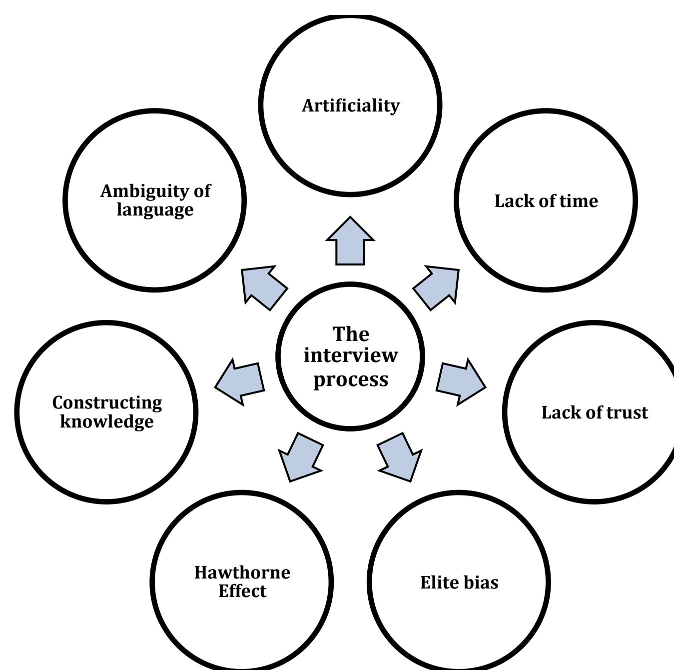


Fig 10: The interview process

Failure to consider these factors could result in an interview that 'just goes wrong' and fails to meet the expectations of either partner in the interview process possibly resulting in unusable data (Murray, 2003). Goffman (1959) suggests that the face to face interaction could be likened to a drama suggesting that each participant in the drama influences the performance of the other stating that social interaction is:

".... the reciprocal influence of individuals upon one another's actions when in one another's immediate physical presence." (p. 26)

To bring this into context the dramaturgical model proposed by Goffman and the pitfalls of the interview process by Myer and Newman (2007) have many synergies although differing typography. The artificiality of the environment/stage needs consideration for both participants in the interview process to feel at ease in each other's company. The researcher used two location types either a quiet office within the university or a staff room on clinical placement. The choice of location and timing of the interview was purely the participants' and the decision was based on their convenience. The only environmental requirement was comfortable chairs in a venue that ensured privacy, in which the participant felt comfortable to discuss their thoughts and feelings. Using Goffman's nomenclature, the props of the social interaction are equally important – in this case the digital recorder. Although small and unobtrusive the need to discuss its use as an ethical requirement and the very act of turning the equipment on at the start of the process is likely to influence performance and cause unease (King and Horrocks, 2010). There is a need to develop rapport with the participant to ensure that extraneous variables and their effects are minimised. DiCicco-Bloom & Crabtree (2006) suggest the use of broad, unstructured almost conversational questions before entering the true explorative nature of the interview process. This phase is particularly important to an ethnographer because a participant who is at ease is more likely to be open and honest in their responses providing the true self rather than looking to portray a fictional character that the participant feels the researcher wants then to be (McConnell-Henry et al. 2009). The researcher also found early on in the project that direct questions such as "how do you make decisions?" or "have you considered how you go about making decision since starting nurse education?" generally result on a mono syllable answer and a response that could be condensed to ' I've never really thought about how I make decisions before you asked the question." The need to elicit open and flexible questioning style by the researcher to reduce syntax ambiguity and elicit trust and a feel of time well spent is the art of interviewing (Broom, 2005). Knowing you are part of a

research project and being interviewed by a lecturer is likely to influence a favourable response as the participant is unlikely to want to show themselves in a poor light (Wood, Brink & Kerr, 2006). To negate this effect the conversational style of this ethnographic interview and the preparation time spent ensuring that participants realise that they are not being judged, but engaged in a study that is looking for their voice, their ideas and their understanding of how decision-making developed saw a dataset rich in context.

The issue of bias is a concept that should be uppermost in the researcher's mind. A researcher may poorly interpret or mislead the reader through a misrepresentation of events either consciously or sub consciously (Cloyes, 2006). An ethnographer is a partner in the interview process, the need to be open yet leave sufficient space for the participant's views to blossom without undue prejudice from the researcher is a skillset that has to be quickly acquired by the ethnographer (Kirk, 2007). Linked closely and similar in nature to bias, is a concept generally termed 'the Hawthorne Effect' (McCambridge, Witton & Elbourne, 2014). A participant may change an opinion when interviewed manipulating their answers in an attempt to second guess the researcher by conveying answers the participant believes the researcher wants to hear rather than their true opinion (Fernald, Coombs & DeAlleaume, 2012). A relaxed interview and an open and honest account of the research aims by the interviewer should reduce this concept but should be at the forefront of the mind during the interview process.

The understanding of the participant's world through direct correspondence and rich description of the observed world has been subsumed in the last few decades with the post positivist need to seek a trustworthy and transparent research methods (Madill, Jordan & Shirley, 2000). The very nature of qualitative methodology and the subjectiveness of the methods, analysis and sole interpretations by the researcher has also been open to debate within the research community (Linneman, 2011). The ability to reproduce consistent results has been key in quantitative studies but there is a more relaxed approach in the naturalistic methodologies (Holloway and Todre, 2010). From the outset,

this research has been guided by the need to reduce as much as is possible researcher bias to promote reliability of findings to ensure the results are an accurate representation of the participant's understanding of their environment and the situations they find themselves in. Roberts, Priest & Traynor (2006) suggests that with good planning and attention to detail, the thorny issue of reliability can be tackled by digitally recording the interview, the completion of meticulous field notes and care over the 'cherry picking' of statements or events whilst collating the information presented by participants (Morse and Field, 1998). Detailed account of events through comprehensive field notes both during and after the data collection episode is as important as the interview itself. An extensive account of personal and analytical thought processes throughout the data collection and analysis phases of the studies grounds the data in the real world and ensures the researcher demonstrates an audit trail of thought and decision-making throughout the analytical process (Corbin and Strauss, 2008). Weber (1990) also explores the use of coding as a mechanism of ensuring reliability. In his work on content analysis he promotes the transparent use of code definitions and the agreement of these codes with researchers outside of the project termed "inter rater reliability". This is a method utilised by the researcher to ensure data are grounded and has real world context (Elo and Kyngas, 2008). Validity on the other hand is a more abstract concept and determines the efficiency on how well the studies aims and objects measure the phenomenon under investigation (Brink, 1993). It is important that the researcher is aware of research bias throughout the process. It is the researcher who decides what is included, how it is interpreted and, as a result of familiarity, may miss nuances and ambiguities that may be essential to the outcome of the project (Roberts, 2009). By addressing issues of validity, the researcher remains on a clear and transparent track ensuring that the reader of this study is very clear about the decision-making processes, employed by the researcher, through all stages of the research process and any preconceived ideas that may have influenced that thought process (Roberts, Priest & Traynor, 2006). Constant review of the data, reference to field notes and reflexive care to ensure undue influence or manipulation of theme/category development through member checking were used to minimise researcher bias.

Since the move beyond pure anthropology and into social sciences, qualitative researchers have been battling with this issue of objectivity (Barusch et al. 2011). The postpositivist researcher is keen to minimise researcher bias and eliminate subjectivity without at times truly embracing the mechanisms employed or more importantly providing an explicit account of how this process was undertaken (Wood, 2010). Jonsen & Jehn (2009) suggests that a comprehensive account of the evolution of coding or concept development is missing in many research publications, making it is difficult to evaluate whether the paper is truly objective. Triangulation is a commonly used term in research literature where the researcher addresses a number of methodological issues to reduce subjectivity and bring clarity to qualitative data (Adami and Kiger, 2005). Denzin (1989b) outlines a number of differing methods of triangulation ranging from methodological triangulation through to Data triangulation. The researcher in this study is cognisant of the need to address validity and reliability but is more concerned with the ethnographic principles of thick description and completeness of data and phenomena. Ethnographic studies are personalised accounts of the lived experience and so attempting to triangulate for reproducibility is not a priority. Holism, or as it is sometimes referred to in the American literature 'criteriology' or the science of certitude (Williamson, 2005), is addressed to ensure that the coding or developed concepts are a true record of events and are seen to be actual and real as portrayed by the participants at that moment of time and is strived for by the author. Triangulation within method is seen as a mechanism to enrich the participant's explanation by collecting data from a variety of perspectives and sources to ensure completeness (Casey and Murphy, 2009). Often described as a tool that reduces the limitations of any method used (Ramprogus, 2005) the researcher sees triangulation within method as a mechanism that bring equity to the research tools utilising the best of each method (Jones and Bugge, 2006). Methodological triangulation through the serial use of interview, non-participant observation through simulation and analysis of documents, plus the use of participants to verify the account (Investigative Triangulation) and the developing concepts ensures that the final analysis is a clear and an accurate representation of the participant's perspective of the phenomena at the time of the study (Bekhet and Zauszniewski, 2012).

The pursuit of objectivity requires thought and planning from the early stages. The ability to look at the real world without the researcher's personal preferences or prejudices influencing data collection or analysis is fundamental to this process (LeVasseur, 2003). The ability to suspend judgement and create boundaries between personal experiences, ontological view and that of the real lived experience is an issue that phenomenological researchers have been pondering for many years (Bertelsen, 2005). Although never clearly defined in his evolving view of phenomenology Husserl (1999) defines the term bracketing as a mechanism of assisting the researcher to suspend, as much as possible, their beliefs and value systems whilst entering the world of the participant. Likened to the peeling away of onion skins to ultimately get to the heart of the problem or the use of parenthesis in mathematics to partition a formula, bracketing assists the researcher to focus in on the real phenomena whilst recognising their own influence on the problem under investigation (Drew, 2004). Although this reductionist approach has less importance in ethnography, the principles of bracketing at interview and during data analysis are equally important (Simon, 2011). It would be easy as a researcher to look for the obvious rather than critically explore and actively listening to participants. Reducing the 'unacknowledged preconceptions' related to the research can only increase the rigor of the study (Tufford and Newman, 2012). This is particularly important with the wealth of decision-making theories on offer in the literature that could easily seduce the researcher to attempt to force data into categories to ensure data saturation. Enlightenment is an important aspect of this research having the ability to identify, from the collected data, new learning in familiar situations. The definition of bracketing from photographic perspective is possibly a more accurate way of describing this ethnographic concept. The photographer takes a number of photographs of a scene but alters exposure or film speed setting to highlight or emphasis particular characteristics of the image. Similarly, by being open minded and having the ability to look at the participants' world from a variety of differing and innovative perspectives provides the deep understanding necessary for true enlightenment. Bracketing is one method to assist the researcher in their quest for objectivity but the very nature of the interview

process, the relationship between researcher and participant and the 'asymmetrical power relationships' inherent in the research process have the potential to influence actors involved in this study (Kvale, 1996). Reflexivity promotes introspection and self critique so that any preconceptions or situational dynamics are examined and portrayed by the researcher as another layer of data assisting the reader to make conclusions over the honesty of the project (Jootun, McGhee & Marland, 2009). Kirby and McKenna (1994) coined the phrase 'cultural baggage' asserting that the researchers' vested interest in the collection and analysis of the data should be clearly documented but should not be regarded as insignificant. The very process of interview is a social interaction between two people and the resulting truth obtained from this dialogue will be influenced by the relationship between the two parties and formulated contextually by the two individuals' social, cultural and relational experiences (Hsiung, 2010). A method of providing an audit trail of thoughts and feelings during the research process would be the development of a reflexive journal (Roller, 2012). Keeping account of these emotions allows the researcher to reflect back on the experience and identify any subtle cues that may be perceived as pre or misconceptions that may ultimately develop into bias. From an ethnographic perspective it is important to establish whether the conclusions are derived from an etic or emic perspective rather than sprinkled in the researcher's 'rose tinted' interpretation of reality (Pellatt, 2003). Houghton et al. (2013) suggests that the use of reflexivity is a mechanism by which we are able to monitor or audit the ethnographic research process. Finlay (2002) in her typology of the reflexive process suggests five variants of reflexivity that either stand alone or overlap. Without truly coming to any conclusive outcome in the paper Finlay suggests that each variant gives a philosophical structure that may be utilised by the researcher dependent upon the method chosen. From an ethnographic perspective there appears to be two variants where this project could easily benefit that of mutual collaboration and social critique. Mutual collaboration views the participant as investing as much in the research process as the researcher. This variant proposes that by consenting and assisting the researcher with inter-rater reliability the participant is a co-researcher in the project, ensuring that both parties are influential in the reflexive process. Social

critique on the other hand, shows how the reflexive process addresses the power imbalance between researcher and participant. Being cognisant of the difficulties inherent in the differing social positions the researcher recognises the shifting nature of the research relationship and fits neatly into the social constructive paradigm (McBrien, 2008).

Regardless of the philosophical stance taken it is important that the researcher focuses on the essence of what is said rather than the constant naval gazing that can so easily happen whilst attempting to defragment researcher from participant opinion. From an ethnographic perspective, it is the true understanding of the concept under investigation that is important and this can only be obtained if the participant is at ease. By ensuring that the researcher is open and transparent during the collection and analysis of the data allowing the true voice of the participant to be heard (Dicks, Soyinka & Coffey, 2006). This will ensure that the reader is able to make a judgement about the integrity of the conclusions made (Carolan, 2003).

The researcher is cognisant that the relationship between researcher and participant is not purely based on research. As a lecturer on the nurse education programme, there is always a concern that this may influence the response given by the participant leading to the Hawthorne Effect mentioned earlier (Clark & McCann, 2005). To minimise this risk the researcher spent a period of time at the start of the research project in conversation about the research project, it's aims, the role of the participant and how their confidentiality would be maintained. The interview was made into a social conversational event exploring the participant's course to date and how they are enjoying their new profession. Although this data was not saved, being outside the remit of the research statement, the researcher had the digital recorder running from the start of this interaction. This allowed the participant to feel at ease whilst being recorded and allowing the spectre of the device to fade into the background as both individuals became comfortable in each other's company (Byrne, 2001).

The researcher considered the use of video recording equipment to get the subtleties of the conversation such as facial expression and mannerisms, during the interview process and observation phase, that could easily be missed through discourse and digital recording (Heath, Luff, & Svensson, 2007). The logistics of setting up the equipment and the effect this may have on the individual during the interview process may be counterproductive. Students give consent at the start of the nurse education programme to be video recorded whilst taught in the simulation laboratory and with built in video equipment in each room, it would be unobtrusive and relatively easy to manage. This consent is for teaching purposes and would not be considered ethically sound from a research perspective. Inevitably students ask before any simulation event as part of normal timetabled activity if they are recorded, and it is easy to see that recording the sessions would have been an additional stressor, so it was decided by the researcher at the start of the process that despite the benefits of being able to recall the event at leisure, making the participant self-conscious of being recorded was not desirable if the researcher wanted to maintain the participant's confidence and trust throughout the research project (Caldwell & Atwal, 2005).

Any doubts about the participant's ability to recall events were quickly dispelled, as in all cases, they proved articulate and responsive to questioning during the interview process. The semi-structured nature of the interview process allowed the conversational process to be maintained with the participant seamless moving from preamble to interview. This conversational style was encouraged with questioning used to maintain the discourse and ensure the interview remained within the parameters of the research aims (Heyl, 2001). As much as possible, the interview was restricted to approximately 30 - 45 minutes although the preamble and the closing conversation acting almost as a debrief, took the whole process to around 60 minutes for a number of participants. This period allowed an in-depth investigation of the research aims but also ensured that both researcher and participant could maintain the depth of concentration needed to collect and assimilate accurate and informative data (King & Horrocks, 2010). It was important that the participant left the interview feeling valued and so time

was spent giving context and discussing the participant’s future involvement in the study to make them feel part of the research process.

Observation Strategies

One of the advantages of observation is that information can be collected on a wide variety of differing factors allowing the researcher to see first hand how participants perform rather than taking their word for the activity (Polit, 2010). Interviews provide an insight into the thinking behind the decisions made by participants and at times can be a reflective and cathartic experience for both parties but does not capture decision-making in the real-time (Knox & Burkard, 2009). An essential element of ethnography is observation (Roberts, 2009) and the researcher has an interest in witnessing how the participant makes a decision within the simulated clinical environment. Initial proposals designed a study that explored decision-making within the clinical environment but the ethical hurdles imposed to observe student nurse practice restricted access to the clinical encounter and almost stage managing the situation, making the event meaningless from an ethnographic perspective. The researcher is cognisant of the need to respect the rights of child and family (Edelsohn, 2012) and so a more feasible option was the use of a simulated environment. The researcher is aware that utilising an artificial environment may elicit a simulated response from participants that would not be comparable to their reactions in a real life situation (Broom, Lynch & Preece, 2009). To try to offset this the simulated clinical environment is designed and managed to promote an atmosphere of entering a real clinical environment. Students are expected to treat the area in the same way they would a clinical placement. This includes adhering to uniform policy and maintaining behaviour fitting of a nurse on entering the building. The management of the scenario creates a clinical ambiance and is important to mimic the real world (Bishop & Stewart, 2014). The scenario chosen for this research project is a commonly performed nursing task vital signs but has a twist allowing participants to use their own initiative and/or rely on peer support whilst making a decision. To replicate the stressors of the clinical environment in a simulation laboratory the researcher has included an additional element to the scenario that requires the participant to demonstrate their skills in basic infant life support. Basic life support is an algorithm based procedure that is easily taught (Fraga et al. 2012) but how they react in an unfamiliar environment with

the additional pressure of working with peers and the stress of assessing and managing in an arrest situation requires composure and sound decision-making strategies (Maxson et al. 2011). Participants are aware that this scenario builds on a similar simulated event that occurred earlier in year 1 where they are required to do an observation round to collect physiological data (vital signs). Although not told of the resuscitation event prior to the simulation under observation, participants attended theoretical sessions on basic paediatric life support and had several opportunities during the term, leading up to the simulation, to practice this clinical skill. This simulated event is not unique to this research project and is an established part of the second year of the child health curriculum and is tried, tested and evaluated by students as an effective teaching and learning tool but this is the first time it has been closely scrutinised under research conditions. In previous years, evaluations have shown students become stressed whilst undertaking this scenario but a debrief acts as a powerful learning tool and focuses the students mind as they progress into the third year of nurse education (O'Brien & Pedicino, 2011). This format will be used by the researcher giving an opportunity to explore the strategies utilised by the participant to make decisions in real-time and as a result demonstrates how the participant acts and interacts within this closed setting (Corbin & Strauss, 2008) giving the researcher an insider perspective through observation and debrief. Casey (2004) devised a structured template to justify and plan the use of observation in the clinical setting and this has been adapted for the simulated environment; this will be used to justify the use of observation and identify potential pitfalls.

It is difficult to discuss any aspect of observation as a method without referring to the seminal work by Gold (1958). As part of a research team led by Buford Junker, Gold proposed four theoretical principles that could be applied to a researcher in the field (Everett et al. 1952). Ranging on a continuum from complete participant to complete observer, Gold suggests that the level of interaction and 'hands on' activity envisaged by the researcher influences the nature and efficiency of the observation. The most common role adopted when observing clinical/simulated practice appears to be that of 'observer as

participant' where the study incorporates the characteristics of 'one off' social interaction. This category assumes that the researcher is a participant only by their presence and although this is the case for some of the interaction, this simulated session is part of a timetabled activity and doubles as a research and a teaching tool. There will be elements of the researcher engaging with participants to ensure the scenario follows a pre-prescribed lesson plan. This means that the researcher participation in the simulation will interchange depending on the needs and performance of the participants and thus equally fulfilling the criteria of Gold's 'participant as observer'. One area that will be made clear to the participants is that although they are second year students the simulated exercise requires them to make autonomous decisions about what is needed to ensure a successful resuscitation outcome. Although the researcher will ensure structure and smooth progression of simulated exercise, the clinical decisions made during the scenario will be purely those of the participants.

It should be noted at this stage that there is much debate over the classifications presented by Gold, with a number of authors suggesting that the role of the observer is more fluid and less predicable as would be suggested by the four theoretical categories. Davies (1989) proposes that there is no 'single theoretical typology of participation.' Pope & Mays (2006) goes one step further by purporting that the extent of any researcher's involvement during observation is dictated by the nature of the setting and the research aims set out by the researcher. This justifies the researcher stance that his actions at the time of observation will be fluid and will merge two of Gold's categories as the scenario unfolds.

The next phase in the observational cycle is whether the observation event will be structured or unstructured. Participant observation allows the discovery of actions and behaviours present in the population under study (Bonner & Tolhurst, 2002). It would be relatively straightforward to develop a structured observation schedule that allows the researcher to look at specific aspects related to decision-making process. This again would be using the researcher's pre-defined perception of what would constitute a good decision and as a result

would narrow the focus and possibly filter data that could prove invaluable when constructing an understanding of the event (Spradley, 1980). Using an unstructured approach ensures no pre-determined categories or classifications whilst observing actions and behaviours in real time as they naturally unfold (Mulhall, 2003). This is consistent with the ethos of the ethnographic method where categorisation and participant's narrative is generated from the data rather than imposed upon the data (Barton, 2008). Although the scenario is managed and the researcher is in control of events and how they unfold the decisions made by participants will be spontaneous and worked through by the participants with little prompting by the researcher or other lecturing staff within the simulated environment. This creates an additional dilemma for the ethnographer of whether a molar or molecular stance is taken during observation of the simulated event. Molar principles promote an unstructured observational technique with no pre-defined parameters allowing a wider perspective whilst examining an event (Roche et al. 2014). In contrast, a molecular viewpoint would be more prescriptive and precise, narrowing the perspective of the phenomenon during the observation process. The complexity of human interaction and the difficulty to predetermine all of the parameters that may influence the decision-making process and clinical reasoning, suggests that a molar approach would give the flexibility needed for this particular study. Polit & Hunglar (2010) & Nolan, Grant & Nolan (1985) confirm that the research aims and the chosen method should be the determining factor that influences the observational style. It should not be based upon criterion derived from personal opinion or deduced from the literature.

Lofland et al (2006) suggest that there are two mechanisms for collecting data in the clinical environment (natural setting), traditional participant observation and intensive interviewing. Participant observation is described as a multifaceted exploration of human interaction and relationships in a natural setting. Lofland et al (2006) moves away from the traditional definitions of intensive interviewing by suggesting that this is a technique of actively listening, looking, questioning and clarifying the skills that are important whilst understanding the unique position that is under observation. So rather than

being seen as separate tools, the benefits of both mechanisms of data collection can be merged to provide rich grounded data that gives context and meaning to the human social interactions and decisions that are made within the natural setting. This is an important issue as the aims and objectives of the study revolve around the process and context of the decision made and the rationale for nursing interventions prescribed by participants during clinical encounters. Combining methods ensures depth of observation that contributes to category development and helps inform the interview schedule that may ultimately give guidance for additional observation and present guidelines for filtering in the later stages of the project (Blee, 2000). How best to capture this rich dataset is open to discussion, digital video recording the simulated environment would give high quality data but would be intrusive, difficult to administer and ethically hard to justify (Brimble, 2008). The researcher could have used this method of data recording but because it was not used with previous cohorts a decision was made not to use video for this intake to ensure the participants have a consistent experience. Several authors describe lapel microphones or headsets that record the interaction in real time and saved digitally (Goulart, Ramsey & Parvathaneni, 2014; Houghton et al. 2013; Reid, 1991). This would be a valuable and provide an audibly clear, accurate and individualised data set when up to four participants may be involved in the debrief. The inconvenience to the participant and the physical effects the audio technology may have on the learning process would be an additional distraction in a simulated environment that may already be perceived as artificial.

The use of field notes is universally described in the literature although how these field notes are structured is not. When to record this information is open to debate, if you record at the time of the event/interaction then you may get accurate notes but you may influence or even disrupt the very phenomenon you are investigating (Emerson, Fretz & Shaw, 2011). The collection of data by notes and jottings followed by a comprehensive writing of full notes after the events would be the most efficient way of capturing this social intercourse (Thorpe & Holt, 2008). This method would allow the normal routines to continue without the participant being aware of note taking.

Immediately after the observation event the researcher dictates any feelings, perceptions or valuable data witnessed into a hand held digital recorder away from the simulated environment. This allows speed of data capture with later transcription and ensures an efficient mechanism of capturing and maintaining context and accuracy of note taking away from the simulated environment. Although not as accurate and detailed as a video recording, generating a log of events combined with an audio recording of the debrief session, objectively captures the participants account of the simulated scenario, how they performed and the factors that influenced their decision-making process.

It is difficult for the author in this dual role of researcher and lecturer, to fade into the simulated background and allow the participant to fend for themselves. The simulated experience requires priming of the event through a formal handover to set the scene, giving patient histories and medical/nursing care to the point of simulation. It should be worth noting at this stage that the participants are familiar with the simulated environment so orientation to the environment is not required except to point out where essential equipment is stored. Following an outline of the scenario and a handover of the clinical condition of the child has been conveyed, the researcher has a reduced role and interaction is limited to discussion of key events rather than direction or assistance in clinical decision-making. The student is role-playing a qualified child health nurse, collecting physiological data by recording the temperature, pulse and respiratory rate on a number of high fidelity manikins. At this stage, the participant is working in isolation, self allocating to a child/manikin and working with peers once the resuscitation section of the simulation starts with a shout from an adjacent room from a mother (female lecturer) anxiously informing the students that her baby has stopped breathing. The scenario moves to this adjacent room where the participant is presented with a resuscitation doll and an anxious mother and little other information. All information from this stage forward has to be gained from the mother or by requesting clinical information about the condition of the baby. The role of the researcher is to act in much the same way as in the post registration Advanced Life Support Course

where the participant is reminded that the baby is not breathing only giving clinical features of the baby's improvement or deterioration based on the participant's performance.

It is important that participants are truly immersed in the simulated exercise so positioning of the researcher within the simulated environment is important ensuring observation and collection of evidence but not so visible that participants will constantly be asking the lecturer 'what do I do next?' Polit et al (2001) give three methods of observing the natural setting, single positioning where the researcher occupies one location only and observes interaction from that location only. Multiple positioning where the researcher moves around the study site to observe interactions from different locations and mobile positioning where the researcher follows a person during a given activity or for a particular observational period. All three options have merit but to effectively observe the scenario requires the researcher to be close to the simulated action, although complete shadowing as described by Lundgren & Segesten (2001) may not be entirely necessary. Keeping a discrete distance would be appropriate allowing the researcher to witness context and the timing of any decisions made.

A simulated event such as this scenario allows the researcher to combine both time and event sampling techniques. The observation of vital signs provides valuable research data on how participant's analyse and synthesise the collected data determining the condition of the child. Observation of this early phase shows the skill set of the participant and their ability to use that information to plan care. Time sampling is used to record how decisions are made following the collection of physiological data (Wirth, Kahn & Perkoff, 1977). It is the participant's reaction to the call for resuscitative help and the decisions they make from that point on that is the true focus of the study. Overall, the predominant technique is event sampling occurring at the time of the resuscitation process and at debrief towards the end of the scenario. The basic life support technique is algorithm-based procedure and actions are initiated in a sequential order (Resuscitation Council, 2014), assisting the researcher by identifying key components of the procedure and acting as a script or template to

identify strategic events focusing the researcher attention to the key elements of the procedure that require a decision to be made. Although not technically part of the observation process, debrief is a chance for participant and researcher to seek clarification of action and rationale and for the decisions made immediately after the simulated exercise (O'Brien, 2011). The researcher acts as a facilitator seeking the participant's viewpoint on how they performed, the decisions they make and their feelings during the simulated event. This session was digitally recorded, as the researcher wanted to ensure that this important phase of the simulation was captured for accuracy and depth of understanding (Hutchinson, 2005).

The literature is very clear that the researcher should ensure that the timing of the observation period should be sufficient length to ensure all events are captured and fully recorded (Moore & Savage, 2002). The researcher has to maintain concentration throughout the process, as a result 'comfort breaks' are as important as the time spent observing. Spradley (1980) terms the inability to concentrate 'selective inattention' and although clinical observation could take some hours, this scenario is self-contained and takes approximately 60 minutes with debrief taking roughly 20 to 30 minutes, a total of 90 minutes. This allows a period of intensive observation to occur, debrief, time to write up field notes and, more importantly a break for the researcher to reflect on the event and ensure a period of recharge before the next simulation. Each simulated event contained three participants and ran twice daily over a number of days. The cohort was aware that this timetabled event would also be part of a research project. All students participated in this timetabled exercise although only four of the seven simulated events are included in this study ensuring that those interviewed are also sampled during the simulated observation.

This simulation is a tried and tested annual event and the researcher is confident in the simulated clinical environment and with the scenario presented to the cohort. This allowed the researcher to concentrate on capturing data and ensuring the research process does not distract from the participant's learning experience. Two lecturers run the exercise and both have worked this scenario

for several years knowing their respective roles during the simulation and as such requiring little adaptation for this research project. It was clear that this scenario would be used in the research project more than a year in advance and although no data was stored the researcher used any simulation he was involved in with child branch students as a pilot to ensure note taking, positioning and the role of observer during simulation was considered to highlight any difficulties that may not have been foreseen. These dummy runs helped to make note writing a more efficient process whilst ensuring the researcher was very clear about the dual role he was about to undertake. This proved invaluable and ensured the smooth running of the simulated exercise with the participants engrossed in the learning experience rather than realising that they had been involved in a research exercise. Simulated events are choreographed and although outcomes may vary the structure of the scenario is carefully planned. This ensures consistency of experience; with all participants getting the same opportunities. Replicability is an important construct within research and although the researcher would not claim that the results could be reproduced certainly the simulated clinical event could. This consistency means all participants experience the same scenario but it's the decisions they make that ultimate influences outcomes.

The researcher is acutely aware of maintaining the key ethical issues of beneficence, respect for human dignity, safety & justice when dealing with participants (Comer, 2009). Although the study aims to explore the decision making process, the dual role of being a researcher and lecturer creates a dilemma over divided loyalties between the two roles being undertaken at the time of the observational study (Jones & Jack, 1999). It is clear that decisions or guidelines have to be formulated before the start of the observational study stating when the researcher would intervene if unsafe or negligent care were observed during the simulated practice, although this is a simulated environment and no harm will result from actions taken by the participant. This continues to be a learning event and the participant should be aware of any care or decisions made that would be considered to be negligent or unsafe. These actions needs to be rectified as close to the time of the event as is possible as the

needs of the participant to learn safe practice greatly outweighs the researcher's needs in this unlikely event. The researcher is aware that the setting of these guidelines may not resolve the difficult research decisions that may have to be made during the observational period but helps to gain the confidence of an ethical committee (King et al. 1999) and provides a good foundation whilst developing a workable relationship between researcher and participant. The researcher appreciates that the collection of data is essential for the successful completion of the project but the simulated session's primary objective is the effective learning and application of new skills by child health student nurses.

Chapter 4: Qualitative Data Analysis

As a novice researcher the whole process of data analysis seemed confusing. The literature contains a multitude of differing methods. One thing that is apparent when you first read the literature around this topic area is how data analysis methods appear to share a great similarity only differing in terminology and association with the researcher's methodology. This leads to confusion and the feeling that the process is more complex than required. This section will explore the rationale behind using these methods and because of the fluid nature of these tools the author will define the criteria utilised during the data analysis process, starting with content analysis.

Content Analysis

Content analysis is a technique used to systematically and objectively examine qualitative datasets derived from documentary evidence (Twycross and Shields, 2008). Despite it's increasing popularity in healthcare qualitative research, the literature base is relatively sparse especially whilst reviewing for the effective use of this research tool (Elo and Kyngas, 2008). Initially designed as a mechanism of quantifying written texts, this analytical tool has developed and adapted into a method that sits in both quantitative and qualitative camps (Bowen, 2009). At its simplest, content analysis is a way of looking for trends or patterns in text. This tool gives the researcher the ability to look at the frequency at which words or phrases appear in a document or interview transcript (Gerbic & Stacey, 2005). Alternatively content analysis may be interpretive and offers the tools to investigate meaning and gain an understanding of the participant's view of the research topic under investigation. The complexity of the method is dependant on the methodology chosen and the nature of the research question formulated. What is important is that content analysis is more than the quantification of written texts and is a process whereby the researcher is able to elicit meanings, intentions, consequences and context from the written word (Downe-Wamboldt, 1992).

Content analysis is a text based research tool and its origins can be traced to the beginnings of written word and language development but its use in critiquing

published media and, more importantly, Nazi propaganda in World War II saw the embryonic development of the research tool we see today (Weber, 1990). This research tool is seen frequently in all forms of human sciences but for the purposes of this section the researcher will specifically focus on the application of qualitative content analysis in nursing.

Content analysis requires the written word, this can be derived from media, books, journals or historical first hand accounts. Its use in healthcare generally stems from interviews and focus groups but content analysis can only be performed once the material has been transcribed. Transcribing is often seen as a particularly laborious process by many researcher (Silverman, 2007). The transcript and the act of transcription can be viewed as a window into the participant's thoughts and emotions and the way they interpret these experiences on a daily basis (Balls, 2009). What is clear is a badly transcribed interview provides poor quality data for the qualitative researcher (Sandelowski, 1995). At transcription, the researcher needs to consider the quality and complexity of the raw transcribed data that they wish to analyse. The transcribing process will need to be far more detailed if the researcher wishes to interpret meaning compared to one who is looking for word frequency and patterns (MacLean, Meyer & Estable, 2004). As Burnard (1995) eloquently points out that meaning is not always explicitly tied to the words themselves but to the context and the relationship between the actors involved in the conversation. The pace, length of silence, pitch and the use of 'filler words' affect meaning and can never be recaptured as that moment in time may be lost or at least difficult to recollect accurately by all parties. It is important that the researcher is clear in their philosophical stance and has a detailed understanding of the data collection methods available to them. Narrative or discourse analysis looks for language patterns, non-verbal behaviour or the subtleties of conversation such as false starts and pauses (Rapley, 2007). For the researcher utilising methods such as content analysis, it is more an exploration and concentration of the content or information rather than the actual syntax (Bailey, 2008). Care needs to taken to capture the complexity of interaction and although transcribing can never be error-free, an accurate a portrait of events should be

the goal of any transcriber (Sandelowski, 1994). It is important that the researcher is acutely aware of their personal values and bias during the transcription process and it is important that content is not rejected at this early stage (Morse and Field, 1998).

Focus is placed upon the transcription of interviews but the thoughts and feelings recorded by the ethnographer during or following data collection in field notes are equally important to provide an aide memoire or promote accuracy of the event during the analytical process (Simmons, 2007). In recent times the definition of the 'field' has evolved from the original anthological meaning of direct observation (Baumbusch, 2011). Atkinson (1992) adds to the discussion by proposing that the field can be explained as

"… something we construct both through the practical transactions and activities of data collection and through the literary activities of writing field notes, analytical memoranda and the like." [Page 5]

The importance placed on the writing of field notes varies depending on the methodological stance employed by the researcher. Emerson, Fretz & Shaw, (2011) describes field notes that are detailed allowing complex grounded analysis of the encounters experienced by the ethnographer, through to notes that are secondary to the data collection process but provides context rather than additional observational depth. In either case, transparency is essential to allow the enquiring reader the opportunity to audit the thinking behind the analysis promoting validity and reliability of the analytical process (Mulhall, 2003). Field notes can be a precise record of the ethnographer's thoughts and feelings at the time of the interview (Wolfinger, 2002). Waterman (1998) adds to the debate by suggesting that field notes give an insight into the researcher's thoughts and feelings by seeing the researcher as an 'instrument' in the analytical process and hence providing 'reflexive validity' as a result field notes are as important during the interview process as it would be during the observational phase with the same rigors applied. Van Maanen (1988) in his

book “Tales of the Field: On writing ethnography” describes three genres of field note writing:

- Realist accounts are the most frequently encountered representing ethnographers as an impersonal conduit through which information about the field is conveyed
- Confessional tales include the researcher’s personal feelings and experiences alongside but separate from the observation/interview account, and finally
- An impressionist account where the ethnographer provides an idealised account of the encounter that draws the reader into the participant’s world.

Although not as polished as the final ethnological account, field notes offer a valuable insight into the researcher’s world and act as a subtext that supports and complements the analytical process. In practice, the researcher found that all three genres were used interchangeably during the construction of field notes. Care was taken to ensure that the researcher’s first impressions were identified to ensure that the data recorded or observed was a true action of the participant’s thoughts and feeling rather than the researcher’s private prejudices.

Inductive or Deductive

The background reading required to formulate a research question or statement is fundamental to every research project but particularly so when dealing with qualitative content analysis. The researcher when devising a remit for research needs to consider what approach they wish to employ, as this will affect the data collection methods utilised and how the data is ultimately analysed. Content analysis can be viewed as inductive or deductive and is dependent on the depth of knowledge available on the research topic area (Elo and Kyngas, 2008). The inductive approach is employed when the literature base is sparse or not enough is known about the phenomenon (Kyngas et al. 2011). This results in codes and categories being directly derived from the transcribed data; this differs from the

deductive approach where the categories are predetermined from the literature prior to analysis (Chinn and Kramer, 1995). In the deductive approach the researcher would predefine the categories from their reading of the literature as if to retest or replicate previous findings (Burns and Grove, 2005). This may be at odds with some qualitative methodologies as the literature review generally occurs following data analysis but initial testing of the literature to determine viability of the project should give the researcher sufficient information to determine the qualitative approach necessary for the project. Although the way the literature deals with these approaches is similar, this section will specifically explore the inductive method, which is pertinent to and used in this research project.

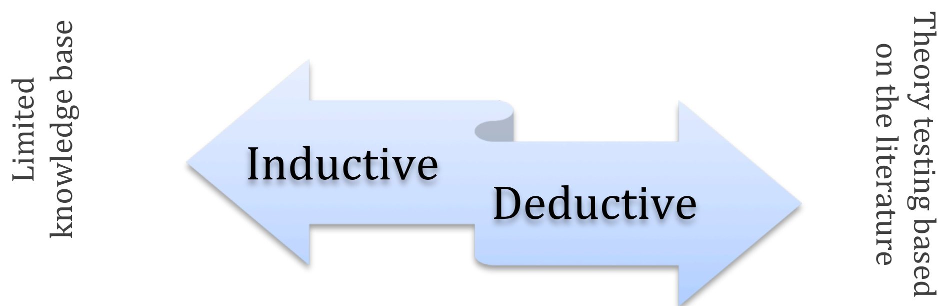


Fig 11: Induction/ Deduction

Content Analysis – The inductive approach

Seen as a sign of a maturing methodology, the complexity of terminology contained within the literature on qualitative data analysis can appear confusing to the uninitiated and, at times, not much clearer to the expert researcher. In this section an attempt has been made to strip away much of the research jargon and focus on the process of inductive content analysis. In figure 12, content analysis has been reduced to the basic inductive process and was the process used during data analysis. It is important to look at each of these phases in depth to ensure that the process of content analysis demonstrates validity and reliability throughout the process. It is also important at this stage to ensure that the researcher is highly aware that, with the best intentions in the world, their own beliefs, feelings and experiences will influence the generation of codes and categories. It is worthwhile to continue keeping a reflective log or field notes to

chart and document your thought processes as you commence your analytical journey (Koch, 2006). This will not only help you keep a check on any researcher bias but may be useful when defining codes and categories at a later date

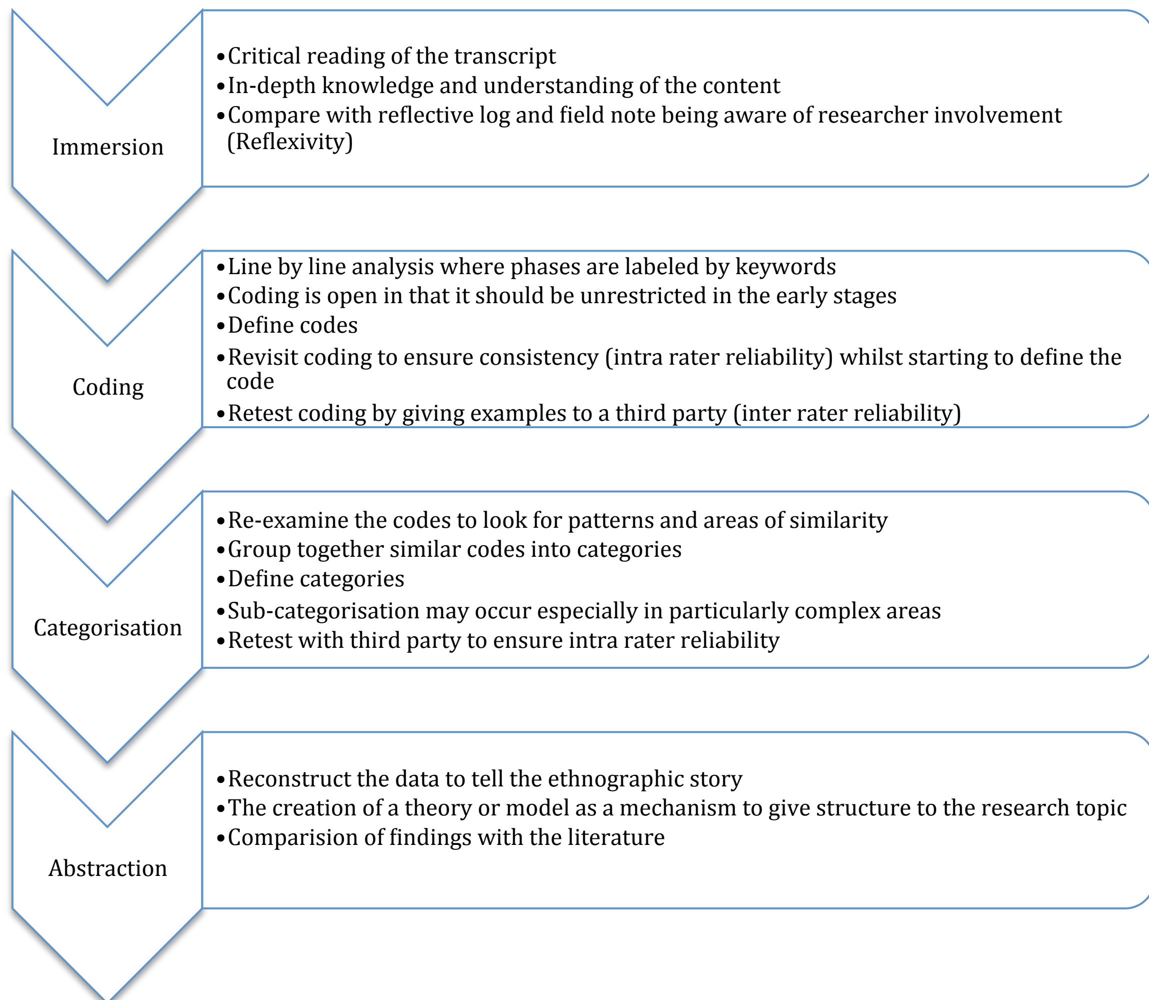


Fig 12: The Inductive Content Analysis Process

The Immersion Process

Initially the immersion process may seem reasonably straightforward but involves the skills of patience, critical reading and time management (Graneheim & Lundman, 2004). Immersion allows the researcher to become intimately familiar with the material. It is tempting to start coding immediately but time spent re-reading the transcript or reading whilst listening to the audiotape of the interview is invaluable (Bowen, 2009). The following questions formed the focus of analytic thought whilst going through this phase:

- What is the central message being communicated by the participant?
- How effectively is the participant conveying this message?
- Does the transcript effectively capture the moment compared to your recollection of the event, your field notes/reflective log or the audiotape?
- Are you able at this early stage to recognise your influence on the interview process?
- Are there any obvious patterns in the participant's comments?
- Are there sections of the text that move the researcher away from the research question?

It is important that the researcher is not to heavy handed in removing data that may seem surplus to the project's objectives. In the early stages, the researcher can never be certain of the direction the analysis will take until it is nearly complete (Elo & Kyngas, 2008). Despite this removing obvious redundant material allows focus and is a legitimate tool for the researcher utilising content analysis (Burnard, 1998). Reductionism is likely to be used in both the immersion and coding phase.

The early stages of the analytical process may prove frustrating as the researcher battles to understand and work with the analytical tool to make sense of the data. Having read about the application of content analysis and the common errors encountered such as bias, meant that this stifled creativity, in the early stages, as focus was centred on reducing personal prejudices and seeking purity of analytical thought rather than becoming truly immersed in the data. Initially

there was great difficulty seeing patterns within the data but taking time away from the data developed clarity with the researcher seeing themes not evident immediately after transcription.

Coding

Coding is a process of labelling qualitative data to provide meaning and context (Saldana, 2009). It is a process by which the qualitative researcher is able to search and give meaning to patterns in the text and ultimately to re-construct and give explanation (Burnard, 1996). Each method has its own terminology but essentially there are two phases of coding - descriptive (or sometimes referred to as open) coding and interpretive coding (Hutchinson, 2005).

Following the immersive stage the researcher is fully engaged with the data and is in possession of a unique insight of participant's understanding of the topic under investigation (Barusch et al. 2011). Frequently as the researcher reads the transcribed text key words, phases or labels emerge from the data set. These may be inspired by the words of the participant (in-vivo) or may be phrases that summarises or contextualises the participant's stance on a topic area (Krippendorff, 2004). The code encapsulates a sentence or phrase and assists the researcher to bring order to the transcript. This would be termed open or descriptive coding and described as first cycle coding because it quick and almost intuitive in nature (Saldana, 2009). Computer software is available to assist the researcher to organise key word searches or save and reorganise patterns or themes in the text (Bazeley, 2009). This method can be easily performed by manually adding a broad margin to the transcribed page. The ample and liberal use of colours helps to link the code to its labelled statement. It is at this stage that the researcher may code at will and is likely to label more than is ever required (Cassell and Symon, 2004). It is important that the researcher tracks the development of codes by giving explanation for their choice. These personal descriptions or memos work as a fluid account of the codes development assisting the researcher with reliability and reflexivity by mapping thought processes (Alvesson, 2011). Consistency is important in all aspects of coding; reliability is maintained by ensuring codes are rigorously

defined and transparent in their development and application (Intra-rater reliability). Inevitably the researcher will find a situation where they feel uncomfortable with a code or the passage that the code represents. It is not unusual for a passage to fall under two codes and the researcher will find the codes merge and ultimately reduce in number as code definition matures (O'Reilly, 2009). This is a natural process and marks the end of the first cycle coding but not before the data has been scrutinised by a third party to ensure consistency (Inter-rater reliability). Peer or participant checking proves to be essential to ensure the coding system is replicable and stands up to external scrutiny.

Categorisation and Abstraction

Although data may have been collected chronologically or themes may be constructed through semi-structured interviews or the process of observation rarely will the researcher present the findings of the topic in this manner (Neuendorf, 2002). Patterns emerge from the transcript and codes naturally fall into interlinked groupings. These are termed categories and are interpretative because the researcher gives meaning to the category and the rationale for code selection (Elo and Kyngas, 2008). This process is influenced by the research question, the researcher’s interpretation of the data and the participants’ ability to tell the story. By its very nature, the researcher’s interpretation of the data should be seen to be objective and transparent. The use of peers external to the project or even participants themselves is as important here as in first cycle coding to minimise or justify researcher’s own bias during the interpretive process (Alevesson and Skoldberg, 2009). The creation of memos plots the development of categories and gives the researcher the tools to give clarity and context to their thinking when disseminating the findings. Complexity and clarity of meaning may be enhanced by the use of sub categories (Hsieh and Shannon, 2005). The researcher is able to show relationships or hierarchical connections within the dataset that would be lost if combined into a single category. This process is termed abstraction and care has to be taken not forced the data into a category staying true to the research question and the emerging criteria developed through the first and second cycle coding and memo development. It

is at this stage that clear definition is essential as the researcher attempts to give clarity to the emerging themes. It is the developed relationship between categories and their importance to the participant that requires careful attention by the researcher as their own thoughts and opinions could easily influence decisions when doubt is raised over the placing of data into a specific category. This process of category development can be likened to the taxonomic classification of species where any living organism on the planet can be categorised from the general to the specific. A similar process could be used in qualitative analysis where the main category contains more specific subsets each linked and identified with its own characteristics or level of importance but significantly each dataset uniquely bound to the main category. This is important in methodologies such as Grounded Theory where the building of a model or theory is seen as an endpoint and the structure of this is important. The ethnographer adopts a more circumspect view of the data using themes to structure the participant's world taking care not to manipulate the meaning and context.

There comes a point during the analysis process where the researcher is satisfied with the category system and there is a need to tell the ethnographic story. This is a phase of making decisions, interpreting, explaining and providing meaning to the data (Holloway and Wheeler, 2006). This has been likened to assembling a jigsaw but with a vague idea of the picture (Le Compte and Preissle, 1997). There are many pitfalls at this stage but the researcher must ensure that they stay true to the data even if this means revisiting the data and realigning the pieces to give clarity. As with previous stages of the content analysis process, colleagues and participants are valuable to ensure the emerging picture is true to life rather than a fabricated portrayal of the researcher's imagination. The use of wider body of literature is essential to give the project context and currency.

This section has outlined the use of inductive content analysis by presenting the stages of qualitative analysis in a logical and easy to understand format. The strength of this method is that each researcher brings an interpretation to the tool ensuring it constantly evolves. This strength is also its weakness from the

neophyte researcher's perspective as there is no single rule list to follow but key concepts to guide. What becomes clear is that this process should not be rushed. The excitement of completing the transcription process meant that the researcher immediately sought deep meaning and understanding without a period of acclimatisation where a broad understanding of themes, frequency of terms and working codes are developed with no preconceived agenda, just letting the data reveal its secrets. As a result, the researcher found himself in a state of despair as the data felt bland, appearing devoid of any relevant content. The immersive process could be renamed to the 'absorptive phase' as it takes time for the true value of the data to present itself. The researcher needs to read the transcripts, looks at the field notes and reflective accounts written at the time of the interview and sit back to cogitate before the data reveals its secrets.

Content analysis was used extensively to identify key events during document analysis allowing identification of key terms and providing a framework to give context. Initially solely utilised for the analysis of transcribed interview scripts and field notes, the researcher found that this was an effective tool but missed key data when participants' became abstract in their thought process. Utilising thematic analysis alongside content analysis gave a more consistent identification of patterns.

Thematic Analysis

Initially to determine the pertinent from the irrelevant a simple use of content analysis was used. A key word search of decision/decision-making and its variants was performed to explore the number of incidents of these key phrases broadly categorising the text. Thematic analysis establishes patterns and assists the researcher to develop categories for closer analysis and interpretation through the coding and categorisation and abstraction phases of the content analysis framework. Later the researcher will inductively utilise the transcribed spoken word to formulate patterns and generate themes. During document analysis a more top down theoretical approach was employed where the researcher looks for patterns relevant to the research question (Attride-Stirling, 2001). Explicit or semantic content will be used to make sense and give context to the data. Although this may well be all that is needed in some cases a more detailed examination of the text is required to identify underlying assumptions, trends and ideology that may be present. This latent phase moves thematic analysis from the descriptive to the analytical giving depth to the dataset. This is summed up by Braun & Clarke (2006) when they state that thematic analysis is a process of:

Fig 13: Process of Thematic Analysis

1. Becoming familiar with the dataset
2. Generating initial codes
3. Searching for themes
4. Reviewing the themes
5. Defining and naming themes
6. Producing the report.

(Braun and Clarke, 2006)

'.... identifying, analysing and reporting patterns [themes] with data. It minimally organises and describes your dataset in [rich] detail. However, frequently it goes further than this, and interprets various aspects of the research topic.' [p.79]

In other words, a theme is a set of meaning or patterned reply derived from textual datasets that is of importance to the research question. Used in conjunction with content analysis, it provides tools to ensure there is a detailed breakdown of the transcribed data into structured themes through coding (Holloway, 2005). Enhancing the participant's message by focusing purely on the data through a structured and transparent ethnographic account. It would be

easy, especially when amalgamating this analytical tool with content analysis, to explore the number of occurrences and present this as a theme or pattern (Gregory et al. 2012). This was tried in the early stages but it became clear that using such basic search criteria of key words missed very clear themes. Ethnography requires a relatively low level of interpretation compared to methodologies such as grounded theory and hermeneutic phenomenology, but ethnography requires more than simple analysis by frequency (Sandelowski & Barroso, 2002). Categorising and interpreting the data remains important as the researcher assimilates and gains understanding of the participant's viewpoint. The researcher use of an inductive approach with the themes strongly linked to the data without any preconceived coding criteria allowed the themes to develop following immersion (Patton, 2002). A semantic approach would satisfy the research objectives but this tactic was dismissed for a more latent approach of thematic analysis. Braun & Clarke (2006) suggest that the semantic approach examines the data superficially never exploring the data beyond what has been said by the participant. Although acceptable for descriptive ethnography adopting the principles of critical ethnography requires an exploration of the underlying themes, ideas, assumptions and context of the transcribed statements. There is an attempt to understand the decision-making strategies and the factors that influence this from a participant's perspective. As with all qualitative analysis, the researcher is aware that the subjective nature of this analytical tool will call into question rigor. The checking of themes through the use of the participants (Karper & Cole, 2012) and a latent analytical exploration of the themes will go some way to ensure transparency and a balance between what the researcher claims to do and what is shown to be done (Vaismoradi, Turunen & Bondas, 2013). In practice, the two tools are used seamlessly to provide understanding and detail to the text. The researcher is cognisant that although these analytical tools complement each other both have philosophical underpinnings that influence its application, structure and procedural format (Vaismoradi, Turunen & Bondas, 2013).

Longitudinal Data Analysis

Previous sections have explored the general methodology used, the methods selected to collect data and the means by which this data has been analysed. The evolution of decision-making throughout the three years needs a study that is able to capture events over time. Qualitative longitudinal research explores a research problem at key stages but differs from the definition of quantitative methodologies, such as surveys, in that time is seen as fluid, multi dimensional social construct that allows the participant to communicate rich, detailed, textual data whilst tracking the chronological changes that may occur to an individual. In its purest form, Qualitative Longitudinal Research can be a walk through time with the researcher living the experience with participants over length of the study (Hamilton & de Jonge, 2010).

To assist this process the researcher ensured that data collection occurred at or around the time of progression from one year to another.

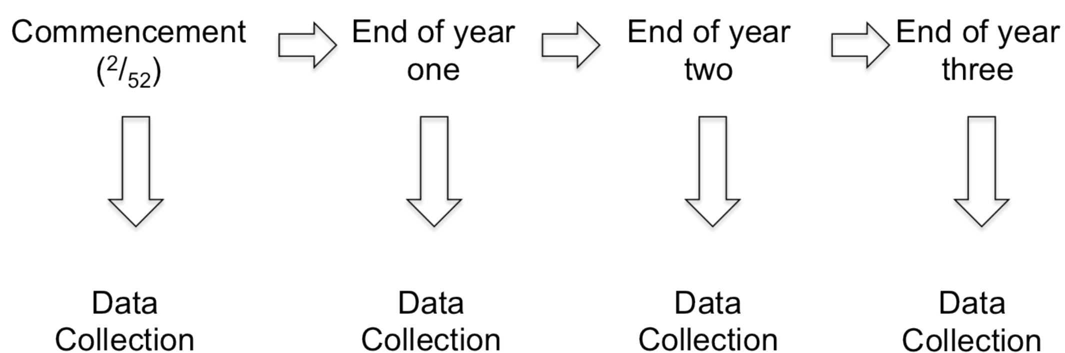


Fig 14: Data collection at progression points

At the start of this project, this novice researcher felt that a trial run would be required to acclimatise to the process of interviewing in a formal research setting. A rudimentary interview schedule was formulated based upon best evidence available during the process of interviewing during pre-test (van Teijlingen & Hundley, 2001). Seen extensively in quantitative research pilot studies are used in two distinct ways. As a small-scale study or feasibility study to examine whether the research is realistic, workable and able to meet the aims of the project (Nunes et al. 2010). This approach is particularly useful to convince funding bodies and stakeholders that the study has a realistic prospect

of gaining valuable results (Sampson, 2004). In this case, a pilot study utilising the principles of pre-test was used where logistical problems that might occur with the proposed method could be identified (Kim, 2011). It allowed the researcher to become familiar with the use the data analysis tools identified for use in the project and increase the researcher's familiarity with the research method. The added benefit of the pre-test is the collection of useful themes to create an interview schedule for the first year of the research project.

Member checking

An ethnographic study should strive to accurately portray participant's thoughts, feelings and emotions (Herbert, 2000). Qualitative researchers are constantly reviewing the research process ensuring everything has been done to represent the accuracy and context of the collected data to promote 'trustworthiness' (Creswell and Miller, 2000). The drive for rigor is not as strong as many of the positivist paradigms and for some may be deemed to be counterproductive if an interpretative viewpoint is taken where there is no desire to prove or disprove but accurately record and analyse the participant's account (McBrien, 2008). Despite this, ensuring that the participant's true voice is accurately interpreted requires thick description of the events and some introspection by the researcher to ensure bias and misrepresentations are minimised or eliminated. A reflexive log is one way to identify and reduce the influence of bias (Roberts, Priest & Traynor, 2006) alongside a transparent audit trail (Barusch et al. 2011) but it is important that the qualitative researcher utilises a number of differing methods to triangulate and promote validity and reliability from a variety of sources. Another option is member checking or validation proposed by Lincoln and Guba (1985). This process gives the participant an opportunity to judge if the transcribed or analysed data has been accurately interpreted and portrays the context and meaning at the time of data collection (Koch, 2006). Seen as a robust way to enhance trustworthiness, member checking can be preformed by sending a full transcript of the interview post event, providing a summary of the transcript or portions of the transcript that require clarification, or finally presenting the participant with a full copy of the analysed results (Holloway & Wheeler, 2002). Three participants were asked if the transcripts were a true representation of their thought and feelings at the time. Anyone who reads the data will have a perspective on how the themes and patterns should emerge and may identify bias and subjectivity (Lincoln & Guba, 1985). Participant's live the experience and can give a valid and honest appraisal giving context and opinion on whether, in their opinion, the analysis of the data is trustworthy from the participant's perspective (Doyle, 2007).

Member checking has its distractors citing participant's perception of the event changes over time; that the participant may be too close to the researcher or there may be a 'halo-effect' resulting from an unequal power relationship between the two parties (McConnell-Henry, Chapman & Francis, 2011). In fact, McConnell and associates raise the issue of who is deemed expert during the data analysis phase and whether that person is the participant. Re-reading past events will inevitably mean that the participant will take the emic stance during this process that is contra to the researcher's wider possibly etic perspective where the views of many rather than a single viewpoint is explored. As a result Julie Carlson's (2010) article 'Avoiding traps in Member Checking' is an essential read as it clearly points out the pitfalls of member checking setting guidance for its usage but more importantly outlining ground rules for the qualitative researcher to ensure a seamless application of this important research tool. The researcher decided against sending full transcripts and provided a polished account to participants that had been categorised and reduced to the key statements that would be used in the final dissertation. Building on the experience of Carlson (2010), the verbatim transcription containing all the filler words, false starts, pauses and repetition of normal discourse may have been a personal challenge for participants alongside the time it would take to read. This polished account gave sufficient material for participants to offer an opinion and to determine whether the themes and patterns reflect their understanding and perceptions of decision-making at the time of the interviews (Turner & Coen, 2008). A clear set of guidelines were also issued so that the participant understands the reason for member checking, explaining that this is not an update of their current thinking but an examination of the text to ensure it is an accurate reflection of their thinking at the time. Conscious that selectivity is influenced by the thoughts and opinions of the researcher and is seen as a form of bias, more data was presented to volunteers than was necessary (Ahern, 1999).

Of the ten participants sampled during this study, three were used to member check during macro analysis [first level coding]. This involved participants being offered summarised sections of the transcripts and a general discussion offered

on whether they felt the early coding strategies employed by the researchers generally reflected their progression through nurse education. Transcripts were sent and the participants were offered a variety of ways to feedback but in all cases chose an informal face-to face discussion. This was an interesting experience because the participants generally agreed with the categories but in their viewpoint the data analysis/coding failed to truly encapsulate the importance of personal and clinical development. On re-evaluation of the transcribed materials it became clear that the attributes of decision-making are implicitly explored through a number of differing categories but forms two main categories of "in ability" and 'in practice' emerged. "In ability" encompasses the reflective self, personal knowledge and developing experience and confidence. "In practice occurs within the clinical area and features categories such as competence, the role of mentors and peers and finally the process of decision-making.

Document Analysis

Ethnography is generally described as a methodology that collects data from observation and interviews (Clissett, 2008). As this qualitative methodology adapts from its anthropological routes, ethnographers has turned to a variety of nonconventional data sources to truly embrace the culture and its meaning to the population under investigation (Altheide, 1987). Document analysis is more than a description of events recorded on a page but an analysis of the motivation, purpose and intent from a historical perspective. Understanding the maturation of the decision-making strategies employed by child health nurses can be captured through the traditional ethnographic methods but participants are a product of the education system and have little understanding of the historical developments that have shaped the curriculum they are undertaking. The policies and documents selected for this section provide a rich cultural heritage ensuring a snapshot into the thinking of policy makers of the time. Critically exploring this dataset gives the researcher an insight into the way professional bodies wish to mould entrants who enter the profession into registrants that are safe and competent practitioners that meet societal health care needs. Document analysis brings a historical context to the research project demonstrating why the curriculum developed as it did and looking to see whether the emphasis of a critical decision maker first proposed by the Tuning Report (2005) truly filters into the timetable delivered to participants and whether this is ultimately reflected in the quality of the decisions made at the bedside.

Nurse education is structured through the publication of guidance and policy from the Nursing Midwifery Council. This guidance forms the backbone of the pre-registration nursing curriculum and the recommendations from these policies are used at validation events to structure courses. Interpretation of these documents and policies by Higher Education Institutions translates into timetabled content and ultimately the time devoted to teaching and learning the art of nursing and, more importantly from this research project's perspective, decision-making. By critically analysing the reports, guidance and publications of the Nursing Midwifery Council, University of South Wales and others, the author

will give a historical and contemporary context providing an broader perspective to the transcribed ethnographic data. This additional data source is contextually rich as it sets out and defines the end product, a registered nurse. How this ultimate goal is interpreted by Higher Education Institutions can be reviewed through the documentation and policies looking specifically for references to and the importance attributed to decision-making, its application into the curriculum and the way decision-making is promoted or assessed during the three years of the undergraduate programme - an etic viewpoint. The researcher is particularly interested in how decision-making is portrayed in regulatory documentation and how this is ultimately applied to timetabling. What is interesting is whether the nursing curriculum explicitly fosters the development of clinical decision-making. Or does the curriculum offer the implicit building blocks of the decision-making process that the student nurse applies during their clinical experience that ultimately leads to an effective decision-maker. To this end, an analysis of key documentation was undertaken using publications that influenced curriculum development, the promotion of critical thinking and importantly, decision-making. This gives an insight into the importance placed on this subject by professional bodies and the guidance offered to Higher Educational Institutions to apply effective decision-making strategies into the curriculum. By examining University of South Wales documentation the researcher will gain an insight of how this guidance was translated into timetabled space to promote a proactive decision-maker.

Research relies upon a rich dataset to ensure authenticity and accuracy of participant's world with the ethnographer traditionally relying on the spoken and/or transcribed word to provide a contemporary perspective. Literature from academic journals is critically reviewed to support or refute the themes, categories or conclusions made by the researcher (Bowen, 2009). The art of critiquing follows a very rigid academic process and is based on the analytical skills of the researcher and the ability to understand and interpret the research process. Document analysis is another important analytical tool complementing interpretive methods and following a social constructivism paradigm (Rasmussen, Muir-Cochrane & Henderson, 2012). It is a systematic procedure

that allows the researcher to review and evaluate documentation and provides context to traditional qualitative research data by, in this case, tracking educational and clinical trends whilst allowing verification of findings or collaborating evidence (Merriam, 1988).

Alongside the principles of content analysis the researcher employed a series of guiding questions that forms a framework promoting consistency of documentary analysis throughout the process. Initially devised by the A.S.L.C (2009), these questions allow the researcher to examine the documentation for context, motivations and intent in conjunction with the guiding principles of content analysis. For clarity these questions are included below:

- What type of document is it?
- Does it have any particularly unique characteristics?
- When was it written?
- Who was the authors and what was his/her position?
- For whom (what audience) was the document written?
- What was the purpose of the document?
- Why was the document written?
- What evidence is there within the document that indicates why it was written?

The researcher has added an addition question to those offered by the A.S.C.L

- What is the quality of supporting evidence contained in the document?

As a dataset, documents offer a number of advantages to the researcher. Throughout the ethnographic process the researcher promotes transparency and reflexivity. One of the foremost criticisms of qualitative research is that it is difficult to reproduce results because the naturalistic perspective is a snapshot of that moment of time of the participant's life (Lee & Porretta, 2013). The content of documents lack obtrusiveness and reactivity, as the content is not developed with the research project in mind and so the researcher does not directly

influence the content of the paper (Rapley, 2007). One main criticism of document analysis is one of document selectivity as it is the researcher that makes the choice of what to analyse. To offset this criticism of bias and selectivity, the researcher relied on the course leader of the undergraduate-nursing programme to select the documentation to be reviewed within this section. With open and honest document selection criteria, the stability offered by documentation available in the public domain allows multiple reviews and reproducibility and is an efficient method, being data selection rather than data collection (Gaudinat et al. 2006). The principles of content analysis have been used and found to be an efficient analytical tool for this purpose, quickly identifying key words and paragraphs that are then further analysed utilising a combination of the more advanced features of content and thematic analysis presented previously in this dissertation (Jonsen & Jehn, 2009).

Chapter 5: Results

The chapter will start with the content analysis of key documents that inform the curriculum before looking at the analysis of the interview data from pre-test to year three of the nurse education programme. Finally, the observational phase of the study will be presented to explore how decision-making occurred in real-time and whether this compares with the participants' recollection of how they performed in clinical practice and during the simulated event.

Document Analysis: The results

Traditionally a critique of relevant documents would be contained in the literature review and would give context to the research project. The documents contained in this section are seen as important in the development of the decision-making process as they set guiding principles from which educationalists develop curriculum and timetables. The following documents have been analysed as data and critical comment given on their influence on the development of the child health student nurse as a decision-maker and are presented in chronological order:

- Standards of Proficiency for Pre-registration Nursing Education
- The Tuning Report
- The Code: Standards of conduct, performance and ethics for nurses and midwives
- Standards for Pre-registration Nursing Education
- Definitive Document 2007
- Review of Timetables for cohort studied
- The All Wales On-going Record of Achievement of Practice Competence

These documents have been analysed using the guiding principles of content analysis presented in Chapter 4. Frequency of keyword encounter and the contextual meaning of the phrases and themes produced from these searches is valuable data. A historical perspective gives weight to the how and the way student nurses are currently educated but importantly the researcher is keen to investigate the significance placed on decision-making within these documents and policies. The outcome of this analysis gives the reader a perspective on the qualities inherent in a registered practitioner following the three years of the nurse education programme and, more importantly from this research projects' perspective, a critical decision-maker as seen through the policy makers of the time and the documentation and guidance issued up to the start of this research project. The researcher is cognisant that the curriculum changed in 2013 so all documentation relates to the curriculum in place at the time of the study.

Standards of Proficiency for Pre-registration Nursing Education

The NMC in 2004 produced a report titled 'Standards of proficiency for pre-registration nursing education'(NMC, 2004). The reports primary objective is to define:

'… … the overarching principles of being able to practice as a nurse; the context in which they are achieved defines the scope of professional practice. Applicants for entry to the nurses' part of the register must achieve the standards of proficiency in the practice of adult nursing, mental health nursing, learning disabilities nursing or children's nursing.' [Page 4]

This report provides the standards of proficiency necessary for applicants to become registrants and as such defines the criteria that curricula should be developed from. It is written primarily for nurse educators guiding them through key indicators that should be met by all registrants at the end of the three years of the nurse education programme. The purpose of the report was to establish the newly formed NMC by adapting and modernising the previous guidance provided by the former professional body the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC). The evidence base within the report is poor. The document contains footnotes and these have references within them. The citations stem either from NMC or UKCC documentation from the past or Acts of Parliament with no truly independent evidence offered.

In this 48-page report there were 14 instances of the keyword decision and its variant identified. Four of these were discounted as they are contained in titles or refer to mentors signing off students at the end of the education programme, leaving a total of 10 instances. On analysis, these could be classified under three themes:

- Characteristics of a sound decision-maker
- Competence
- Partnership

Decision-making in this report is explicitly outlined and the characteristics and competence of the decision maker is generally explored alongside the effects the decision may have on the individual and the clients under their care. The report explicitly looks at the development of the decision maker over time and the ability of the practitioner to work within the scope of their competence. This is an interesting concept because the student needs to know their limitations to be effective within these criteria.

Delegation is mentioned under the context of responsibility of shared care and the ability of managing others, the wider principles of team working or multi-professional collaboration explores the students role in the decision making process within a team to ensure the rights and needs of the child and family are considered and maintained. The elements of competence are outlined demonstrating the relationship between the development of knowledge, skills and the promotion of safe, effective care whilst always being accountable for actions. The final theme links to partnership and picks up on the NMC's primary objective of safe guarding the public. It links to the values and attitudes held by the practitioner that may influence the decision-making process. It also explores the student's role in disseminating information to children and family and how this may influence the family's decision-making process whilst empowering family's to enact any decisions made.

Overall, this report outlines the skills required to be a safe, competent decision-maker. It is based on the premise that with competence and accountability comes a thinking, proactive registrant capable of critical thinking skills that aids the decision-making process. This reports sets the scene for educators to develop a practitioner aware of their limitations and thinking with their client's needs at the heart of everything they do.

The Tuning Project 2009

One of founding principles of the European Union is free movement of citizens across borders to seek employment (European Union, 2014). Foreign ministers of all member States sought to enact these principles by agreeing a series of reforms called the Bologna Process (1999) that would create a European Higher Education Area (EHEA) based on international cooperation and academic exchange to allow mobility of students, graduates and higher education staff (EHEA, 2010). In Helsinki 2005, the Bologna Process was further refined resulting in the production of a document titled ' Standards and Guidelines for Quality Assurance in the European Higher Education Area' (EHEA, 2010). This document sets the standards for Higher Education Institutes to facilitate a pan European currency for academic credit so qualifications have value across the European Union. The Bologna Process is

".... the single most important reform of higher education to take place in the last thirty years and will, in the long term, affect millions of nurses in practice, education and research who work in countries that make up the European Union". (Davies, 2008 p.935)

To implement the guidance offered by the Bologna Process, the Tuning Project was established in 2000, supported and funded by the European Union. The European Credit Transfer & Accumulation System (ECTS) placed a greater emphasis on learning outcomes and competencies. In a response to this development each Subject Area Group (SAG) formulated consultative networks from across the sector to apply this guidance and the Tuning Project Report (2009) 'Reference Points for the Design and Delivery of Degree Programmes in Nursing' is a result of the Nursing Subject Area Group.

From a decision-making perspective this document informs the development of nursing curriculum by the Nursing Midwifery Council and Higher Education Institutions but more importantly the Tuning Project provides a working definition of a registered nurse that is referred to by the Nursing Midwifery Council (2010b) and acts as the ultimate end goal for all nursing curriculum.

“ This registered nurse is a professional person achieving a competent standard of practice at first cycle level following successful completion of an approved academic course. ***The registered nurse is a safe, caring, and competent decision maker willing to accept personal and professional accountability for his/her actions and continuous learning.*** *The registered nurse practices within a statutory framework and code of ethics delivering nursing practice (care) that is appropriately based on research, evidence and critical thinking that effectively responds to the needs of individual clients (patients) and diverse populations”. [P.20]*

The researcher has highlighted the important statement related to the research statement of this dissertation that a registered nurse following completion of their three-year nurse education programme should be a “safe, caring and competent decision-maker”. With such a bold declaration in a document defining the end product of nurse education, the researcher explored the number of instances where decision-making was referred to directly within the document. Utilising a keyword search for decision/ decision–making/ decision maker and its variants there were 18 instances throughout the document including the reference to decision–making in the definition directly quoted earlier. A further three instances of the keyword formed titles of new sections or labels on a number of tables. The number of direct reference to the keyword search is surprisingly few considering the documents importance.

The SAG report (EHEA, 2010) on nursing promotes the development of nursing through the completion of competencies. Decision-making may be classified under three distinct themes - Professional, Clinical & Academic categories. The professional theme outlines the interdisciplinary working and promotes the ethical and social components of professionalism as much as the development of clinical skill.

The aim of the professional theme is to ultimately develop practitioners with the ability to generate and influence policy and so become leaders in their areas of expertise. Interesting, page 20 sees the document making the comment that the

development of professionalism is difficult due to nursing being a mainly female dominated profession in many European countries. Although not explicitly explored in the document there is a suggestion that nursing is seen as almost subservient to more male dominated professions such as medicine. The academic theme outlines the need for the development of knowledge and cognitive competencies to facilitate decision-making strategies. There is little discussion on how this should be handled and applied although the report makes an explicit link to the large body of literature in this area and the utilisation of Information and Communication Technologies [ICT] to assist the decision-making process. The final theme is clinical and explores the development of decision-making within the clinical environment. It outlines the importance of shared decision making with the multiprofessional team and the need for collaboration with our client group to ensure decision-making is shared. As will be seen in other documents produced by the Nursing, Midwifery Council & the University these themes have been duplicated but scant advice is given about the development of a critical decision-maker.

The Turning Project encouraged a diverse group of clinicians, employers and interested groups to join the Subject Area Groups. Names and biographical information are made available for the validation panel members and co-ordinators but for an important 84-page document outlining the future direction of the nursing profession the paper contains a total of nine citations. Admittedly, some of these may well be based on best practice but never the less the document is evidence light.

This document has been embraced by professional bodies and outlines the broad themes expected in nursing curricula across the European Union. It outlines categories and in its definition of a nurse it clearly positions decision-making central to the development of a competent practitioner. What is evident is the development of a decision-maker is given little attention and so is clearly open to interpretation by professional bodies. There are 14 statements [removing the reference to the definition and headings] related to decision-making in this document, of these only three relate to the process of decision-making based on

importance of a sound knowledge base, use of assessment tools and evidence-based practice. The following documents will be critically scrutinised to see if these three statements meet the needs of a developing competent decision-maker.

The Code: Standards of conduct, performance and ethics for nurses and midwives

Published on the first of May 2008 the Code is written to ensure clarity and transparency on the rights and responsibilities of all nurse practitioner. The code was reprinted in 2010 with the addition of numbers to statements and making stylistic but not content change (NMC, 2008). Although not primarily produced for education, the code mentions the maintenance of competence and high professional standards. A Keyword search produced three instances. The only direct mention of decisions or the act of making a decision relates to page 2 of the code where the practitioner should be able to justify his/her decisions. There is no further expansion of this point and in fairness the purpose of this document is not to inform curriculum development but be a guide for practitioners in their everyday practice. The code assumes that each practitioner has been instructed and educated to an appropriate level to allow compliance on qualification. For more specific review on the Council's stance on decision making the next document analysed was the Standards for Pre-registration Nursing Education published in 2010 (NMC, 2010b).

Standards for Pre-registration Nursing Education (N.M.C., 2010)

The role of the regulator is to safeguard the health and well being of the public. To satisfy this goal the NMC produce a number of standards under four headings:

- Professional Values
- Communication and interpersonal skills
- Nursing practice and decision-making
- Leadership, management and team working

These standards are translated into competencies and guide the Approved Education Institutions [AEI's] and their clinical partners whilst developing curriculum or structuring clinical placement. As a result the document shows the intent of the Nursing Midwifery Council and acts as a minimum safe standard that should be achieved by all newly qualified registrants. A key word search strategy revealed 89 instances of decision-making or its variants. Many of these instances were chapter or domain titles and excluded from the analysis. The document also set standards for all four pre-registration branches and many of the standards are replicated. For the purpose of this document analysis only generic standards or those related to the child branch were considered for more detailed analysis leaving in total 27 instances directly relating to decision-making as the remainder are replicas with branch specific changes made to satisfy the professional group they relate to.

When analysed in detail it can be seen that the classification of decision-making takes three themes throughout this documentation.

- The decision-making process
- Collaboration and the decision-making process
- Personal development

Although all three themes interlink the decision making process is outlined by the practitioner's effective use of clinical research-based evidence. Although not

explicitly prescribed the effective use of knowledge and the role of developing experience is highlighted.

The document also makes reference to development and attainment of problem solving, critical or analytical thought processes. These skills are fundamental to the decision-making process but mentioned just three times on page 5, 48 & 112. Informed choice is applied in a number of differing ways throughout this report. It is aligned to the statement relating to shared decision-making between professional and client and implicitly explored from the decision-making process. The ability to make a choice from a number of options is key to the decision-making process and has been seen in the literature review to be a key component of making the right choice, at the right time and can be taught. The NMC has a statutory duty to safeguard the public and this is a clear strategic direction taken by this documentation. Multiprofessional working, collaboration, age appropriate information, an understanding of the ethical and legal ramifications of decisions are all explored from the stance that any decision made should be in the best interests of the child. The final theme is one based upon the personal responsibility, accountability and continuous learning. These statements relate to the skillset required by the registrant on qualification and are very pertinent to the decision-making process. Later in this thesis the researcher will explore how these guiding principles have been translated into the timetable delivered to the student.

This document gives context and meaning to previously published documents analysed in this section. The key features of decision-making are outlined and some indication on how they should be applied within practice through collaboration and team working. Apart from European Union, Department of Health and a Royal College of Nursing reference, this document relies mainly on NMC policy for a majority of the citations. There is little suggestion that the role of the nurse in decision-making is evidence based within this document and as a result it is difficult to elicit the philosophical underpinnings of the document or make any suggestions on the direction curricula should take to develop a competent decision-maker.

Definitive Document – Validation Document

Having considered the regulator's guidance on this topic it seems a natural progression to explore how the Higher Education Institution has interpreted these regulations. Curriculum development is based upon a validated definitive document that is informed and regulated by the regulating body the Nursing Midwifery Council whilst fully satisfying University regulations.

Performing a basic search based on the keyword decision and its derivatives showed that this definitive document had 27 instances. This is adjusted to 23 instances when decision-making refers to mentor development rather than student, or where the keywords are contained in titles that offers no direct explanation of how the term can be applied. When examined closely it can be seen that the document refers to decision-making in four key themes. Process encompasses the act of making a decision presenting a framework of the decision-making process and the key components required by the neophyte student. The application of evidence-based practice into the clinical arena provides rationale for action and the ability to problem solve appears to be fundamental to this theme. The personal development theme suggests that decision-making is an internally developed schema that assists the decision making process.

Experience, individual judgement and reflection appears fundamental to this process when awareness of the decision-making process and its implementation are key. The ability to justifying and present a case for action through written or oral defence of any decisions made or the demonstration of good decision making through role modelling is essential. This theme closely supports 'outcome', where the ramifications of the decision are explored from a personal and a client's perspective. Informed decision-making, legal and ethical underpinnings of the decision and accountability are major components of this theme. The principle of planning explores the movement from process to action and how this impinges on the individual and client, through intervention and the nurse's role and status within the multiagency team.

This document is 129 pages long and written by academics containing just 14 references, a majority of which are NMC, Royal College of Nursing or Government documents and explores philosophy of children's nursing and professional regulation rather than seeking support from the literature. Decision-making is referred to but not truly defined within this document. This is surprising when you consider the central role decision-making has daily in the student's clinical practice. Although it could be argued that this definitive document is written for a purpose – validation – but it should be remembered that it structures the individual modules of the course and ultimately the timetable. So if a key concept is not truly defined then the likelihood of seeing a distinct decision-making component to the timetable lessens.

Review of Timetables for cohort studied

Having considered the regulators' guidance and the interpretation of this by the course leaders through the definitive document, the researcher was keen to see how this was applied into the timetable studied by this cohort. Although all participants would have come into the profession with a series of differing decision-making models gained from their personal experiences or fashioned during their careers before nurse education. The importance placed upon clinical decision-making following the Tuning Project that has been adopted by the Nursing Midwifery Council would suggest that decision–making would be a key component of the curriculum and so would be explicitly explored and nurtured through the timetable (Patel et al. 2002). Decision-making is something that can be taught and evaluated through the programme. There is no doubt that the process of making a clinical decision is complex and comprises of a number of key principles that need to be assimilated and applied by the student (Aliev, Pedrycz & Huseynov, 2012). As a result, it is of interest to analyse the timetable to seek evidence of how decision-making is structured through the three years of the nurse education programme and ultimately delivered to the students to allow them to formulate decision-making strategies.

The cohort under investigation followed the old structure of Common Foundation Programme and a two-year child branch programme. Year 1 or the common foundation programme follows a generic pattern of education geared toward all four branches of nursing offered within the faculty. The year consists of three blocks of education over three terms each followed by a period of clinical placement. Term one introduces the new student into the profession by providing study skills, statutory updating such as manual handling and cardiopulmonary resuscitation and the aesthetics of nursing. Decision-making or variants of this phrase are absent from this term's timetable although the key elements of the decision-making process such as problem solving, assessment, reflection and introduction to evidence based nursing are covered. In term 2, an introduction to advocacy is timetabled whilst the third term supplements this with nursing ethics, risk assessment and accountability. What can be seen is that there is no explicit recognition of decision-making as a timetabled element in its

own right in the first year. It could be argued that the key components of the decision-making process are explored and these components could be merged and formulated by the student into a schema that could assist the development of decision-making.

Year two and three roughly follows a similar pattern of six weeks in theory block and six weeks in clinical practice except for the last placement termed consolidation where the student has a ten-week placement gaining management competencies. Evidence based nursing and assessment are key timetabled components in the second year and it is not until year three where a single three hour session entitled "Clinical decision-making: Setting prioritises – the nurse practitioners role" is explicitly taught. On closer examination, the session does not cover decision-making strategies but explores the work of advanced nurse practitioners and the role they have in diagnosis and nursing/medical intervention.

On initial analysis it appears that little attention is paid to the development of decision-making. It could be argued that this a neglected area of the nurse curriculum for an essential clinical skill that is learnt, developed and matured throughout the three years of the nurse education programme and possibly used hundreds of times during the participants' day. The components of making a decision are taught but it appears that it is left to the participant to pull these components together to formalise their own decision-making strategies within the clinical environment. As will be seen in the data analysis section, when asked directly participants find it difficult to talk about the decision-making process. Participants appear to understand the importance of reflection, risk management and other key components of the decision-making process that are taught and timetabled but have no true decision-making structure to allow them to cognitively explore how to make decisions on a day-to-day basis. In fact, they generally underplay the importance of the decisions they make. At times, it appears that participants do not value the decisions they make or even recognise that they are making decisions that have outcomes that may influence the quality

of care experienced by their clients. This is hardly surprising when there is scant attention paid to the decision-making process within the timetable.

The All Wales On-going Record of Achievement of Practice Competence (2012)

Although an important aspect of the nurse education programme, the academic timetabled component is only part of the picture and 50% of the summative award is based on gaining clinical competence. All students have to complete a series of competencies stipulated by the Nursing, Midwifery Council (2012) that are assessed by qualified nurses within the clinical environment. These mentors have undergone a mentorship training programme devised by the Nursing, Midwifery Council and are responsible for 'signing-off' as competent students either at the end of their allocated placement, at progression points at the end of each year or, at the end of the nurse education programme to allow registration. The All Wales On-going Record of Achievement of Practice Competence is a document given to all students at the start of their nurse education programme and acts as a record of developing competence during the three years of the course. The document contains both Field [competencies specific to the Child Health Field] and Generic Competences; each competency statement has a series of associated practice learning outcomes. This document is a measure of the developing student nurse's practical skill and professionalism. A qualified nurse must sign all competences and the student is deemed to be competent prior to each progression point and ultimately, in the final year, qualification. The document is divided into the three years of the programme and each year has four domains:

- Professional Values
- Communication & Interpersonal Skills
- Nursing Practice and decision-making
- Leadership, management and team working

Using the simple key word search of 'decision' and it variants, the researcher wanted to ascertain the number of competencies that specifically dealt with the assessment of decision-making within the clinical area. The results makes interesting reading as there was in total 111 instances of the word 'decision' or it's variant throughout the document. Of these 64 instances relate to chapter or

domain headings and have little application in the competence process. The table below gives an outline of the number of decision-related hits through each year of the nurse education programme and the category of decision it refers to:

Decision type	Year of Training		
	Year 1	Year 2	Year 3
Direct reference to decision-making in practice	4	5	8
Decision-making and information sharing with child & family	6	10	10
Shared decision-making with the multi-professional team	1	1	3
Number of competency repetition from previous years		9	9

Figure 15: Direct reference to decision-making

The first row of the table relates to data referring to the student making decisions in practice specifically linked to the caring process. Although the year on year figure increases as would be expected as the participant becomes more experienced in the decision-making process. The number reduces when repetition is taken away as the generic competency statement is the same through the three years; it is the practice outcomes that are specific to the year of study. Decision-making of any form needs to be developed but the partnership and multi-professional competencies linked to collaboration deal more with family centred care and communication skills rather than the process of making the decision itself needing different points of reference for the mentor to deem the participant as successful meeting the competency. The keyword decision and its derivatives is prominent throughout this document but there are no clear competency statements that fully explore the student's ability to make a sound and competent clinical decision. Instead it is almost implied that by meeting the competencies within this document the participant would be a competent decision-maker. This is surprising when you consider the central role the Tuning Report's (2005) definition has on the development of all the documents examined.

Conclusion

It appears from the documents reviewed that the importance of decision-making is recognised. This vital skill is utilised minute by minute, with some decisions being routine and automatically enacted by the participant. Other decisions may have a significant impact on the quality of life for the client group and requires structure and an appreciation of the outcomes of our actions. I am reminded of a remark frequently heard in the corridors of Higher Education Institutions when research is taught. Where lecturers comment that students are taught the complexity of methodology, method development and data analysis, but cannot seem to locate or, at times, identify a research paper from that of expert opinion. So is the case with decision-making, the student appears to be given the skills to make a decision, they are even assessed clinically in their ability to make a decision, but the strategies the student employs whilst making a decision is not so clear cut in the development of the timetable or even, as will be seen later, in the minds of the participants. This is unsurprising, as the prominence of personal decision-making strategies appears to reduce as soon as you move away from the Tuning Report (2005) definition of a nurse being a 'competent decision-maker'. As the documentation focuses on the day-to-day taught content, so it appears the concept of decision-making becomes more abstract and nebulous. The taught component of the course contains the theoretical elements of decision-making, allowing the student to pull together the key components of decision-making into a workable personal model. The application is left to the student to implement and the mentor to assess utilising competency frameworks that are not truly 'fit for purpose' from a decision-making perspective.

This section on document analysis proved useful to set the scene giving the reader context of the theoretical underpinnings on which the course is structured. It also demonstrates that there is little guidance for students on how best to manage decision-making within the clinical area. This gives a perspective on the decision-making maturation of participants through the three years of the course up to qualification.

The Pre-test results

Phase 0 Data Collection

A session was arranged during the first few weeks of the participant's training seeking the cohort's permission to take part in this study. A member of the child health team, not involved in the study, gave an outline of the research proposal to the cohort. This was an attempt to ensure the cohort did not feel coerced to participate and the researcher's email details were made available to enable potential participants to gain direct contact with the researcher to participate or if additional information was required. The response from the group was overwhelming with all members of the cohort responding positively and wishing to participate in the study. As a result a formal meeting was arranged to give specific details to the cohort whilst giving the researcher an opportunity to reassure those, who may not involved in the early stages, that they may be approached later in the study and would not be disadvantaged. Ten participants were contacted and a convenient venue found to undertake a semi-structured interview lasting between 20 to 30 minutes. The only selection criteria used ensured that there was a mix of school leavers and mature students. Ethnographers choose their participants using a "big net" approach in this early stage as it is difficult to accurate predict the quality of response prior to the interview process, whilst becoming more purposive as the study progresses (Polit & Beck, 2010). All members of the cohort under investigations had the same chance of being involved in the study but specific characteristics were sought as the research progresses and in particular as themes or categories need to be tested such as maturity, school leavers and gender. In all cases, participants gave consent to participate in the study following the guidance set out by the Faculty's ethics committee. Phase 0 of the research project, looked at day-to-day decision-making strategies employed by participants, how experienced they felt they were in the phenomena and their ability to describe the events they have encountered and whether the decision they made were perceived as good or poor. With the participants permission this was digitally recorded for ease and accuracy of transcription and accompanied with a detailed log of the researcher's reflections related to the process (Rapley, 2007). The purpose of this initial

phase of data collection was to get a feel on how aware students were of the decision-making strategies they employ on a day-to-day basis. The participant's selected for this phase of the study were keen to recount their understanding of their decision-making maturation and as a result were retained for the longitudinal phases of the research. Consistency of sample ensures that the ethnological principles of cohort identity, socialisation and the individual growing as a professional could be captured whilst monitoring the evolution of decision-maker.

This opening phase of the study also allowed the researcher to become accustomed with the interview process, the demands and rigor of the research process and the efficient use of equipment for the recording of data and to practice the art of transcribing. This proved invaluable and helped to identify key issues such as time management and transcribing errors, making subsequent phases more efficient from the researcher and participant's perspective.

Results of Phase 0 Data Collection

Following transcription a period of time is set aside to be immerse oneself in the data. Initially, there appeared to be little content for analysis but as the researcher became familiar with the data, themes and categories reveal themselves through immersion in the transcribed text (Alvesson, 2011). Content and thematic analysis was used to explore how the respondent defines their decision-making strategies (Silverman, 2007). Interpretation of the data whilst looking for patterns and themes in the discourse leads to two strategies whilst coding. In the first instance the qualitative computer software NVivo was used to develop a number of free nodes based upon a detailed sentence-by-sentence deconstruction of the data. This form of coding is termed descriptive coding resulting in a number of labels that clearly identify the contextual nature of the data (Bazeley, 2009). As is the case with most novice researchers, especially when using technology to analyse the data, the researcher found that there were 22 free nodes many of which overlapped. Following a short period of time resting from the data, the researcher re-analysed the data and re-examined the coding strategy. It was apparent that there were patterns in the coding but the labels or code names utilised did not fully assist the researcher whilst reconstructing the data. The labels were reworked using in-vivo coding to ensure the respondents voice was explicit in the labels used. The data could then be classified into two opposing data sets. The first shows the main characteristics of respondents who perceive themselves as being good decision makers and the second poor decision makers.

Phase 0 was useful on a number of counts, the experience gained through pre-test, interviewing, analysing data and presenting the results has been invaluable to this novice researcher (Lofland et al. 2006). One area that saved time on data analysis was the attention to detail needed when naming and defining codes. This seemed the easiest part of the process initially but it soon became apparent that the code required a label that accurately reflects the phase or statement and is transparent for categorisation and organisation of the code later in the study to aid analytical thinking (Bazeley, 2009).

The researcher spent a lot of time learning how to effectively use qualitative analysis software NVIVO version 9. The simplicity offered by software packages in the handling, organising and interrogating the data utilising functions such as:

- Content Searching tools
- Linking tools
- Coding tools
- Query tools
- Writing and annotation tools
- Mapping and networking tools

was appealing (Lewins & Silver, 2009). The use of such software is an attractive option to the new researcher who has had limited experience in data analysis and was quickly seduced by the options available and the hope of a quick fix or shortcut. During Phase 0, it became apparent that despite the advanced information technology skills possessed by the researcher, the data for subsequent phases would be manually rather than electronically processed. There is no clear consensus on the merit of electronic versus manual analysis of the collected data. It appears that the decision is generally based on the level of computer literacy and/or fear of information technologies. In the author's experience it was felt that onscreen analysis resulted in a loss of context and feel for the data. It almost felt that it was coding for coding sake and that the researcher was becoming 'intellectually distant' from the data (O'Reilly, 2009). The advanced facilities contained within word processing software packages such as Microsoft Word was effective in the moving and filing of data and colour coding themes. The advanced keyword searching facilities of Adobe Acrobat Pro was invaluable for scanning large documents and transcripts resulting in a reduction in researcher time manually working through each page and thus increasing efficiency (Lathlean, 2010). As an ethnographer the ability to organise data using software is important, but there was almost a cathartic experience felt when themes emerged from the data, as the printed page takes on a multi-coloured systematic life of its own. The process of coding of data is the same

regardless of the tools employed by the researcher, computer assisted qualitative analysis software will not automatically perform the data analysis for you in the same way as quantitative software such as S.P.S.S (Lofland et al. 2006). The researcher found that the advanced facilities of storage, keyword search and filing allows the electronic gathering of themes, but the hard graft of manually going through the data on a printed page allowed true immersion.

Descriptive coding allowed the researcher to identify key themes and it is these themes that were used to develop the Interview schedule for Year/Phase 1 Interviews. Although the analysis of phase 0 may not be directly applicable to clinical decision-making, it does give an interesting insight into the respondent's opinion on their own decision-making strategies and what factors influence the way they react to particular experiences at the start of their nurse education. The data demonstrates not only their approach to decision-making but also gives insight into their moral status and how they see themselves within their society based upon their decision making judgements. It is these issues that have been applied into the interview schedule to see how important peers; environment and socialisation are on the decision-making strategies utilised by the neophyte nurse.

The diagrams are a synopsis of the themes and categories derived from the Phase 0 data collection. For clarity, the themes have been diagrammatically presented showing the characteristics of making a good or a poor decision from the participant's perspective.

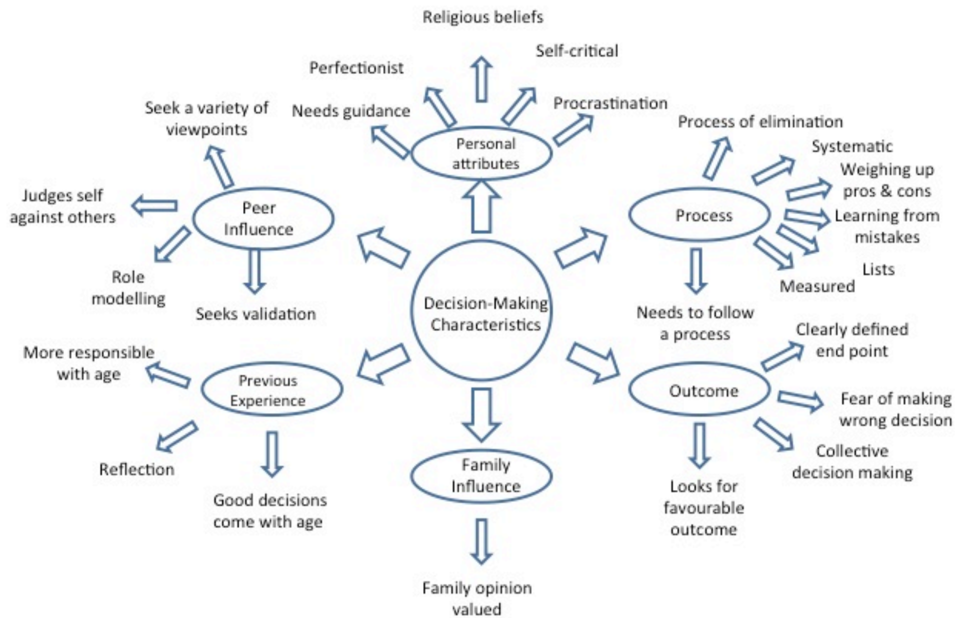


Fig 16: Characteristics of a good decision-maker

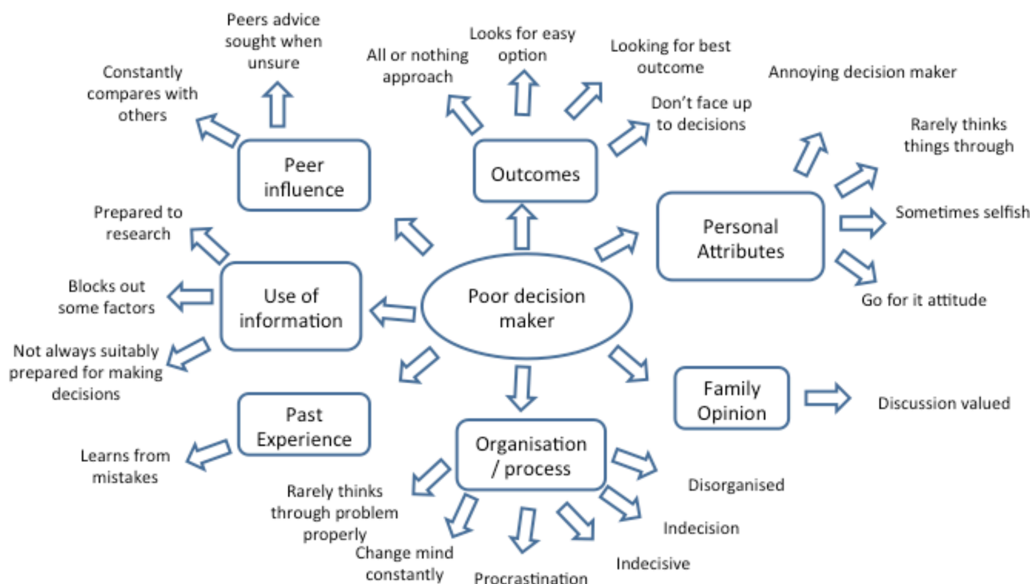


Fig 17: Characteristics of a poor decision-maker

This pre-test has been added to the research study to demonstrate the development of the interview schedule used later in Phase 1. Questions asked at Phase 0 interview relate to their day-to-day decision making strategies such as a car purchase or organising their family life, rather than clinical decision-making but gives the researcher an insight into the decision-making attributes used prior to nurse education. The experience of going through this process was invaluable

as it gave an opportunity to undertake a number of research interviews, apply the key themes of the data analysis tools and exposed the researcher to the art and rigors of research. In the first two interviews, for example, the researcher asked directly "How do you make a decision?" the participants generally stared blankly and could not coherently define their personal decision-making strategy. The following statements sum up the responses obtained from a number of participants on their general perceptions of making a decision:

"I haven't really thought about it [thinking of making a decision], I just sort of go with the flow really and what happens happens." Part 0.5 0320

"well I do a bit, but after I think I should have really thought about that [decision–making] before I did it but I think that's what I have always been like as well." Part 0.4 0843

When a participant makes what they deem a good decision it is generally linked to a favourable or positive outcome.

I don't think I make like snap decisions I suppose unless you're in a situation where you would have to but I do tend to like, I suppose I think of positives and negatives, right what's going to be the outcome of this now let's see who going to benefit all round you know. Part 0.3 1108

I think when I do make decisions I will be like what are the good things if I make this…if I chose to do it this way what are the outcomes this way. Part 0.1 0703

Participants who deem themselves as poor decision makers refer to their inability to make up their minds. It seems as if they are unable to weigh up the pros and cons to make a decision they are happy with.

No [laugh] [Why not?] my mum will tell you this I am absolutely terrible at making decisions [laugh]. I am always uming and aaahing whether to do this or whether to do that [laugh] Part 0.1 1220

I don't know I just go for stuff and I don't think enough I don't think [yeah] Part 0.9 1011

Others look for the easy option rather than the best solution to the problem. This factor was seen particularly in the younger participants.

I don't sort of think it through or work it out I just go with what is easier and then do that one Part 0.4 0103

No not really, we just sort of take the easy option (laugh) Part 0.3 0045

Ethics committees rightly require that participants of any study should have a clear understanding of what the research entails. Despite being aware of the nature of the research project, prior to the interview, every participant found it difficult to conceptualise and communicate the decision-making process they utilise and it's development and maturation during phase 0 and this required careful interview technique for phase 1 data collection at the end of the first year of nurse education. As a result, this direct questioning strategy was quickly dispensed with and a more subtle exploration of the variables that influence decision-making was sought. Being aware of these subtleties meant that there was little wasted time during the interview process and questions were designed, phrased and delivered in a way that would illicit a meaningful response from the participant. Being aware of such difficulties puts the participant at ease as the researcher takes care to phrase a question to ensure it is understood and the participants has a realistic opportunity to give a full and personal response. Regardless of experience, age, gender or the participant's perceived ability to make a decision, it is clear that the themes that emerge from this data proved to be a useful template that structured an interview schedule for the next phase of this research project. The categories and criteria are grounded in the respondent's answers to the posed question albeit the category names are not coded utilising participants words [in vivo coding] in this phase of the study. This ensures that the researcher is clear about the categories and how the interview questions build to capture meaningful information for the later stages of the research project. The following interview schedule is presented so that the

categories link seamlessly from the data in Phase 0 rather than jumping from one category to the next. To elicit these categories the researcher posed questions linked to decisions made in the real world such as the factors that influenced the participant's choice of university, the purchase of a car or an expensive electrical appliance. Participants were also asked to consider what they deemed to be good and/or poor decision and how they came to that decision, the factors that influenced it and how they sourced information to support the decisions made. The table below outlines the working interview strategy developed following Phase 0. The categories in the left hand column generally relate to the main themes derived from the data analysis whilst the criteria section stem from the sub categories that evolved from the main theme. This allowed the construction of an interview schedule used in Phase 1 of the study.

Category	Criteria that ultimately formed the interview schedule
Previous/Past Experience	• Comparison with past decisions • Education and it use in the decision making process
Peer Influence	• Decision comparison with peers • Perceived peer pressure and possible peer competition • Peer approval • Role modelling
Use of Information	• Application of knowledge • Ability to seek and source information
Personal Characteristics	• Ability to reflect on decisions made • Respondents ability to give rationale for the decisions made • Self awareness – knowing own limitations • Beliefs or moral position on decisions making strategy
Organisation/ Process	• Conceptualisation of the decision making process • Ability to differentiate between planned and spontaneous decision making • Respondents ability to effectively organise self to make a decision
Outcome	• The ability of the respondent to identify a clearly defined endpoint • The role advocacy has on the decision making strategy • Accountability and the decision making process
Environment	• The effects of the environment on the decision making process

Fig 18: Development of the interview schedule

The semi-structured nature of the interview allowed deviation depending on the participant's response but the categories and the criteria above gave structure and comfort to this inexperienced researcher to ensure common themes and all areas were covered. What follows is an exploration of the results from the three years of the nurse education programme.

The Results - Phases 1-3

Interviewed at the end of each year of the three-year nurse education programme, students were invited to consider and reflect upon the decisions they made and how they were made during the previous 12 months. Nine students, selected at the start of phase 0, were interviewed over a period of one month; unfortunately one student was unwell and withdrew at a late stage from the interview process interviewed. Rescheduling this interview would have placed the participant into their second year of the programme, rather than contaminating the responses with second year experiences. The researcher decided not to enlist an additional participant from the cohort or wait for the participant's return from illness, instead this participant re-joined the study at phase 2. Each interview ran for at least 45 minutes and the interview was conducted in a comfortable environment of the participant's choosing. A number of interviews were conducted on university premises and the remainder in a quiet comfortable area on the children's unit in their base hospital. The participant chose the interview setting as this was seen as an important factor in making the individual feel in control and at ease in the environment (Kvale & Brinkmann, 2009). An interview is a two person interpersonal encounter and although the interviewer is seeking information it is necessary for the participant engaged and at ease with the process (Kajornboon, 2005).

This chapter will explore the participant's story of their decision-making development during the three years of their nurse education programme. Through abstraction the researcher will formulate a framework of decision-making maturation (Williamson and Long, 2005).

Phase 0 identified that respondents found spontaneous discussion on decision-making difficult. Prior to Phase 1 interviews, one respondent requested a copy of the interview schedule.

"I should have had these questions before hand so I could have thought about situations." Part 1.3 1855

This suggestion was considered but discounted for one simple reason. The researcher was keen to gain an untarnished account of how participants view clinical decision-making rather than an account that may be seasoned and tarnished by reading of the literature before data collection. There will always be a trade off by the ethnographer; on the one hand the researcher is keen to elicit a snap shot of the participants own views, the lived experience of decision-making (Hoey, 2012). Conversely, ethic committees are keen to ensure that participants are fully informed of the research process by giving sufficient material to ensure participation is based on a sound understanding of the individual's role and its implications when consenting to be a participant in a research project. This means that the researcher balances the ethical safeguards rightly imposed by ethic committees against the pursuit of unblemished data during the research project (Tingle & Cribb, 2007). Presenting the interview schedule up front would have given the participant an opportunity to scan the decision-making literature. This may be beneficial from a participant's perspective, even to the point of making the participant feel truly informed from an ethical perspective (Thompson et al. 2006). Unfortunately, some viewpoints may not have been formulated by the participant but rather have been generated from their reading, possibly utilising jargon, terminology or decision-making strategies rather than personal accounts, explanations and thoughts spontaneously generated and focused in the emotions and the experiences of that moment of time. This would clash with the inductive nature of ethnography where the researcher is looking for the truth as seen by the participant at that period of time (Mastroeasqua, Crupi & Tentori, 2010). Rather than testing the participant's ability to review a topic area, the researcher is acutely aware of the open-ended and exploratory nature of the methodology where dialogue and observation combines to look for emerging patterns rather than textbook discussions on the decision-making process (William, 2006).

Initial analysis performed by the researcher explored the decision making process and sought to find decision-making patterns within the data. This was a troubling experience for the researcher and in conjunction with the comments following member checking, it became apparent that the researcher had moved

away from his ethnographic roots and was not fully exploring the data from the participant's perspective. Initially overwhelmed by the amount of data requiring analysis it became apparent that inadvertently coding had been influenced by the literature. What was a very complex inter related hierarchical decision-making schema initially developed on first stage of data analysis was eventually simplified, as it is clear to the researcher, that the overwhelming feelings and emotions experienced by the participant relating to decision making development could be more accurately categorised into two main themes - personal ability and practice ability. Personal ability promotes the participant's attempt to come to terms with the decision-making process and the way they embrace their feelings of being at ease in the clinical environment. It specifically relates to the development of a comprehensive knowledge base, their ability to learn and adapt to new situations they encounter and having confidence, over time, to make decisions. Practice ability, relates to the practical day to day encounters within the clinical placement. It is the evolution of the practical skills necessary for registration where the participant comes to terms with the complexity of decision-making, exposure to new experiences and working within a multiprofessional team. This category explores how the internalised schemas developed by the participant is applied and operationalised
in clinical practice plus the clinical experience participants are exposed to as they journey through the three years of their nurse education programme. This is represented diagrammatically below:

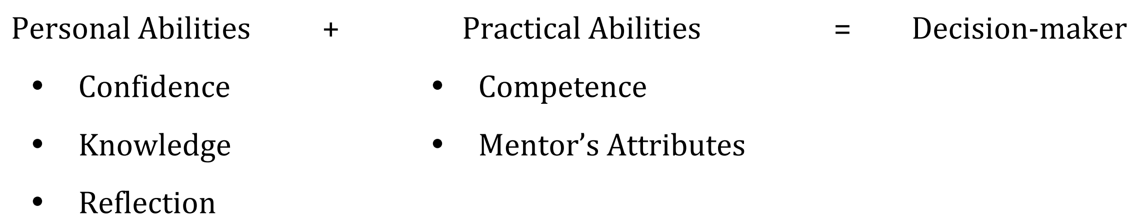


Fig 19: Decision-making Model

The ability to work and function in a fast paced, highly stressed, complex environment sees the participant move from a subservient pair of hands, at the start of the nurse education programme, into a competent and useful member of the child health team. The way participants move through this process is very

similar and is based upon the ability to learn from events and to be given the experiences and opportunity to function as an effective, independent critical thinker. Each of the categories above will be explored from a longitudinal perspective allowing the reader to see how the student travels through the three years of the nurse education programme. In all cases, a distinct change in the participant's awareness of their decision-making abilities can be seen. This section is structured to present the key themes and categories from each year of the nurse education programme. It is in the discussion at the end of each section that the longitudinal journey is critically analysed and conclusions presented.

Results

The results have been categorised separately so that the reader has an opportunity to witness the development of each of the key decision-making factors on a yearly basis. There is a large body of knowledge related to decision – making with a wide array of models and theories associated with it (Thompson et al. 2004). Decision-making is at the heart of nursing and a critical component of daily practice (Arries, 2006). Data analysis reveals six key components that participants identify as factors in the maturation of decision-making through the three years of the nurse education programme. In isolation, these components are not surprising but their relationship and the influence they exert on the decision making process has implications for the way participants understand the ward environment and the clinical situations they find themselves in. The results section starts with the importance of knowledge on the decision-making process in the personal ability domain.

Knowledge and making a decision

Knowledge is at the heart of all healthcare interactions, the ability to understand the complexity that surrounds the practitioner and the wish to become experienced and competent like their registered colleagues is a motivating factor for student nurses to constantly strive to increase and improve what they know (Schaefer, 2002). These are aspirational aims and knowledge forms the cornerstone in this development through the assembly of a comprehensive database to draw upon during the decision-making process. The fundamental ways of knowing proposed by Carper (1992) presents a picture of nursing as a series of four interlinking paradigms of empirics, esthetics, personal and ethics, that when mastered and combined encompass everything that relates to being a nurse. Carper's model implicitly explores but does not define the term knowledge and it's implication for clinical practice. Moch (1990) attempted to explore this notion in greater depth by the addition of experiential and interpersonal and intuitive knowing as a way of capturing the complexities of human interaction. To truly understand the notion of decision-making it is imperative that we look closer at this concept of knowledge from the participant's perspective. This section examines the participant's thoughts and feelings linked to knowledge development. In particular, it examines the key events that the participant feels influenced the assimilation of knowledge and its influence in the decision-making process.

Knowledge - The first Year

This section demonstrates the participant's assessment of his or her own knowledge base during the first year. The need to demonstrate knowledge and apply it within the clinical arena is assessed by mentors but it appears the participant is also very aware of their own strengths and deficits whilst conveying their cognitive ability. From the first placement of the participant's nurse programme there is an awareness of the enormity of the task ahead, the data presents the participant's feelings, views and understanding of what is happening around them.

When asked, participants will inevitably mention learning or knowledge acquisition derived from the clinical arena rather than the skills and theory taught in University. This is unsurprising as the profession is a hands-on clinical profession. As the participant gains an appreciation of the nursing/clinical theory and acquires practical skills, so the participant's understanding of the world around them changes. Quickly the participant decides that despite the intensive theory block at the start of the course it is the clinical environment that holds all the secrets of nursing.

"Yes, I think that is where you do a majority of your learning is out on the wards, its where you do things" Part 1.1 2104

"Some things you can't be taught though without doing it practically in that situation [referring to the clinical environment]." Part 1.4 1110

The following categories will explore this concept in greater depth

This section explores how the participant applies information gained in the University setting. Split into two separate sub categories Application of theory to practice & skills they demonstrate the importance placed upon the information offered within higher education and the ability of the participant to analyse, synthesise and apply this to decision-making in the clinical environment.

Questions were posed to participants during interview to investigate the importance placed on knowledge gained in University compared to that gained through clinical experience. The aim of this series of questions was to find out the relevance of the information offered and whether it was useful in the early stages of the participant's first year and how they utilised that information whilst caring for their client group. 'Praxis' is a process where theory, knowledge or skills are practiced, mastered and ultimately applied to the clinical environment (Wills & McEwen, 2002). From an undergraduate perspective, praxis enables the participant to ultimately develop into a safe and competent registered practitioner (Honey & Lim, 2008). It will come as no surprise to many lecturers in higher education that participants place greater importance on clinical knowledge over that gained academically in the early stages. The statements below encapsulate the feeling of respondents in phase 1. From the participant perspective the only true knowledge is clinical knowledge. As can be seen from these following statements:

I think I learned a lot in Uni but to do it for real is quite scary but its on the ward where you learn the job. Part 1.4 0300

I think the skills sessions were helpful, [in uni?] yeah um I just have to go back to the ward because that's where I learnt most to be honest. Part 1.3 0940

What was interesting, from the researcher's perspective, is whether the initial theory block is perceived as useful preparation for the first clinical placement by the participants. The University ensures all statutory requirements are satisfied such as the manual handling passport, basic life support, hand washing techniques and hygiene needs. Following successful attendance at these sessions,

the student is deemed prepared for the first clinical placement. The student perspective is very different as they quickly realise that what is taught in University is not working knowledge on how to effectively survive in the clinical environment and, in particular, the researcher is interested in knowing how this paradox assists the development of decision–making.

One thing galvanised the group in that they all had a common fear – the clinical unknown. Students were placed on an acute surgical ward for adult patients, at an extremely busy time. It is clear, that the participants saw this clinical experience as a 'baptism of fire'. One participant summed up the feeling of not being prepared so nicely when recounting her first morning on her first placement. She recounts how scary and upsetting that experience was because she was, in her opinion, so unprepared for the clinical experience:

…………but the first time a buzzer went off, it was like what the heck is that noise, has someone died on our ward or something [laugh]. Yeah that is something they did not prepare me for in uni [slight pause] buzzers. Part 1.1 1433

This was further echoed by a number of participants who either felt they had little idea of what to expect or felt that the theory paid little relevance to what they saw in the clinical arena.

I can remember the first day we were there, just general, cause I had never worked in healthcare before and just having to toilet the patients and it was quite hard. I didn't feel, I don't know if you could ever feel prepared for that, you know [yeah] going into it. But I did feel a little ill prepared for that. The very basic things, you know [yes]. Part 1.3 0200

At first, it was really a bit scary to be honest. I saw things which and because I had never seen anyone that was ill and didn't know how I was going to cope with like gruesome things really [smile]. Part 1.6 0157

You don't understand anything that is going on either it is like you just don't know what to do so. Part 1.4 3022

Um … … the first few weeks I was very unsure of the … of everything really [um] it was very daunting because I have never been on the ward before [yeah]. Part 1.7 1216

Despite the trauma of such an experience it is surprising that attrition rates are not considerably higher after this first clinical experience. It appears that the theory block covers the main principles of nursing but little time is spent sensitising the student to what they are likely to expect to see, feel, hear or experience during that first six weeks of clinical placement. Decision-making is confined to seeking clarity from the chaos. Comments such as

… and I was like ' I don't know what I am doing, I don't know what I am doing!!!!' [laugh] after that first [referring to the first placement] I was honestly like I went home and I just cried for hours and I was just like 'I can't do this any more' Part 1.1 0910

Um, what I would do um because the first morning I went in it was like they were speaking Chinese to me [laugh]. But I thought I have got to get this into perspective because I haven't got a clue what they are saying and I haven't got a clue of what is going on. Part 1.6 2019

One area that truly encapsulates the feeling of being unprepared was that of the ward handover. The first thing that happens on arrival to any ward in secondary healthcare is that the nursing team will assemble and a summary of the patient dependency and care delivered will be presented from the previous shift to the new nursing team (Doyle & Cruickshank, 2012). The information presented at handover includes patient dependency, interventions and plan of action for the coming shift. Assimilation of this information is essential to the decision-making process from the very start of the shift focusing the nurses' mind on the order, priority and the frequency of tasks needed during the span of duty (Kerr et al. 2002). Analysing the documentation given to students and looking at their theoretical and clinical skills timetable it appears that little, to no, time is devoted to such an activity during the first theory block (Scovell, 2010). The information gathered by this routine clinical event determines the allocation of workload and

forms the basis of prioritising care based on the understanding of information and an assessment of the needs of the client group and is the basis of clinical decision-making (Kerr et al, 2011). Interestingly, the participants saw the handover as a time of confusion, uncertainty and had little appreciation of the importance of the event except to say that they felt out of their depth, a feeling echoed in the literature (O'Connell, Macdonald & Kelly, 2008).

The participants report a complete naivety about this common nursing experience. The handover is seen initially as a mystical event for which participants felt unprepared and unclear about their role and behaviour during and after handover. This nursing task was picked out by the participants as particularly traumatic and it is interesting from a research perspective that decision-making is likely to be stifled from the start as participants have little idea of what to expect on arrival or subsequently during the shift if they do not understand what is happening around them. With little time devoted to explaining this complex process during the timetable, participants clearly do not understand the purpose of this staff gathering at the beginning and end of each shift:

Stunned, I had never been in a handover and I had never been a carer so [yeah] I had never done this type of work before. Part 1.7 1711

On the first one [referring to the first day on placement] I did not know that they did a handover. [laugh] Part 1.1 0444

When I first went in I wasn't to sure what I should be doing in handover. Part 1.9 1326

After this initial shock of course came the initiation into the world of abbreviation, medical jargon and the first taste of the language that they need to understand to appropriately interact with their peers throughout their nursing career. Kerr et al. (2011) suggest that this ritualistic handover event is dominated by medical syntax and abbreviations. To make sense of this new

language is essential to function effectively, what follows are extracts of how alien this process is to the neophyte practitioner:

so it was like so so has got, something that was abbreviated, I would be like I don't know what that is, [whispered] I don't know what that is! I don't know what I am doing!!! [laugh] Part 1.1 0528

but other orthopaedic stuff when they were taking about, abbreviating different types of operations. And if they were to come in with other conditions as well I would sit there and think [Participant makes a fly pass sound and arm action over her head] that's gone way over my head [laugh]. Part 1.2 0934

I swear I didn't understand a single word that anyone said not a single abbreviation nothing [laugh]. Part 1.4 1640

they were like ' oh Come in here and have the handover, right Ok write it all down on this list' and it was like I have written this down but I don't know what it is [laugh]. Part 1.5 0854

It is like learning another language [right] and that is how I done it. And I think that every time I heard something that I hadn't heard before I stop and say "I am really sorry but what does that mean?" Part 1.6 2110

It was like they were talking gibberish you know [yeah]. They would – I would write it all down and then circle things I didn't well [laugh] understand most of the things. Part 1.7 1711

When I first went on I wasn't to sure what I should be doing in handover. They said that I should be writing but I didn't know what I should be writing and I wasn't sure what I had to do [right]. Part 1.9 1326

you know the first time you go in for the handover and all these abbreviations and things are coming out and you are thinking 'What on earth is this!!!' Part 1.8 0216

Developing understanding of the handover process gives some insight into the way the participant starts to socialise with healthcare professionals but also participants start to realise the intensity needed to make sense of their new role. In particular, developing a working relationship with peers and the confidence to overcome the fear to ask questions and interact with Health Care Professionals and make sense of the process.

I always wanted to do nursing but I never really knew what it was, so like I went in to handover and everyone was writing. So I thought I need to write [laugh] but I do not know what I am writing but I will write on my sheet. Part 1.1 0444

Right then I would write then I am on pink team, this persons needs to be bed bathed. But yes the first initial thing was what is everyone else doing so I was copying them [laugh]. Part 1.1 0444

But then we would just ask, otherwise we would just pick out their notes and go through that. If it were really important we would ask there and then and would say look we are really sorry but could you explain this to me [yeah] but otherwise you would just wait until [yes] after [referring to the end of the handover] and everything is so quick isn't it the way they would hand over. Part 1.2 0934

I had gone online with Amazon and bought some student skills books. So I had one for just basic skills; one for Maths and one for abbreviations. And I remember looking in the abbreviation book and I would literally carry the three books in my pocket, like I've got this one now [shows book and laughs] and then I would just look through them and try to make sense out of [yes] of, you know, what had happened and I would go to the bedside and see if there was any signs of what was going on and then think of yeah that is what is. It is like neck of femur, I was thinking what is NOF, what is NOF and what can that be, you know [laugh]. Part 1.2 1202

So I took different coloured pens and highlighters with me and everything I didn't understand I would highlight and I would say to my mentor 'Right what does that mean?' and she would explain and every day I would write in the back of my handover sheet what things were and obviously as time went on [yeah] I would pick it up. So I did pick up a lot of jargon and you do find yourself speaking jargon yourself now which is quite strange. Part 1.6 2019

And I think that every time I heard something that I hadn't heard before I stop and say 'I am really sorry but what does that mean?' You would apologise for saying it because I wouldn't know but obviously they wouldn't know because that is the way they talk. Part 1.6 2110

I would write it all down and then circle things I didn't well [laugh] most of the things and then find an NA then because I wouldn't ask a qualified staff what does this stand for? what does this stand for? [Right] and then write it out then.' Part 1.7 1711

So you just do it [laughing and speaking quickly] and I was doing and I said and my dictionary was in my pocket and I would look things up when I went home just to find out what the conditions were and what the abbreviations were and how you treated different things. Part 1.8 0216

No not in the handover because everything was so rushed. It was such a big ward I didn't want to keep stopping people [yeah]. So I tended to look at other people's you know [handwritten notes] and ask afterwards you know sometimes [yeah]. Part 1.9 1254

We observe right at the start of the participant's nursing career a coping strategy when there is decision-making uncertainty that stays with them for at least the next two years. Participants mimic their peers; this process of observation is a default situation prior to making any explicit decision about care or actions they are about to undertake. The pressurised setting of the handover does not allow

the participants to ask questions at the time about abbreviations, conditions or even the purpose of the handover. So they sit back and write like every other member of the nursing team, understanding little of what is happening around them. This is a fundamental concern from a decision-making position because we have neophyte practitioners with no idea of the structure or nature of the role they are expected to undertake. The ability to decision make in this scenario is negligible; in fact this uncertainty of role is seen as a major stressor, by participants, and creates a dependent practitioner from the start. It could be argued that this may be a good thing for a first ward placement and reduces clinical risk but rather than the student being able to feel at ease in a pressurised situation, they find themselves in a position of not understanding the handover process never mind the nature of the illness and treatment required by their client. It is difficult to make decisions when you do not fully appreciate your role and how it will influence your daily practice.

But when you get into it, it is much easier [yeah] it has just got to be explained in the first place. Part 1.5 0854

The significance of the information offered in University and how it relates to clinical practice is examined in this next section. Participants were critical of the sequence of timetabled events and what they see as the disjointed way the curriculum has been put together compared to their clinical experience.

Yeah, I didn't find myself on the ward thinking oh yeah I think that lecture of that particular session was useful and has helped me with this [interesting] I have to be honest. Although I might have found the lectures interesting it wasn't easy to apply them to my ward experience. Part 1.3 1622

when I got on the ward I didn't think I had learnt especially in the first six weeks I didn't think I learnt much [right] theoretically. Part 1.8 0419

Students are keen to master the skills they see as essential to effectively participate within the nursing team. When theory and practice diverge (as perceived by the participant) at the start of training, the participant feels that the

knowledge provided by the University is divorced from the reality of clinical practice. Participants seem not to understand the importance of the statutory training required that will ensure that they are safe practitioners when they enter the clinical environment or that the taught theoretical content accumulates over time providing comprehensive education package at the end of the three years of the nurse education programme.

Um [long pause whilst thinking] the first ten weeks no because I did not expect ward X (referring to the ward name] at all, but after that yes I think so. Although I think some of it was backwards I think, like we would be doing skills well for the first one we did the hand washing and that and when we came back we would be doing skills that we had already practiced out there like giving injections and stuff or whatever we were doing [yeah] So we had already, it was like going backwards but I suppose it is good to learn techniques and stuff again [yeah] Part 1.1 0322

Other participants found solace in the fact that they had a general idea of what was expected from the simulated skills sessions in University:

Yeah, because otherwise for some things I wouldn't have a clue, skills especially. Because you come onto the wards and they say 'Do this!' and you are like I haven't got a clue what that is. So yeah I think skills [in university] are really, really helpful. Part 1.5 0541

I think that although we learnt quite a lot in the first term um because I think that I never worked in that sort of area before I um I picked up on things that I learnt in the first term but I didn't really learn things until I actually went on first placement. [Right] It was like when we did things like the skills sessions I felt that I didn't get the full effect of it until I had gone onto the wards. I just didn't understand and I just didn't get the full effect of it [yes]. Um but um I think that I learnt a lot more doing practice um but then it was good coming back to the second term because you had been out there and you understood a lot more in the second term. Part 1.6 0410

In these early stages of the nurse education programme, the participant is acutely aware of their knowledge and skill deficit and need for self-discipline to gain mastery of the routine tasks and the steep learning curve they are likely to encounter. The importance placed on clinical learning by the participant is immense but even during the first year the ability to understand 'why' things happen is deemed to be important by participants especially as the student progresses to the end of the first year.

I think yeah it is good going to uni to get the whole science side of it as in um why did that happen but definitely being out on the ward completely changes everything like [yeah] it puts things into perspective being out on the ward. Part 1.1 2104

It's the why it is the reasoning isn't it, it is not just doing it, it is the why you are doing it it is the reasoning isn't it. It is good to know that because if patients say "why are you doing that?" you can't just say you got to so you have got to know the reasoning to stand by yourself so you definitely have to know the theory better to be able to apply it in practice then. Part 1.4 1148

Oh yeah definitely you need that I mean many say it should all be practice but if you don't know your theory then there is no point putting anything into practice if you don't know what you are doing isn't it? Part 1.4 3242

With experience comes a greater understanding, with a number of participants stating that it was only when they encountered the condition, procedure or treatment clinically did the theoretical knowledge provided by the University make sense. One participant turned that around further and suggested that witnessing a clinical event gave context to the theory taught later in the year:

'Um I would relate back after my second theory and my first placement then things made sense to me and things linked in together [good]. So I think that it all worked out quite nice [yeah].' Part 1.6 2800

What can be deduced from the first year is that the needs of the participant could be construed as being at odds with content within the nursing curriculum. The

University timetables the art of nursing, statutory updating and the promotion of what the University staff perceive, based on NMC guidance, as important to become a safe practitioner. Practical advice such as handover preparation is given no mention on the timetable and so from the start the participant is placed at a disadvantage within the clinical setting. Much has been written about the theory practice gap within nursing and these statements highlight the problems encountered by the student nurse almost from the first day of clinical practice, because they are unable to 'see the wood for the trees' (Scully, 2011). The process of internalising and applying the theory gained within the educational institution quickly becomes lost in the survival game of task mastery (Jerlock, Falk & Severinsson, 2003). The need for acceptance and the process of socialisation results in a participant searching for tasks that they can quickly utilise to become useful. The theory taught in University is based on sound principles but these are often sabotaged by the covert acts promoted at the bedside of getting things done in the most efficient and timely fashion (Maben, Latter & Clark, 2006). It could be argued that this is a natural rite of passage for every new member of the professional as the relevance of theory taught can only be applied with sufficient knowledge and experience making the application of theory to practice a retrospective game of catch up (Ousey & Gallagher, 2007). Without a true understanding of this important aspect of nursing it is not difficult to see that the participant is at a disadvantage for not knowing what is happening next. Decision-making requires information that has been understood and internalised before action can be taken. It appears that preparation for the clinical environment is far from ideal from the participant's perspective and creates a dependent practitioner who learns to appreciate the subtleties inherent in nursing within the clinical environment. Unfortunately, the timetable does not provide sufficient content to equip participants to make rudimentary clinical decisions or sensitise participants to the routine and common experiences they will encounter within the clinical environment. As we move into the second year of nurse education there is a change in the way participants acquire and synthesise knowledge with a greater realisation of the importance of theory.

Knowledge - The second year.

To make an effective decision it is essential that the participants' knowledge base continues to expand and develop (Dadgaran, Parvizy & Peyrovi, 2012). The participant's ability to understand the taught component of the course and apply this into practice proved easier in the second year compared to the first. The importance of the competency process and how this relates to acquisition of clinical skills also appeared to gain greater importance from the participants' viewpoint and there appears to be a link between skills, competence, knowledge and the ability to make a decision. Split between theoretical knowledge and clinical skills, participants clearly differentiate between the developing knowledge base and their competence as a critical thinker and decision-maker.

One criticism of the first year of nurse education is the generic nature of the content. Participants start talking about gaining an understanding of what it is to be a child health nurse or remark that it is only now, in the second year, that learning takes place.

Yeah because the first year was very generalised and a lot of it didn't relate – some of it but not most of it did the basic things and that. A lot of the lectures were palliative care and obviously children can as well but care of the elderly and disease of children are very different. Part 2.7 1419

So the second year was like really I got in touch and I was like the first placement of my second year I really enjoyed. It was a paeds ward and that was the first time I really thought I was learning more about what to do [yeah] Part 2.2 0122

The two statements above typify the general feeling of participants where the theoretical blocks, in the first year, are seen as peripheral and generic and do not directly relate to their ultimate goal of becoming a child health nurse. The relevance of the knowledge gained in the first year is not lost on the participant but appears almost insignificant because its not specifically child related. This feeling is specific to the taught components of the course as participants refer to building on clinical experience encountered during the first year.

As much as I feel that the first year wasn't related I did learn from it and that I think some people find it hard with Paeds because like the first year is general nursing I still I have learnt skills that I have taken forward like developing my relationship with my mentor and things like that which I then took into my second year Part 2.2 3030

It's like in the first year you are just student. It is like in the first year you can't do much because you are just finding out and it's all new. In the second year, you have already had a taste of it so you have kind off got the basics of it and its like where everything is and like you have a bit more confidence because you have learnt more and especially about conditions and stuff like that. Part 2.3 0817

Oh definitely yeah I think both the theory and the practical side with skills like that um there's obviously you are not going to know everything and we didn't do a lot of child in the first year. So when I look back at the theory that I had to start me off in the second year it must have prepared us enough to go into that first six week placement because I felt I knew a lot going into it. Part 2.6 1809

There was some negativity about the generic nature of the first year with one participant suggesting that she felt, on reflection, being unprepared for the placements in the first year.

Yeah definitely you didn't really learn much about the placements in the first year and you didn't really have any child-geared theory and so you weren't able to implement it in practice because we weren't in paeds practice so it was a bit unrelated. The second year fitted in better. Part 2.2 0208

At the end of the second year most participants could see the relevance of the first year's theory and how they are now building on the foundations laid down during the common foundation process. It appears that participants realise the skills gained in the first year assist decision-making in the second.

Um I think so. I think sometimes I feel that the first year is a bit of a blur to me because you feel like you haven't taken much in because there is so much

information. But when you come to a situation and you do something then you think God you know and you can see with the observations and stuff and the normal values and ranges and you say 'oh god that's not normal' and you would think I wouldn't have known that last year. [laugh] Part 2.6 1334

Yes I think we were well prepared for the first placement [of the second year] because we hadn't touched a great deal on paediatrics specifically in the first year. So obviously then during the second year then and by the six week placement then you knew things, you saw things and you recognised things which I never thought I would be able to do. Part 2.6 1846

Knowing the basics is important in laying foundations for future knowledge and competence and is based on confidence. Confidence, as previously mentioned, is a fickle notion and fluctuates with the participant's familiarity with the environment, procedures encountered or the routine on the ward they are placed. Without confidence the participant is unlikely to step forward to make decisions. Some participants felt completely disempowered by the changes they encountered in year 2

So when I arrived on Paeds then at the beginning of the second year it felt like a lot of knowledge, well not knowledge but a lot of skill was sort of taken back off you because you can't do them. So in that way I felt that I was going backwards but then my knowledge of Paeds improved so I felt like I was going forward I don't know I think there is both ways. Part 2.1 1319

its like almost you have to take a backwards step in some things but in other things its like 'go and do that!' and you are like 'ohhh OK' [laugh]. Part 2.1 0127

Yeah, yeah I do, I do there are new situations where I think I'm the type of person that I am quite nervous going into new situations but then my confidence grows and then I will made sure then that I become competent and knowledgeable in the tasks that I am doing. Part 2.5 1815

The specific teaching of child pathophysiology and the art of children's nursing were appreciated during the second year and a number of participants remarked on this issue. The specific nature of the theoretical content gave context to the situations the participant's were exposed to during the second year and can only assist the decision-making process.

I think yeah, I don't know I think the acute ones [modules] were good as in especially when we looked at certain diseases and that and illnesses. Because in Paeds the same things come through at Christmas time like your bronchs and all that but in that respect knowing the science behind the things you do was good. Part 2.1 1452

Yes, definitely because you get to know the conditions and things and yeah Part 2.2 0858

Yeah definitely [what's been the main difference?] Um [long pause] to be honest [pause] I'm trying to think now about decision-making. Yeah because I didn't have the knowledge then that I do now….. Part 2.4 1518

The second year was much more obviously child focused so I think it definitely relates more, the skills [simulation sessions organised by the child health team] I found very good as well because I found on this ward it was the first time where we used stethoscopes to do obs. It was very good you used the stethoscope every time. Now from the importance of knowing it and the importance of using it Part 2.7 1419

As the participant's knowledge base increases so the ability to apply that taught in University becomes easier. Making sense of this newly acquired knowledge and building on the foundation laid down in the first year of the nursing programme facilitates a new found awareness that there are embryonic signs of a developing nurse (Metzler & Metz, 2010). Differing ward environments, the further development of clinical skills and new experiences will always raise anxiety levels. What is clear is that when the participant reflects back at the end of the second year on what occurred in the first year there is a realisation that

true learning had occurred (Corlett, 2000). Being 'ward wise', a survival principle developed in the first year to recognise routine, key tasks suitable for the neophyte and recognising the importance of mirroring the actions of their mentor means that the second year allows the participant to concentrate fully on developing this knowledge base and its application into the clinical environment (Feeney, 2013). There is a different mind-set in that the participant now deems themselves to be a true child health student nurses in the second year. The theory and clinical placements are purely child orientated and it is at this stage that they feel they have entered the course for which they applied.

Even though we were first year trained we weren't then trained in paeds so like, it was like going back to basics, starting again, in some aspect [yes]. Part 2.1 0127

I felt that I only started to learn anything really relevant to my training in my second year. Part 2.3 0112

The relationship between theory and practice is now recognised by participants there is a realisation that it is for them to take responsibility for their learning and provide the highest quality evidence based care they can achieve (Peate, 2012).

Knowledge – The third year

The third year of the nurse education programme see participants realise that their knowledge base has greater depth and content than previously realised. One area that is interesting from an analytical perspective is the participants' understanding of the source of their knowledge. Interviews with all participants fail to give credit to theoretical knowledge learnt in University. There is an implicit belief that knowledge is gained from clinical experience with one student suggesting

No matter how much you teach us in the uni it is completely different when you are in that situation. But I have like learnt from that experience and I have grown in confidence from these experiences. Part 3.1 0539

One participant did suggest that the greater depth of knowledge gained from searching the literature whilst compiling the dissertation helped with assertiveness by challenging the information placed on a NHS Trust intranet

Exactly yeah um I have even queried something with the Doctors here. For example when I was doing my dissertation um one of the um I was in my third year one of the nurses said there was some information on the internal computer about my subject. So I looked at on that information and it was under um a Doctor's name but some of the information was wrong [yeah] and was wrong, wrong by quite a bit you know like doubling their medication [right] in error. So I actually went up to the Doctor and said 'Excuse me Doctor reading this on the Intranet and the information is wrong' and he said 'Oh yes yes I know I know' he said 'but it is not for general consumption and I didn't write it you know' [laugh] and the the staff who were around at the time were 'I can't believe you went up to the Doctor and said that you know' [laugh]. You do have the confidence especially when you are doing your dissertation you get to know the subject and you in a greater deal of depth of knowledge and it gives you the confidence to disagree with people. Part 3.2 0808

In the only other instance where being assertive was mentioned, the participant relates to clinical knowledge rather than the more formally applied information

But being here for twelve weeks I know more I have got a better knowledge of what is going on, of what is right and what is not right [yes]. I think gaining knowledge and experience helps you to be more assertive because I don't know because in the first and second year you half doubt yourself, well ok if the Doctor went for a fourth stab [referring to venepuncture] I wouldn't have said anything because I didn't have enough knowledge to have said anything even though he shouldn't be doing it for the fourth time or goes. But now being in a placement long enough and gaining enough experience and knowledge I am able to be more assertive so I know what I am talking about [yes] Part 3.1 2017

It appears that working with more junior students assists this process. The ability to be able to answer clinical questions seems to raise an awareness that the educational journey results in a significant personal change for the participant. Participants see that journey and start to compare how they were in the first year compared to the third.

I was thinking about this the other day actually yesterday, I was thinking do the third do the second years think or look up to me. Do they feel they can approach me and ask me questions because before if I saw a third year, in my first year, I would just cling onto them like 'what's this then?', 'How do I do this then?' [smile] 'why are you doing that?' Whereas now I am like I hope that I can be approached by second years because I hope that they think I have the knowledge and [think] how I did when I was back there then [yeah]. Part 3.3 2517

And I do sometimes find myself thinking I I don't really know how I got here [right] so it has all kind off all come together and you actually grasp how although you know that you have studied for it. But when you look back at the first year you look at third year students or qualified nurses and you are obviously three years from that and you think there is no way I would ever [um] or you would hear them say things and think how did they think of that. When people say to you how do you feel about being qualified in a couple of weeks and things you just say "I don't know how I got here!" [yeah] but you did and its just you know when you think back on it, it all flows. Part 3.6 0806

In the early stages of the third year the realisation is subtle that they are becoming a knowledgeable practitioners and it appears that this process happens in a number of differing ways. The next statement results from a general discussion at home with the participant talking to her parent.

But now I just say something in the house and they just say 'Xxxx [participant's name] we don't know what that is' and it is kind of like oh yeah you don't know what that was because I wouldn't have known what that was until I have done my nursing [yeah]. So I think that my knowledge has expanded a lot but I still think that there is a lot to go as well because you can't know everything can you [yeah] Part 3.1 1742

Peers have a role in this process also where ideas and potential decisions are bounced around their colleagues, learning from each other whilst comparing experience and knowledge and applying this to decision-making.

Students from my same year have definitely helped a lot because we have shared experiences and we find when one of us is not sure of something then I think that we have really gelled well here. And obviously there are quite a lot of students here so we are all bouncing of each other with knowledge [yes]. When something is happening we are pulling each other into it and if we do things for the first time. And with the second years as well I have had a second year following me that's has been very good as well because she you know I have been learning off her and she has been learning off me [yeah] so that has been good as well. Part 3.4 2105

The following statements outline the student's accounts on how their knowledge has developed in the third year. There has been very little discussion on the application of theory, gained from University, to clinical practice. There is description of clinical knowledge learnt on the job through experience but when the statements have closer scrutiny it is difficult to see how the decisions made or the knowledge gained could be divorced from the theoretical knowledge and it appears that the assimilation of this information is almost sub-conscious rather than planned and considered during their daily practice.

Whereas before I would think about what is the history [means knowledge] behind that what, my action and how I can change this. But now the background history is inbuilt into you and you automatically know how your actions are going to affect things in the future so [yeah] it's more second nature Part 3.2 1535

I feel I would have held back a little bit longer and thought this is unusual and maybe would have done some things like observations and would have watched him but I definitely maybe would have sat back a little bit longer whereas I instantly knew that he wasn't right and picked it up really quickly. Part 3.4 0440

You don't kind of realise how your knowledge comes together until you are sort of put there by your own which I think is a good thing. I am one of these people who like to be thrown in at the deep end as well [Yes]. I think that is the only way you are going to have the confidence [to make decisions] because in a couple of weeks time we are going to be doing it for real [laugh]. Part 3.6 0147

[The third year] gives you that extra bit more knowledge, confidence and everything [yeah] you know. You could put yourself in a decision-making situation that although things are going to be scary you can kind of, you can see how to deal with as well when you are put in there [in that situation]. Part 3.6 2419

I think it is quite nice to be given the opportunity to use your knowledge into practice, use your skills and it gives you confidence and um not be judged for it or but being encouraged to use it [yes]. Do it as you would when you are wearing blue I suppose, which is nice I suppose. Part 3.6 2757

What is evident is that the participants move from dependent, anxious, new practitioners, unsure of routine, syntax or their position within the clinical environment and emerge as knowledgeable individuals, who in most cases, become valuable assets to the child health team. The nature of this evolution opens the debate about the way information is conveyed to the student group during the three years and whether this could be managed more effectively. Initially conceived in Canada, the notion of knowledge translation is becoming more popular for the application of new knowledge disseminated from research (Grimshaw et al. 2012). Knowledge translation has two strands T_1 outlines the

translation of research into clinical science and knowledge. T_2 translates clinical science and knowledge in an attempt to improve the understanding of health related topics to assists its transfer into the clinical environment and it is this phase that is very pertinent to this discussion (Sung et al. 2003). Until the later stages of the nurse education programme, participants refer to the lack of understanding of the situation they find themselves in. Throughout the first year the evidence-based topics taught, in University appears difficult to apply into clinical practice initially, this is not unique to the research cohort but something that is also seen in the literature (Ajani & Moez, 2011). The gap between 'what is known' and 'what is done' demonstrates the underutilisation of evidence-based research into practice. If this is encountered by the participant in the early stages of the course then the participant is likely to default to 'what is done' when a practitioner requires new knowledge or skills (Cochrane, Heron & Lawlor, 2008). Nurse education programmes follow sound pedagogical principles with innovative approaches to convey meaning and to promote new learning (Zakari, Hamadi & Salem, 2014). What is not included is a dynamic, iterative process that allows synthesis and application of evidence-based knowledge into the clinical arena (Straus, Tetroe & Graham, 2009). The data, in the early stages, suggests that there are two processes to socialising participants into the clinical environment (Davis et al. 2003):

- Dissemination

  A process where the lecturer/mentor formats information in user-friendly packages or summarising complex topics based upon common mores dominant within the clinical environment, and
- Diffusion

  A concept where knowledge is absorbed or drip-fed through immersion and/or social mirroring of key personnel within the clinical environment.

Using the principles of knowledge translation, in the early stages of the nurse education programme, provides skills in knowledge management providing a healthcare practitioner with tools to actively manipulate and transform newly

acquired knowledge into clinical practice (Luton, 2013). Second year students find application of theory to practice an easier concept due to experience and a more mature knowledge database. If the principles of knowledge management were taught in the early stages of the nurse education programme then these skillsets would remain with the practitioner throughout their career allowing greater uptake of evidence-based research, possibly reducing the theory-practice gap and ultimately promoting high quality nursing decisions (Mills, Field & Cant, 2011). What seems to be happening is that knowledge and it's application into the clinical setting appears to occur through diffusion. If the participant were furnished with a set of decision-making tools, it would allow them to take on new knowledge and relate it into everyday practice through the decisions they make, allowing greater use of their developing knowledge.

The Process of Reflection and Decision-making

All participants suggest that they regularly use reflection and see its importance in the decision making process. Some participant's admit that they have only just realised that they have been reflecting on their experience in practice. This demonstrates the need to step back ensuring time to analyse and synthesise the information received within the clinical environment and how it can be modified and applied in the future.

Um probably without knowing yeah. Without being aware I probably do [reflect]. Part 1.9 0844

[A response following a question on how they adapt to their environment] If I am really out of depth I do tend to just step back and question and think back after. Part 1.8 0610

Reflection – The first year

Taught in the early stages of nurse education, the reflective process is ingrained into the student nurse's psyche (Johns, 2009). Participants have formal, taught sessions on the theoretical underpinnings of the reflective process and how it can assist professional development. The cohort is formatively, through an e portfolio, and summatively assessed throughout the first year of nurse education incorporating the principles of reflective practice. The e portfolio encourages students to identify issues or experiences they have experienced and reflect on it's effectiveness. This is built upon summatively when the student is required to use a formative example from the e portfolio and reflect upon this scenario using the wider body of knowledge to support their viewpoint. A good decision-maker needs to demonstrate the ability to reflect (Williams, 2001). A contextual awareness of what is happening around them is an essential skill learnt through the three years of the nurse education programme (Price, 2004). Many of the decisions made within the clinical environment require logical reasoning based on an ever expanding database of knowledge, experience and clinical encounters

alongside the ability to provide rationale and justification for action (Saintsing, Gibson & Pennington, 2011). Combined, this provides an understanding of the situation and also promotes contextual awareness allowing the individual to apply and transfer skills in a number of differing ways. Like most skills reflection can be taught and the statements below shows how the student readily see the relevance of this important skill.

Ah definitely so, um and when we did all this sort of reflection assignments because you have got to do them and I didn't really appreciate the beauty of it because they were scenarios that we see [in practice] and related to nursing. Part 1.8 1243

Yeah when we did our reflective assignment in the first year, I thought that it was really important when I was writing my assignment. Um I was quite surprised how much attention I paid to the situation as well without realising it. Um because as I was writing up about it, I was saying it was such an environment that I didn't think of at the time, um and I didn't realise how much it had affected me to remember so much about it [yes] so it was nice to write about it and to show other people um something that had affected me. Part 1.6 1503

Oh I have done that loads [yeah] absolutely, that first essay that we did with reflection that sort of tore away at everything and I think in every situation now when you are first dealing with a patient and you are going in then you are coming out and you are thinking I should have said that, I should have done that. And I am terrible for doing that anyway, picking away at myself and I think the next time I am going to do this, this and this and I am going to do this differently so for me yeah I use that all the time Part 1.2 1643

The researcher was particularly interested in the way in which participants utilise reflection whilst making a clinical decision. Even at an early stage of the participant's education they readily break down the reflective process into categories such as tasks (technical), practical (interpersonal skills) and relationships (emancipatory) similarly proposed by Thompson et al. (2004). The data strongly suggests for this cohort that there is little reflection at the time of

the decision. Utilising the schema devised by Schön (1983), only a single statement describes what could be called reflection 'in action', or a reflective thought process at the time of the event or decision. This event occurred in the last clinical placement of the first year and is primarily linked to a procedure oriented tasks.

Yes um I do and when I am actually doing it I do analyse it as I am going along. Part 1.6 2634

Thought processes in the early stages of the nurse education programme are focused on rule-governed practice and it could be easily argued that this is not true reflection but an individual who is developing or challenging the validity of an action before undertaking it (Burton, 2000). It appears from the data that most reflective episodes occur after the event, reflection 'on action'. It appears that the participant reviews experiences, decisions and outcomes at a time where they are able to compute and rationalise events away from the stressors of the clinical environment. Some are emancipatory in nature comparing themselves with peers and mentors. Schön (1983) describes the cerebral ability to look at practice as a 'cognitive post-mortem' the systematic dissection of the decision or procedure to look at efficiencies and future proofing the action (Forneris & Pedan-McAlpine, 2007).

I think about what my mentor has done during the day. You know what she has taught me and what I have seen from other members of staff, you know following people [yeah] patients. Yeah probably then when I think back and think yeah that's, that work better than previously. Part 1.9 0911

I do do it but I don't realise I am doing it at the time. I talk about work and the decisions I make a lot with like friends and family. Nothing confidentially of course so obviously you are doing it with out thinking about it always thinking about it trying to improve. Part 1.7 2220

A majority of the data set relates to decision-making and the reflective process surrounding incidents or procedural tasks as these dominate the participant's thinking in the early stages of the course. This reflection is a means to an end with the participant attempting to devise a future strategy or a more favourable outcome should this skill set be required again. The following statements demonstrate this ability to look for improvement by reflecting 'on action'.

You can't reflect on that on the wards because you are busy um but I always look back and think maybe I could have stopped and talked or maybe I could have [yeah] you know I could have taken 10 minutes to do something [yeah]. I do think about it sometimes when I go home. And it does help to talk about it to other people [yeah] about it as well I think 'I should have done it, I should have done it differently.' Part 1.6 1340

Yeah I think sometimes I sort of think oh why did I do that like that [yeah] and I have never really thought about it in-depth but I do kind of think what am I doing this for and why have I done that like that and yeah. Part 1.5 0704

You can always do things better or say things better as long as you remember that next time I suppose you are learning then and you will do it better next time. There are always ways to improve yeah definitely. Part 1.3 1235

When you are doing something then you have done it you think back then. Ah I have been taught or I have seen it done another way, even though I have done it that way, so maybe the other way may be better for that person, but every situation is different so you might have to try it different for different people. That's how I think about it that everyone is different and you may do something for one person but you can't do it for the next person. Part 1.3 1308

Yeah, I think you need to really [talking about reflection] as a Nurse, and as a student that is the main way we would learn. By looking at what we have done and thinking 'Oh if that would have happen how would have that changed or cause that happened how could have dealt with that better [yeah].' I think that that is the key

thing as a student you need to do, to look back over things you are dealing with Part 1.1 0949

The first year of the nurse education programme sees the participant embarking on the reflective journey that subtly changes as the participant develops a contextual awareness of the situations they find themselves in. Reflection in the early stages is a look back a reflection 'on action'. This is described as single loop learning, a phrase coined by Argyris & Schön (1978), in that the individual is looking for a change in action that leads to the same outcome. In other words, a client may have misunderstood a conversation, the outcome or message of that conversation may remain the same but the manner in which it is delivered or the decision-making process would be under investigation or reviewed by the participant. In the early stages participants are more doers than critical thinkers as there is a need for mastery of skills and personal interaction rather than in-depth critical thinking and decision-making. Limited knowledge, experience and contextual awareness lead the neophyte practitioner to think back, monitor and even plan events should they occur again.

Reflection - The second year

During the second year participants explore their progression during the first year and the way in which their added responsibility has influence the way they look and reflect. In the first year, participants appear to be divorced from the stressors of clinical life and although there is no doubt that they worry and are anxious about what happens before, during and after the clinical shifts, it is the second year where they truly reflect on their actions and the likely consequences. Data analysis suggests that participants reflect on three key areas linked to the decisions they make:

- Reflection on practice where participants think over the shift from the comfort of their home.
- Autonomy and the participants growing awareness that the decisions they make and their opinions count whilst planning and implementing care
- Reflection on ability where the participant explores their level of clinical skill compared to their peers.

The following statement sums up the general feeling towards reflection, where they compare and contrast the first two years of nurse education.

Um … … I would say that I used [yeah] more reflection yeah I think [in the second year]. I think in the first year like I said you think you are told to do things and you kind of do them and to be honest it was more like a 'baptism of fire' so it wasn't like why did I do that it was more like what did I just do [yeah laugh]. I would say yeah in the second year you are more reflective [yeah]. Part 2.1 0548

A number of students mentioned that they started to relive the shift on their return home. As many qualified practitioners will state that this is a natural part of being a healthcare practitioner in a stressful environment. To the participant this is their first true encounter, where they revisit the decisions made during the shift and explore their effectiveness and more worrying from the participant's perspective, the likely outcome of their action.

Um yeah a 100% and I find myself going home and thinking about things as well [right] not to a certain degree where I can't sleep and that but in the first year you go home you have done your bit and that's it and you have got no responsibility really because your mentor's…. But even like last year [talking about the second year] um it was things like if I wrote something and hadn't had it countersigned I would I would panic and I would ring the ward back and I know that it was allowed that if you wanted to write in the notes then get it countersigned. Part 2.6 2601

I hadn't, I hadn't really seen a critically ill [patient] because I didn't have that opportunity on the ward [talking about the first year placements] it was a bit of a shock for me so. I would still be going over it in my head [when I went home] like 'why did that happen?' 'What was that?' you know [um]. Part 2.2 2540

The basics of autonomy are also evident during the second year where the participant starts to consider actions or in actions. Sometimes confused with responsibility, autonomy is the ability or the capacity to make an informed, un-coerced decision (Darbyshire & Fleming, 2008). Participants start to recognise changes in conditions and have a better idea of good and poor nurse practice. This is accompanied, in the second year, with a change in the mentor/student relationship (seen later in this chapter) that gives the participant freedom, self-sufficiency to work in greater isolation and to make decisions for themselves (Wade, 2004). This results in students starting to feel accountable for their action, a good example of this is the next statement where the participant realises that they could have made the decision rather than waiting for their mentor to make the decision for them

Yes it is still important because say I was in the first year where something like was wrong or I felt that I would tell I would be thinking in my head I would wait for my mentor to pick up on it and then I reflect back, I think I should have said that and she would have told me well done for seeing that yourself. I think now as well I would diagnose and suggest what I think they should have and then I would reflect

on that and think it was good that I did that and in the first year I would wish that I did it so I would progress. Part 2.2 0927

Or in the next statement the participant realises that they should be more proactive in the care they deliver

Definitely all the time [yeah] and because I am a worrier anyway [laugh] I am always mulling things over I could have done this, I could have done that. I have been told that I have done a really good job there but I am always thinking I should have done this and I should have done that. Part 2.5 1930

The data related to reflecting on ability offers a viewpoint on how the student compares their level of clinical skill to others around them.

Like shadowing somebody and reflecting on theirs [performance] as well as your experience [yes] so then you can take it on and progress. Part 2.2 0927

Certain people have strengths and weaknesses in certain areas, so you watch and learn. Part 2.3 2148

What is found in the second year is that the participant moves away for formally recording their reflections through a journal and internalises the process. It is almost like a cerebral 'to do list' developed by the participant when they next encounter a similar event.

Yeah I reflect upon things a lot yeah, why I made that decisions and what I would do to do them differently next time perhaps [Yeah]. I don't log it down as much as I should but I will do this year because it's like an area I should be reflecting on a bit more [Yeah] but I am reflecting upon a situation such as should we be doing this or what could I do next time you know. Part 2.4 1808

I think it is more automatic now, reflection. Whereas I don't have to go on 'oh what have I done today' you reflect automatically on what you have done. Like that 'I

should have waited' or something like that really. Its just automatic I don't think I don't think I am reflecting unless I am thinking about it, I think. Part 2.7 1237

Although participants predominantly still reflect on action rather than in action what is seen is a personal change in the relationship with their role. Reflection shifts from a procedural evaluation of tasks or individual performance to a realisation that they are accountable for any act or omission in their day-to-day practice (NMC, 2010). There is still a close relationship between participant and mentor but these bonds are weakening as the participant becomes more confident and competent in role. This newfound freedom comes at a cost because when reflecting the participant is not only analysing personal decision-making performance but also potential outcomes of actions and inactions (RCN, 2011). This cognitive shift shows a more critical approach to the care delivered realising that there are many ways to handle events and storing this for future reference.

The second year sees the development of autonomy and a realisation that their actions have consequence. It would be folly to suggest that first year participants do not understand the implications of their actions, but with greater autonomy we start to see the participant appreciate that their mentor will not check every decision or action and so the reflective process allows the opportunity to relive and improve.

Reflection – The third year

Reflection seems to become less formal in the third year and is incorporated into the every day working of the participant. Utilising Schön's nomenclature students reflect on and significantly, in the third year, in action. The whole nature of the reflective process has changed and this is affected by the nature of the assessment process within the higher education establishment. In the first year, in particular participants are encouraged to formatively and summatively reflect on clinical practice. This takes the form of formal assignment writing in the case of summative assessment and portfolio entries in the case of the formative assessment. This academic requirement reduces as the participant moves to the third year and could be argued that it results in a tick box type of reflection as the relative importance reduces from an academic perspective (Billington, 2013). With an every expanding theoretical knowledge database and clinical experience to draw from the participant is able to make quick and decisive decisions that would not be available to them in the early stages of the course. As a result in the third year we start seeing participants mentioning that they instinctively reflect.

I think like in the past I would have sat down and reflected on it but know I am more of an instinct reflecting on it. So I am not sitting down like before and you had to write your reflections and that and make the effort to reflect, but now it's like automatic. Part 3.1 1112

Whereas in the second year we used to go home and write a few things down of our experiences. Now I tend just to do it more in my mind and think wow I did this well or I could do this better next time and still I am still reflecting. Part 3.4 0639

Yeah but I feel most people do reflection even if they don't realise they are doing. They think 'oh maybe I could have done that a bit better next time Ok next time I will do this or you know.' Part 3.8 2429

An area that Greenwood (1998) disagrees with the Argyris & Schön's model is in preparation for behaviour or events adding a prequel of reflection 'before action' where the participants ready themselves from the encounters that may arise.

Although the reflection 'on action' appears to continue in the third year as the literature suggest this is mostly linked to the responsibility of practice and thinking through the next days work pattern almost visualising events or what happens when the child leaves the ward and the lasting impressions the family may have of the care delivered (Price, 2004).

Yeah you do look at the shift and think ok maybe I could do it this way tomorrow and maybe it would run a bit more smoothly [yes] that's where I have got my plan from I am thinking right Ok so that yeah now I am thinking about it from reflection. Right Ok I will come in tomorrow and and do this, this and this. Yeah the little things you do you know you look at but then the overall are [yeah] you don't realise you are doing it it is only now you are mentioning it [yeah]. Part 3.8 2525

You think things, you think things of more than just practice but families you think into that and even when the child has gone home you think of the care [yeah] out of the hospital and [and whether that was handled well or not] yeah and just there's when things stick in your mind more than they probably would in your first and second year. You sort of because you get more involved now you are more involved and you get yourself more involved as you get your thought process tends to carry on when you have left work as well. Part 3.6 1845

It appears from the data that the majority of reflection occurs in practice at the time of the event. The participant is using the reflective process to strive to make a decision, or to make or take the best option whilst caring for child and family. In the early part of the nurse education programme, reflection in practice is very focused toward procedural skills. The ability to take a wider perspective during the third year, is clearly a priority for participants as they attempt to improve the whole care package rather than concentrating on procedural skills that are practiced and reflection becomes second nature and almost intuitive (Perry, 2000).

You do, you feel you got to have been thinking and reflecting sort of all the time [talking about during her shift] really [yeah] but not to the point where you worrying about it, you know you just want to get better [yeah]? Part 3.5 1347

Yeah I suppose so, I suppose because you are getting used to things you are not reflecting on little things as you would have in the first and second years but then you are constantly looking to improve aren't you? Part 3.4 0958

Whereas before it was more formal reflection doing it step-by-step in the second year, [yeah] whereas now I am just thinking generally of how you can give the whole now really [right]. Part 3.5 0720

Throughout this section on reflection we have seen the development of participants from predominantly reflecting 'on action' to an almost intuitive 'in action' reflector. This transformation does not occur in isolation and is based the ability, a wiliness to make a decision, an ever-expanding knowledge base, increased experience and greater autonomy in practice. Alongside a more proficient reflector we have an increasingly, albeit at times, fragile transformation in personal confidence that will be dealt with in the next section.

Confidence to make decisions

Confidence can be defined as a belief that an individual can complete a task or goal to their best ability (Farrand et al. 2006). As eloquently discussed by a participant in the study when trying to define confidence she states that:

I don't know it is sort of a confidence thing again it is sort of trusting my own judgment kind off. Part 1.5 1541

Chesser-Smyth & Long (2013) outline that confidence is central to the development of decision-making and competence. The results of their mixed design study utilising pre and post test self evaluation questionnaires and focus groups suggest that the development of confidence requires the student to feel they are competent at a particular task (performance accomplishment), the student needs to observe more experienced practitioners at work (vicarious experience), the student requires constructive feedback on performance (verbal persuasion) and finally, the student feels at one in the environment (emotional arousal) and free from personal stress and anxiety.

The results from a grounded theory study on a similar topic area confirms this and goes further by suggesting that self efficacy or confidence is linked with the practitioner's willingness to make decisions in the clinical environment even following qualification (Jahanpour et al. 2010). Self-confidence and effective decision-making is explicitly linked and was directly addressed in a report on fitness for practice in Scotland where the curricula was evaluated to ensure that it fosters confidence and ultimately effective decision-making (Lauder et al. 2008).

It would be naive of the researcher to believe that the increase in confidence experienced by participants during the three years of the nurse education programme was smooth and without incident. Students regularly discuss dips in confidence as new experiences or difficult events present. If a macro perspective is taken on the development of confidence it can be seen that confidence slowly builds during the first year, increases at a steady rate during the second year and

peaks during the consolidation period. From analysis of the three years of data it can be seen that a number of differing variables influence the development of decision-making confidence as the course proceeds. When there is uncertainty it affects confidence and this is termed as 'a dip in confidence' by participants. The following statement comes from a third year student explaining the change in their level of confidence during the nurse education programme.

Definitely, in the first year I was really nervous I had no confidence and I didn't know what I was doing. But now I remember coming in here [talking about her current placement in the local SCBU] when we did the round robin in Maternity and umm [participant coughs] when we came out with the Midwives and we did the labour ward and they brought us over here for the day just to look around. And I remember walking in here and I though 'Oh my gosh, I would love to work in here but I could never be as good as them'. And then the other day I thought 'oh my god, remember that and now I am a consolidating student and I am looking after the nursery or high dependency by myself [yeah].' And like if you had asked me in the first year if I could come here and work then I would have said 'no way!' You can't just have a children's degree you have got to have more degrees than that to get in here it takes more than that no way! [laugh] it like yeah going through the experiences and you learn and you build in confidence and [yeah] and it's like I'm doing I did A&E and I did full on resus on someone and I thought that I would never do that [yeah] and I have like. No matter how much you teach us in the uni it is completely different for when you are in that situation. But I have like learnt from that experience and I have grown in confidence from these experiences. Part 3.1 0539

Confidence – the first year

This section of data analysis explores the first year of the programme. Participants recall feelings of uncertainty of role and exposure to events that they felt ill prepared but as time progressed a feeling of mentor trust and familiarity in the ward environment and clinical routine matures.

The first ward experience appears to be quite an eye opener for all participants. From the school leaver to the more mature students who held responsible position pre nursing, all participants felt an inability to make even the simplest clinical decision due to a lack of confidence. Two school-leaver, openly discuss their first placement, admitting that decision-making was low on their priority list before nurse education never mind making decision within the clinical environment.

Yes I wouldn't have made decisions before [nursing], I hated making decisions before [yeah] so I am not confident to make then now. Part 1.1 1931

No I still don't do decisions very well [laugh, no] I don't know it just … don't know what it is I have just never done decisions I just go with the flow. Part 1.5 1037

Experienced participants were surprised by their lack of confidence and feeling unprepared for the healthcare experience, resulting in previously confident individuals shying away from making decisions.

As a student you are just sort of wondering around and you have got this lost look about you [yeah] and they [referring to qualified staff] would say 'Are you alright?' and I would say 'Actually no you know I don't know about this or I don't know what to do about that'. Part 1.6 1051

I reacted in a totally different way to the way I thought I would have [referring to being more confident] yeah that was strange that was, but I think like a lot of the things it is just exposure isn't it. Part 1.3 0200

Whilst one participant started to question her own ability feeling totally out of their comfort zone

I think it is always quite easy to think I am not ever really going to be confident in that area, never really comfortable with my capabilities. Part 1.2 1855

One participant found the early part of nurse education quite upsetting as she has taken charge of others in previous employment but found she was so lacking in confidence to make decisions or challenge others.

… … … … .. .. .. … I think in the first year I wish I had been more confident in what I said. I think it depends on how confident and competent you are [talking of the clinical environment] it's just so different to my previously role [before nursing]. Part 1.9 2148

The ability to make decisions improves dramatically during the first year but the process is dependent upon confidence. The role of the mentor in developing this process is essential as the student nurse gains practical competence and develops a relationship with their mentor (Hodges, 2009). A number of participants mention the term 'trust' and this appears to be an important factor in the development of a confident, independent decision-maker (Erdem & Aytemur, 2008).

… on the second ward I was given a lot more trust and that helped me a lot I think [referring to confidence]. I had a really good mentor and a lot of lovely staff and they sort of trusted me more and that gave me a lot of confidence [to make decisions]. Part 1.7 1216

It is not going to your mentor as frequently as you would have normally have done [right]. It is like having that certain ability to make small decisions and your mentor lets you [participant referring to trust]. Part 1.3 2022

To make sound decisions you need to be comfortable in the clinical environment and your practical abilities. During the first year of nurse education the

participants witnessed a vast variety of new experiences on a daily basis. This results in the participant's confidence level travelling along a continuum as the participants experience the high and lows of being a student nurse. On the negative side, confidence was held back because of a feeling of being ill prepared or a procedure not being fully explained

I can remember the first day we were there [taking about her first clinical experience], just general, cause I had never worked in healthcare before and it was quite hard. I didn't feel, I don't know if you could ever feel prepared for that, you know [yeah] going into it. Part 1.3 0200

The first ward it was like I don't have a clue what to do. Part 1.4 1640

they would come with me [talking of her mentor] and show me or something and even things like um …… like um IV, like stopping an IV we were allowed to do that on the first placement but I didn't have the confidence to to do it [yes] so it was beeping and they would say 'go and cap it off' and I would say 'I don't know what to do' and no one would come because they would work in bays and it wouldn't be their bay. Part 1.6 1051

One aspect that is common to all is the building of confidence over time. It appears that identifying ward routine, mastering the medical terminology and syntax, time served in the clinical environment and becoming 'ward wise' promotes confidence in ability and ultimately allows the participant to start the first tentative stages of decision-making. The building of confidence and ultimately putting themselves forward to make a decision appears to come with experience and time spent in the clinical environment.

I think because I have grown in confidence now I think the responsibility side of it [making a decision] as well because before I came straight out of school and like I didn't really have any responsibility [personally] but now I do have a lot of responsibility. Part 1.1 2014

So little things like that you know and as time went on you would know your tricks of how to deal with it and this helps when you have to decide what to do next and give you confidence. Part 1.2 1202

I think so yeah towards the very end [referring to the end of the first year] I would say so, but it took quite a long time to get there I think [gaining confidence to make decisions] Part 1.3 0842

I think so, it's the confidence to do things on your own. When you see a change in something like for example um a gentleman who had lost a lot of weight. He hadn't been weighed for quite some time and I went and got the weighing scales and I thought, this guy needs to be weighed, as he is looking so thin. And he had lost an extremely large amount of weight. And my mentor said 'well done good that was really good well done' and I thought that was my personal decision. Part 1.6 1722

And I think that being on the ward for that majority of time gave me all that confidence. Gave me the confidence to just go and do it and to recognise it [make decision] as well because I think on my first week I would never have picked that up. Part 1.6 1928

Yes it all makes and helps me make decisions [talking about ward experience], it just gives you more confidence it betters you in yourself. Part 1.7 2103

Confidence to make decisions is not a fully developed concept at the end of this first year and can be quite fragile when the student is placed in a new environment.

And then by the end when we get to the children's ward [talking of the final placement of the first year] and I knew where things were then. But on the last ward then we were like what does this mean and what does that means because there was only a few things that we didn't know but it was unsettling. Part 1.4 1640

Confidence to promote decision-making is fluid with the ebbs and flow of clinical experience and how comfortable the participant feels in the clinical environment, their mentor and the nursing team. In the next statement a participant talks of being wary to step over the line by making too many decisions in isolation and appearing too confident early in the course.

I think as a student there's a line um which you don't cross in the sense of like I said earlier of being over confident and things like that and I think you have got to take a step back and think that you are a student and then you have got to show that you want to learn and show confidence [yes].Part 1.6 3129

Overall, this category shows the importance of confidence in the decision-making process. The need to be informed, supported and spend time in the clinical placement changed the participants into reasonably confident decision-makers by the end of the first year. One interesting point of note is that when interviewed in the first weeks (Phase 0) of nurse education programme is that the term confidence was not mentioned related to decision-making. These interviews enquired about decision-making styles prior to nursing and at no stage was the term confidence mentioned by any of the participants which suggests that the lack of knowledge, unfamiliarity of environment and the magnitude of the task ahead of them affects confidence to decision-make, once participant's enters the unfamiliar world of nurse education.

Confidence – The second year

It appeared from the first year analysis that all participants were affected by a lack of confidence and although levels of confidence improved during the second year, there is no doubt that confidence is still an over arching feature of decision making. For some participants the second year was seen as an exciting time and confirmed their personal development and maturity as a child health nurse. For others there was an element of doubt over their abilities and some participants found difficulties assessing their progress with competence and their ability to decision-make. At the end of the second year, students felt that progress had been made but were guarded when it comes to assessing their current level of confidence.

Um [laugh] yeah I suppose so yeah yeah [laugh] I don't sound convincing do I [laugh]. Part 2.5 3400 [this response was obtained following a direct question about feeling confident]

No I am going to be in white epaulettes forever [laugh]. Part 2.1 1131

I think I am just [makes a sign with her fingers 'a little'] more confident I suppose really [yeah]. Part 2.7 2040

You know I feel confident doing things or I don't feel stupid asking her questions [referring to her mentor]. Part2.3 2043

After a difficult situation within the ward environment one student took a rather negative perspective when confidence was low.

But I thought pick yourself up and try again but in a way that did knock my confidence a little bit and did make me feel that, that I, do you know what I mean [yeah], I could fail this. Part 2.4 1203

Other students took a more philosophical stance when it came to second year confidence

Yes I think that is something that will come along in the third year [referring to confidence]. Part 2.1 20.35

The first year like the uni hands you that confidence but you need to take on yourself to develop it, the first year it is handed to you slowly and the second year you need to take it on yourself to develop your confidence it more like individualised learning you know rather than in the first year it is almost handed to you. Part 2.2 1757

And I felt a bit more relaxed like [right] in doing things on my own so I didn't have to go up and ask can I do this or can I do that. So it was more like a bit more confidence in myself to carry on and do things. Part 2.3 0131

Like I am more confident [yes] like on my first placement [in second year] I was not confident at all and I thought that I was going to be a crap nurse and I thought I can't do anything and they won't let me do anything and I still felt like a first year nurse [yes]. Part 2.3 1425

If anything in the second year you are still, you take that back seat and you are not confident you think all these people have been doing this for 15 to 20 years [yeah] and I know nothing. Part 2.4 1604

Many participants felt that the progression in confidence stemmed from the skills learnt in the first year and time spent within the clinical arena learning the clinical routine. In fact, if the participants felt that they had encountered a scenario before or felt well versed in its practice then confidence to make decisions was reasonably high.

I felt really confident in my second year when I was on my placement it became a little bit within my comfort zone because you were doing your routine and you have your own little ways in your placement. Part 2.6 3326

I think with doing that as well it is building my confidence you get to know the ward and where things are kept and things rather than feeling thing didn't come out of the blue. Part 2.7 0540

Whereas in the second year you start to think 'Ok yeah I have still got to do all those things' [learnt in the first year] but but you start to think how can you go further as a nurse in confidence and getting different things [yes]. And I think to get a lot of things in the first year mentors will be like we are going to do this we are going to do that. Whereas in the second year you have to kind of have to ask can I do this and can I do that? Part 2.1 1028

Um, yeah because I think you know more so again it is more down to confidence. I will always check with someone anyway whatever the decision I will always say is that all right and can I do this and is that OK [right]. Part 2.7 0830

So So you need to be given it like … … softly in the first year [yeah] then and then you know you have to develop your own confidence and competence and not have it pushed on you like having people telling you that you need to do this. I think that you need to develop that yourself that you need to learn it yourself and not have it pushed on you. Part 2.2 1602

It appears that confidence to make a decision requires the skill of being assertive and not placing yourself in unfamiliar situations. This is particularly important as a student nurse in their second year as they could easily be asked to perform a task they are ill prepared for.

If someone was to come and ask you and you know you can't do it and you say yes because you don't want to seem incompetent then it is just not a good thing. So it is coming back to confidence again its like having the confidence to say 'look I don't know how to do that!' [yes] which I think in your second and going into your third year this is like quite difficult because some mentors do think or like not give you a negative attitude like say 'you can do this can't you?' and for you to say no then it is really like [laugh] it is just the way they word it because if you were to say no to that its kind of like you feel awkward so. But I am quite happy to say I can't do that

sorry [yeah] but I think some people may have a problem saying that I can't do it so yeah. Part 2.2 2148

Yeah definitely, especially perhaps not in terms of other nurses but other care professionals I am still not [right] really confident in that in being in that situation yet to say no [when asked to perform a task they do not feel competent to perform] Part 2.4 2744

Well I suppose within yourself there are certain areas that when you see a new task or asked to do a new task and you think right I am not really sure about this but then towards the end of it you are feeling confident and competent that you completed the tasks and so its all about reflecting isn't it? [yes] Part 2.51856

Linked very closely to the familiarity of events comes an increase in experience. Participants discussed how familiarity with conditions, procedures and even in some cases witnessing extremely sick children boosts confidence to take on simple decision-making opportunities on a daily basis.

Yes um in my second year when I was on the Paeds ward we had a lot of we had a lot of children coming into ITU. To observe that and to observe what they did I became more confident to deal with it everyday [referring to everyday clinical situations]. Part 2.2 2300

Yeah when you have had a child all day [yeah] and you are the one that has been talking to them and nursed them and have been with them for twelve hours [yeah]. You feel like you really do know that child so I think it is your decision over a doctor who has seen them for only an hour flitting here and there you need to sort of have. And I have had the confidence to think, to make my decision you know that it should be the right one. Part 2.6 2027

Yeah I am quite an indecisive person anyway so I think that when I have more confidence in what I am doing then. Yeah I probably would give a decision now where as before I would have been an indecisive person so I think where I am more confident in giving it then I will [yes] yeah I would probably well I am more able to

give a decision than I used to be [right]. Whereas before I would have been 'well I don't know what do you think?' Now I would be able to be a bit more, I don't know what's the word, I could do it on my own I could make my own decisions [yeah]. Part 2.7 2456

I thought it was really good, I felt really confident and because I was leading it I didn't think I would. If I thought about what I was going to do here, I thought I would have stepped back but I was confidently leading and I surprised myself [referring to caring for a bay of children] Part 2.7 2810

Its like in the first year you are just student. It is like in the first year you can't do much because you are just finding out and it's all new. In the second year, you have already had a taste of it so you have kind off got the basics of it and its like you know where everything is and like you have a bit more confidence because you have learnt more and especially about conditions and stuff like that. Part 2.3 0817

With experience comes confidence to present a case to mentors rather than being directed. A number of students present statements where they are keen to test their skills and knowledge and be judged for their actions and decisions rather than being told.

In the second year, I would make a decision and I would be confident enough to present it to my mentor rather than waiting for her to tell me what to do. So I would present it to her and if it was right then well done to me and if it is not then I am happy for her to say the better thing to do would be to do this [yes] I feel more confident. Part 2.2 1914

And I think that if they haven't got the confidence to ask then you won't learn so it is a little like a vicious circle because you have got to gain the confidence to learn [yes] and if you don't [present your decisions to your mentor] I don't think you learn as well. Part 2.2 2540

For participants to take the next step in the decision-making process it is important that mentors convey an open and facilitative learning experience

allowing students to make decisions for themselves and learn from them and as a result become more confident.

I I I I [participant stutters at the start of the sentence] do think it is good that your mentor does think that you are competent. Competence I think does link back to confidence; if you are not confident in doing something then you are probably not competent [yes]. Part 2.2 1757

It became more natural [This question was about making a decisions] because I could see my mentors doing it, but also when you are in your second year placement you are in contact with third year students and see them going and doing it and seeing other people doing it gives you the confidence to do it yourself. Part 2.2 0709

I used to feel sometimes like ' I don't know if I can't do this, this is a bit too much' and she [Mentor] would say 'you can do it don't underestimate yourself,' you know you are a second year student now and I think that if I hadn't been in that situation [challenging a decision] I um like twenty times more confident now to do things [great]. Part 2.6 0414

You were more like part of the team down here and if we were or we didn't feel confident it wasn't as if they just said just go and do this. Like they went through it with you first so you did feel confident doing it [good] going up and doing things with the patients and the families. Part 2.3 0222

When I do finish this course it will, it will give me more confidence that [yeah] I can make decisions but always knowing you always, whatever decision you make, you have always got someone there anyway [yeah] but it is nice that you can have the experience to make these decisions earlier on, I feel that it does anyway. Part 2.4 0554

So and I think that it gives you self confidence in the sense that um when you are giving the right answer and you seem to know what you are talking about they kind of guide you to do other things with them. Which um see more things, do more

things on your own, um you just feel like um I don't know, you feel that they have respect for you I sense. Part 2.6 0307

Alongside a facilitative learning environment, the participant starts to appreciate that with decision-making comes responsibility. In the first year analysis there was a suggestion by participants that although they appreciated outcomes the ultimate responsibility for their actions is the mentors. This changes in the second year with the participants starting to realise that to progress they need to become active decision-maker and with this comes additional responsibilities and a need to be accountable for their actions.

Um I think that the main difference is confidence. I think um as a first year student you are not given a lot of opportunity to do things. Um and as soon as you say you are in your second year they are less cautious to allow you to get involved to make decisions for yourself and things like that. And so your clinical judgement is a bit more respected in a sense [right] in the first year because you are obviously still learning in the first year. Being in the second year I found that they took you a little more seriously [right] in a sense. Part 2.6 0136

Yeah because your confidence gets, because you feel you are having a bit more um sort of valued. Although you do in the first year although you are still training you are still um in comparison you are not quite so nervous. But because you are given that bit more responsibility in your second year [yeah] I think you gain a bit more sort of confidence in that respect where people think more and they think you can do more and you feel that you can do more. Part 2.6 0233

Yeah I felt more confident um and because I was more confident they allowed me to do more things. Part 2.7 0425

Regardless of the newfound confidence participants still felt an underlying doubt and lacked self-belief in their decision-making skills at this stage in their training. There is a definite move away from observation and subservience seen in the first year to an embryonic autonomous health care practitioner. This self-doubt

acts as firewall allowing the student to consider a course of action but check the likely success of this decision with mentors before implementing the decision.

Yeah I was and sometimes I would know the answers but yet I still think that I should work within the student role and actually I have got to be safe here as well as wanting my mentor to know about this [um]. Part 2.5 1615

Yes I would be like should I do this [make a decision to perform a procedure] and I would have to ask before I did it. Part 2.1 2120

I am quite nervous going into new situations but then my confidence grows and then I will make sure then that I become competent in the tasks that I am doing by checking [with mentor] but yeah I would say but not in every situation [laugh]. Part 2.5 1815

This position is sometimes justified through comparison with peers or rationalising their feeling and emotions by observing or citing discussing the concept of confidence with third year students or qualified staff.

Yeah in my first year I could never see that happening especially in my first placement. I come across third years and I remember thinking they must really know what they are doing but you are still but I don't think that you ever feel 100% confident not until you have been working. I have talked to other staff and they are qualified and they still don't feel totally confident you know. Part 2.2 1206

One participant summarised how she felt about the development of confidence and decision-making by the end of the second year, suggesting that there was a move away from the dependent student in the first year to the more autonomous child health nurse by the end of the second.

Yeah I think you kind of when decision-making…. You go from the transition you are a student nurse but you are getting, you are progressing, you are moving, forward, you are getting, [yes] you are looking to be more qualified so you kind of

in every sort of placement you are leaving your student status further and further behind. Part 2.4 1002

The end of the second year sees participants exercising their newfound confidence to start making decisions. Participants are aware that with the confidence to act, albeit under the guidance of their mentor, means that they have to embrace responsibility. James Wendell [1811 – 1884] is attributed with a famous two-word quote "responsibility educates" (Stewart, 1986) and this is clearly felt by participants. To act in the best interest of the client and the profession is a founding principle of being a nurse (NMC, 2008). As confidence to decision make increases so the participant is likely to judge the clinical decision making qualities of their mentor or peers (Hellström-Hyson, Mårtensson & Kristofferzon, 2012). Hirsch (2013) presents two developing themes that when combined allows the participant to take responsibility for a situation. The theme of moral judgement where the individual shows an ability to decide what is right or wrong in a situation and is a skill that is clearly displayed in the data at the end of the second year. The second theme is moral potency and is a developing concept at this stage of the nurse education programme. Hannah & Avolio (2010) suggests that it entails a sense of ownership of one's environment, the capacity to act for the well being of others and the courage to act ethically or challenge another's acts, this develops dramatically during the third year.

Confidence – The third year

It appears from the analysis of the data that confidence in the third year can be divided into three distinct categories:

- Self belief
- Taking the Initiative
- Confidence to multitask

Although in the early stages of the third year confidence levels drop slightly as the spectre of qualification becomes a tangible entity, there is a conscious decision to push forward to achieve

I'd say that you get a lot more responsibility and in the second year you half think that I will never make it as a staff nurse then even though you still get doubts into the third year you do build your confidence. And through the experience umm umm [participant coughs] and the confidence that you gained you do finally get there [laugh] with a push and shove you get there [yeah] Part 3.1 3106

The first year I would say was a big learning curve because it is completely different to what, completely different to what you think it would be like if you are a normal person [referring to lay people] and ask them what a nurse do. Like I didn't think that they did as much hard work and how hard it was until actually I got on the ward and got to see it do you know what I mean? [Yeah] The second year, I would say more confident than the first year and you feel like you can do things and I wouldn't say it was a breeze at all but you kind of like know you are quite happy with the stage that you are at and comfortable where you are [yeah]. And then the third year is like, I wouldn't say a massive wake up call, but its like you go 'last year, last year, last year ' getting in to do things more and it's a bit of a kick up the backside really. Part 3.3 2238

Umm hmmm definitely um yeah the beginning of the third year I had a dip in confidence but um you learn from that experience and turned it around and people respect me for the decisions that I made and that gave me a lot of confidence as

well and I'm back and everything is fine but the third year I did have a dip in confidence but I have turned it around now I think. Especially when you come back in the third year you feel that you haven't been on the ward for a while you have been in University learning so you do feel that you don't know anything um so that you still have a lot to learn but we are all getting there management wise. Part 3.4 1853

Um, I think in terms of confidence definitely, um and I I found that in the beginning of the third year we were allowed to do a lot more as third year students. We had like a classification then 'right you are a third year student'. Um, [yeah] the second year you are still um you kind off don't know where you stand [yeah] to know what you can do or what your limits are but I think coming to this part now, consolidation you it's you kind off. I feel as if I have qualified [right] and I feel ready but I think um we are quite lucky here because we have been given that responsibility and to go and act as if we are qualified as well. Part 3.6 0054

Alongside this added self-belief comes the confidence to take the initiative.

Yeah it's been ok I have developed and I am a lot more confident um I feel I can go, I feel that I can just go off and do things independently without so much support from my mentor [yes]. So yeah I have just developed more individually and I have become a confident student. Part 3.4 0123

Um I think I am more confident to just get on with things rather than ask for permission sort of thing. I just get on and make decisions and do the obs and feeds and I don't ask and get on with it yeah. Part 3.7 0317

I think the first couple of weeks when you are here you are finding your feet aren't you but now I have been here quite a while I think the ninth week [yeah] so I am getting more confident and getting to know the doctors a bit more [good] so I don't feel so intimidated [laugh]. Part 3.8 1306

I think gaining knowledge and experience helps you to be more assertive because I don't know because in the first and second year you half doubt yourself, but now

being in a placement long enough and gaining enough experience and knowledge I am able to be more assertive so I know what I am talking about [yes]. Part 3.1 2017

Over the last three years you have gained and extended your knowledge but you still don't know everything and I think that you have got to trust yourself to make decisions because you have been studying for the last three years you have got to have some sense of confidence in yourself to make decisions [yes] but I think that if I came to point where I thought I don't know everything about this then I would not make the decision. I would go elsewhere and find and find another opinion really. Part 3.6 2654

The final area linked to confidence is the ability to multitask rather than blindly following tasks or procedures, having identify and come to terms with the routine and basics of care, the third year student starts to recognise the complexity of the tasks that they are undertaking.

Yes, yes I think so although I think that is a natural progression in nursing though isn't it. Like when you are less confident and that you can only really focus on one thing like doing a procedure. Whereas now the procedure isn't actually yeah you have got to do it but it isn't key its not you have got to keep assessing everything else. Part 3.1 1312

I am doing things obviously by procedure and that I am doing other things at the same time like I am still talking and that and I am communicating with the child and playing along with them and stuff whereas before I would normally stick to the questions apart from involved in doing their obs and that and doing like. I would use play more if you know what I mean if I was doing observations and stuff [yes] where I was thinking oh I have got to get this right and I have got to get this right and then if I do think it is a bit out compared to what I have seen the normal ranges and that I would then think to myself right I need to go back and check or double check with whoever. Part 3.3 0434

Definitely where I was a stickler for routine I used to like everything to feel secure I suppose [yes] just to build confidence up and to know what you are doing. Part 3.5 2758

Confidence is further enhanced by positive feedback from a variety of sources but it is mainly valued when it comes from the multiprofessional team.

That particular Doctor made me feel great not long after I started my placement because she asked my opinion on something [right] and I thought that is now the start of being, you know of becoming a proper nurse you know [yes]. A Doctor asking me my opinion on something and I thought that was great. It proved that she had some confidence in me and it helps build my own personal self esteem as well you know [yeah] which I thought was good. Part 3.2 0500

Especially being on our consolidation now with our N/A's and things, you can go and ask them to do something for you and they respect you and they know that you are going to be qualified in a couple of weeks [yes]. Its nice because they don't take because they don't take offence because I think as a second year if you start shouting the orders around [yeah] people would think oh she is too big for her boots. I think you learn to build up the way to speak to people the way you come across to people has got a big thing to do with it as well. Part 3.6 1339

Definitely pushing myself forward more taking the lead as well you know. And it is good to have students to start teaching students type of things we are knowledgeable about and they are asking you questions. Part 3.4 0312

Self-efficacy or self-confidence is a basic nursing requirement and is directly related to the quality of nursing care delivered (Farrand et al. 2006). Confidence is built upon and progresses in peaks and troughs of emotions but is described as recognition of one's ability, self-valuation or a belief in the ability to complete a task (Kukulu et al. 2013). The literature explicitly links confidence and decision-making and is seen as a key requisite for the nurse practitioner to take responsibility for a situation and act appropriately from a decision-making perspective (Hegarty et al. 2009; Kitson-Reynolds, 2009; Taylor et al. 2010). It can be seen in this dataset that once the participants become aware of the environment and their role within it, confidence builds and decisions are made in isolation and/or in parallel with their mentor. The development of confidence has a cognitive, behavioural and an environmental component. Feeling

comfortable with these components promotes confidence or disharmony, as will be seen later in the discussion, factors such as poor mentor attitude results in a deconstruction of self-efficacy (Pearcey & Draper, 2008; Moscaritolo, 2009). Bandura (1977) suggests that self-efficacy is dependent on a number of characteristics. Performance accomplishment, which equates to the carrying out an action or behaviour; Vicarious experience, a mechanism of monitoring and observing other individual's performance; verbal persuasion, a mechanism of gaining feedback through a variety of differing media and finally emotional arousal, the ability to physiological become excited or anxious about the experience or situation the actor finds themselves in (Chesser-Smyth & Long, 2013). What is evident is that these characteristics are easily replicated in the dataset, the ability to perform clinical skills and tasks and the need to observe mentors to compare and contrast self against expert. The constant need for feedback on performance and the thrill or despair when things either go or don't go to plan is evident throughout this material. Confidence in the first year appears to be poorly managed within the nursing curriculum as little attention is given to the issue of stress and anxiety within the clinical environment (Lundberg, 2008). Participants convey the message that a lack of preparation in University results in anxiety beyond their expectation. This results in neophyte participants feeling out of depth and out of their comfort zone. This is a key indicator for confidence reduction and will stifle decision making right from the start of the nurse education programme (Suliman & Halabi, 2007). As the participant becomes more experienced and competent, so confidence builds during the second and third years. This is by evolution rather than managed through education and the development of self-belief.

Competence and the decision-making process

Competence – The first year

This section explores the second of the two main themes, Practice Ability. This theme relates to participants' understanding of decision making whilst providing care within the clinical environment. The section starts with competence before moving on to the role of the mentor and decision–making.

The development of competence is far from the mind of the participant in the first year despite the importance placed on gaining competence. The need to recognise ward routine and appearing busy within the clinical environment seems to be of paramount importance at this early stage of nurse education.

But once you have familiarised yourself and have worked with everybody you are sort of aware of the right that's ok I know how that works, Right that's ok I know how this works and so you just adjust to each individual and being aware of where things are [um]. Part 1.1 2827

coming back to the second term [of the first year] I was a lot more confident um and I felt I could concentrate more on learning as well because [right] because I had an understanding of things, I knew where things were and what to do [yeah]. Part 1.6 0532

There are times in the day when certain things are done [yeah] through the day and I think I would pick them up quite quickly and recognise. I would generally go around and have a look and if something hadn't been done for a while I would just, you would just do it [um] so that is the way I would go about it. Part 1.5 2242

The discussion of clinical practice is dominated in the early stages of the education programme by the feeling of being 'out of depth', but there is one area that all participants suggest that they are competent – the collection of physiological data – the vital sign or the observation round.

Clinical observations we did a lot of them [yeah] so I did quite a lot I did feel it just gives you more confidence and you feel competent. Part 1.7 1216

Whereas now you do know a little bit like with obs and things like that and with the training we have had and you go back, you what you are doing and you know why you are doing it. Part 1.8 0216

Ah, I Think … um … oh I would, I think the most things I feel competent in doing at the moment is observations [right]. And I think it is from doing them constantly and I think from the first placement to the last placement you have done observations on so many different people that you get used to doing it in so many different ways. So I feel very competent in doing them so I know [right] I feel that I can do them right correctly. Part 1.6 2317

It would depend what it was because like I would go in and do obs I wouldn't wait to be told. Part 1.5 0926

The collection of physiological data is an important part of nursing assessment and is underestimated by student nurses who see the observation round as a task of chores (Broom, 2007). As one participant suggests

Because your skills are doing vital obs and that and it is vital information that they need but you just don't see it [in a mocking voice] 'its obs again'. Part 1.8 1612

The concept of competence in the first year student nurses' perspective, is all about clinical skills and a personal need to appear to be useful within the clinical environment. It is only when directly raised by the researcher, that participants mention the clinical competence document that requires completion before the end of the first year. Considering its importance for all aspects of nursing, including decision-making and the need to successfully complete all the first year competencies to allow progression to the second year, many participants see the documentation as no more than a tick box exercise.

Yep, the competencies are just a list. Part 1.8 2036

… … … Um… … … to be honest I just wanted them signed off [yes] I didn't really look into to them too much I was just thinking I need to get that signed off and I need to get that signed off. Part 1.9 1842

Although discussed during the interview process, participants spent little time exploring the issue of competence in the first year. What did appear important was the attempt to become a useful member of the nursing team. This involved being able to find skills or tasks that could be of use to their mentor, such as the observation round. The observation round is seen as little more than a routine task rather than a skilled activity requiring an understanding of complex tasks and physiology (Broom, Lynch & Preece, 2009). The competency documentation and its purpose seemed lost on the participants and this raises a number of issues for later in the nurse education programme. The first year is a foundation, a stage to build on with subsequent years, adding and complementing the previous years attainment. It would appear from the discussions that this cohort of participants saw little importance in the competency documentation apart from getting the signature of their mentor in the right box at the end of the academic year, the following section will examine how the competency process develops in the second year.

Competence – The second year

One area where there is a distinct change in perspective is the gaining of competencies in the second year. The first year data analysis demonstrates the tick box culture with scant mention of the competency process and the pursuit of routine.

Yeah, yeah I think the yeah in the first year you are more concerned about the actual paperwork and that the Uni set. So alright I have got to do this I have got to do that and I have got to do this and if I don't do this then I am not going on a year. Part 2.1 1028

Two clear themes emerge form the data that of being more proactive in the achievement of competencies and earning the right to be signed off as competent. There is no doubt that during the second year of nurse education participants start to take greater responsibility for the completion of competence.

In the second year, you start to think Ok yeah, I have still got to do all those things but but you start to think how can you go further as a nurse in confidence and getting different things [yes]. And I think to get a lot of things in the first year mentors will be like we are going to do this we are going to do that. Whereas in the second year you have to kind of have to ask can I do this and can I do that. Part 2.1 1028

Participants feel the weight of expectation and compare themselves with their qualified peers.

Yeah in the second year, especially as they know that you are a second year student, I feel that it is my responsibility to be capable of more and I wouldn't want to be incapable in my second year. Part 2.2 1025

I am so still not competent [laugh] and the third year [student] I spoke to said that and I expected too much from myself and it was all just practicing it but there is

still so much to learn especially as the second year is acute illness [laugh]. Part 2.2 1206

Overall, the development of competence could be likened to personal discovery or a rite of passage where the participant becomes an active partner in the competence process. This is a fundamental shift from the passive behaviour seen in the first year data collection.

Um sometimes because if my mentor or mentors I have had said "oh I can sign you off for that" perhaps I won't perhaps feel ready then when I have only done this thing twice I want a little more practice so perhaps I'll put that off just a little bit. Instead of just having them perhaps signed off I would say "oh could we perhaps do it again next week and I can do it a bit more" But I am also like if I don't do something for a period of time I feel that competency is kind of slipping away and I have got to, I am one of those to keep a skill up I have got to do it all the time you know. Part 2.4 2144

That's right yeah where as this year I have gone through all the outcomes and put down which I can achieve before I even go out to them [yeah]. So I know in my mind that right I have got this that I need to do here [So you have worked out the system and how that can apply and almost you know what you need to know?] that's right being more responsible I suppose isn't it. I suppose it is preparing you for when you do qualify. It is all slotting into place and thinking 'Oh right ok I have got to do this.' Where as in the first year you are just led [yeah] all the way and whether you sort of lean into it and well I am only in my first year [yeah] and the reality of it kicks in in the second year. Part 2.5 1233

Yes it is taking notice of what it does want you to do and in the first year you would want them signed off. But now you want to make sure that you can actually do them [do the job yeah]. And knowing within yourself that it would be ok if she did sign this [yeah] but the other side of the coin is I really want to know that I can do this. Part 2.5 1423

I knew a lot of people in the first year that had all their competencies signed off in their first placement [yeah]. Whereas I think in the first year I would have probably been able to as well so maybe in a sense yes. But I asked not to be signed off because I didn't know everything in my first placement [right] so I wanted something to work towards and I found that the competencies in the first year were a bit of a competition [yeah]. So if you had them all signed of in the first placement then you were the most amazing nurse in the world [laugh]. But um in my second year and my competencies, in my first placement I did so much because they were so busy there that I had a lot of responsibility given to us as students on the ward that I did get quite a lot signed off [yeah]. So I felt a bit of a hypocrite then [laugh] but no I earned them [yes] I earned them to be signed off. Part 2.6 1434

Well I was saying it was easier in the first year because in think it is a bit of a tick box and you just like to get them in and done and whatever. But I know that there were things such as medication that I hadn't experienced anything like that in the first six-week placement until I went to mental health and seen the different medications. So I said to my mentor 'look I don't really know anything about it ' but I was lucky because my mentor sat down with me and went through each competency and sort of quizzed me on it and what I know 'where have you done that and where have you done this' and I was able to answer so if there was anything I was unsure off she would say half sign it and sort of work towards it [right]. And then anything I thought that I didn't know with medication and that I said well don't sign it and I would get it done at the end of the year. Part 2.6 1557

I think in a way they are tick box because we want to get all the uni work done but I want to learn. I want to make sure I am competent before I I wouldn't like to qualify and think I don't know how to do that [yeah] Especially when it comes to drugs and things. Part 2.7 1756

I think if I, if I don't feel competent I say next time do you mind if I do that or and I will ask to keep doing it and if we go through my competency sheet which is usually at the end my mentor will normally say 'Do you think you have done that?' and I

will say no or yes or she will normally say 'well we haven't done that yet' and I will normally agree. So we will normally do it together [right]. Part 2.7 1825

There is a distinct change in the participants understanding of the competence process in the second year. There is a realisation that the first year was almost a token gesture, from a competency perspective, but the second year sees the participant looking at the competencies as a means of skill mastery. With the interviews taking place at the end of the second year there is even a first mention that participants wouldn't want to qualify without being able to master certain skills.

Competence – The third year

During the third year we witness the participant's developing their clinical skills further. Rather than concentrating on the procedural minutiae of the clinical task, skills are now seen as a package of care rather than performed in isolation

Like when you are less confident and that you can only really focus on one thing like doing a procedure. Whereas now the procedure isn't actually the only thing you are thinking about yeah you have got to do it but it isn't key. Part 3.1 1312

This section will explore the essential components of skill acquisition and the gaining of competence during the third year and how the participant perceives the changes they undergo during this transitional time from student nurse into readiness for life as a qualified practitioner. The second year analysis suggests that the participant more closely considers the importance of competencies and their development as a clinically skilled practitioner. The third year shows a participant who is looking towards qualification and coming to terms with the likely consequences of not attaining clinical expertise during the student years. This is summed up by a participant who outlines the progression of the competence process through the three years of the nurse education programme.

In the first year, I think I have said this before you rush to get them done [talking about competencies] this is really bad to say but you want to get that ticked and that ticked and that ticked. In the second year you start to think a little bit more about them but in the third year you want to know that you can do these [yeah] not only just to get them ticked off you want to know for yourself to make sure that you are competent at doing those [yeah]. Part 3.5 0704

Participants appear to realise that the process of competence is a 'work in progress' as they are proceed towards qualification.

Um … yeah in a lot of respects yes in a lot of things I am competent but there are a lot of things that I am still working on but I do feel nearly ready which is quite

frightening [laugh yeah] but I do feel a lot more confident in my ability. Part 3.3 0918

Oh yeah I was thinking that every time I come into work and finish I'm one step closer to qualifying and I'm doing this throughout the day I am thinking to myself I can do this when I am qualified it's not as bad as you think it's going to be [yes]. Part 3.3 2029

Competence is seen as fundamental to qualification, not just from the obvious minimum standards set out by the Nursing Midwifery Council (NMC, 2010), but acceptance that to be a qualified member of staff you need to be a safe competent practitioner but the participant is well aware that you can never know everything.

I think even for existing staff you know that have been in it for some many years. They still come across things that they haven't done before. So in the main I do feel competent unless I come across something that I hadn't come across before and so I am not afraid to ask. Part 3.2 0240

I do feel ready, I do feel um I sort of surprise myself when I um in no disrespect to the qualified nurses, you find yourself because you are a fresh head and you are fresh from studying, you kind of pick up on things that they might not have as well [yeah]. And in fairness they would always compliment you and never get a bit shirty about it it was always well done. Part 3.6 0407

An important part of gaining clinical skills is the ability and confidence to work in isolation and make decisions for themselves. Participants start to discuss to critical areas that assist the development of clinical skills, the process to act independently and the need to self-check their actions rather then resorting to their mentor to quality assure their actions.

Because you have got to check yourself I have a little more responsibility because it is my P.I.N [talking about the future] and everything isn't it. Part 3.3 2639

Yeah it's been ok I have developed and I am a lot more confident um I feel I can go I feel that I can just go off and do things independently and make decisions for myself without so much support from my mentor [yes]. It is also good to have your mentor there supporting you when you are not sure of things. I think I am competent I feel competent in a lot of areas. Obviously there is lots more to learn and I will keep on learning but but I feel that I am gradually starting to branch out independently. Part 3.4 0123

Yes definitely you pick up on things that you don't know and it's like ok you should know this and then you just work on it and think there will always be there will always be things that you don't know. Part 3.4 0956

The first year I think you are just finding your feet and thinking OK what do nurses actually do. So you watch, observing and trying out a little bit for yourself. Second year you are doing a bit more so you are doing more procedures and more clinical stuff and helping out with the meds more. And then the third year you are basically got your own patients and you are looking after them like the staff nurses have been doing, your working independently. Part 3.8 2618

With independence comes self-checking, rather than seeking advice from the mentor participants starts ensuring that any data collected through assessment, nursing interventions or procedures are rechecked to ensure consistency and quality of action. Participant's take the decision to relook at the situation and re-evaluate their action by waiting, reassessing and comparing and contrasting before continuing with care or referring the issue to their mentor.

I think to myself I always think to myself I always double check. Part 3.3 0716

Um yeah in the main I am comfortable with the things that I know and comfortable with the things that I don't know in certain aspects. But there are still things that pop their head up [yeah] and I suddenly say oh didn't know that and I should've known that or I didn't realise that particular aspect was in that particular situation. The important thing is that I always double-check everything I do. Part 3.2 1613

In the third year it appears that participants have learnt when to involve their mentor in clinical decision-making and when to act independently. Understanding your limitations is important when developing competence and moving to qualification. It appears rather than the general 'don't know anything' attitude of the previous years participants are appreciative of new learning and their abilities to respond.

No no I was pushed [laugh] I was like I don't know I don't know his name the dude from the resus team and I was like they said 'you can have a go next' and I was like 'no' and then he was like 'XXX [states participant's name] is up next shouting it' and I was like 'Noooo!'[laugh] and they are like 'go on' and I was like 'what am I doing' [laugh] it was terrible and then I did it a couple of times since then and I have learnt from that experience. So I am glad that he pushed me and I am glad that he pushed me because I wouldn't have done it. Part 3.1 0704

You know we are coming across things all the time you know we have got a young person in here at the moment with a particularly infectious illness now that has just been diagnosed this morning so [it raises a different perspective] yeah it raises a different perspective and you are having to get outside agencies involved now. I was well out of my depth but I know now. Part 3.2 1613

Yes definitely you pick up on things that you don't know and it's like ok you should know this and then you just work on it and think there will always be there will always be things that you don't know [yes]. But so long as I know what I really need to know and just the other things will just come I suppose. Part 3.4 0956

I think that is a good thing because I feel, I do feel competent in the sense that I don't know everything and I learn every single day [yes] but I feel competent in the fact that I could do the job if that makes sense. Part 3.6 0407

It is one thing to be deemed competent by a mentor or a third party it is another to realise that what used to be a task orientated procedure that needed thought and concentration now appears to be almost second nature.

Passing a N.G [laugh] I don't know why I was really scared about that I really don't know why because now I just do one like [Participant mimes the action of passing a NG tube]. Part 3.1 2850

Like I do think like I have done quite a lot today and I feel I don't know I feel a bit proud of myself you know if I have done more than what I have [yeah] done in previous weeks. Obviously when you got warmed back into the ward, obviously the routine and everything and they were giving us our own patients then I kind of felt like a third year more [yeah]. They [mentors] were like ' you are going to get your pin soon so get working ' [laugh] and I was doing it [making decisions] without thinking about it. Part 3.3 0344

One other factor that seems evident from participant's account of clinical skill acquisition is that of skill transferability. The consolidation period brings security and the feeling of being part of a team but qualification means that there is every chance that participants may be employed in a differing speciality or even a different Trust. Becoming aware that the skills and the decision-making strategies they have acquired would make their care safe and clinically relevant regardless of environment is an important milestone in the participant's journey to qualification.

Yeah I think I could actually like obviously getting used to new surroundings I think I could because you can bring the skills you have learnt to that area. You use each other's skills and support stuff as well isn't it? Part 3.3 1510

Yeah definitely, like I do bank shifts in Special Care and some of the things you see here to the community that can be transferred out as well [yeah] so a lot of things are transferable. But obviously you have to adapt to new situations but the core foundations are there that I need you know, I have nearly got them [laugh]. Part 3.4 1132

Yes that's right and that is fine for instance if you take me out of one area and move to another I really didn't mind, coming down here today [referring to working out of areas for a single shift in a local University Health Board Trust] if that had been said in my first year I would have been petrified [laugh]. Part 3.5 2830

Yeah I think because obviously yeah your basic observations and things and every procedure you are doing are the same and all your basic things. And even if you don't know something it wouldn't take you as long to learn it compared to somebody who had never done their training. Like I haven't worked a lot with tracheostomies and she [ward sister] said to me on the phone about working with tracheostomies and I was like thinking don't [laugh] but you know um I think I have done suctioning and things like that so I don't think it would be too much different um. Part 3.7 2443

Yeah definitely because you well your assessment skills stay the same, the family centred care and your relationships with the parents and doctors are all the same just in a different environment. Part 3.8 1945

I think I am more competent from the second year, I can do a lot more things through going through the different speciality things I have done this year I have gained a lot of experience and through that I feel more confident and I can use this in all areas. Part 3.1 0930

The development of competence over the three years of the nurse education programme sees a dramatic transformation from a novice layperson into a safe and skilled healthcare practitioner and is almost a cathartic experience for participants as they become skilled and start to feel that maybe they could be a registered practitioner. It is very clear from the data collected that participants move through three distinct stages that follow the academic years of the course. Competencies in the first year have very little status and are seen as secondary to becoming ward wise and useful within the clinical environment. The second year see the participant focus on clinical skill acquisition and mastery whilst the third year sees a more holistic view of competencies and care generally with a move away from tasks to more round care packages.

It appears, from this cohorts' perspective, the attainment of the formally recognised competency assessment is relatively low on the participant's priority for first year accomplishments. The development of competence is a two way

process between the internalised perceptions possessed by the participant and the viewpoint of their mentor deeming and validating competence and there must be a divergence between the two parties during the first year. The summative assessment of competencies is already deemed a subjective test of clinical skill (Norman et al. 2002). Indeed, as Cassidy et al. (2012) points out the competence process relies on motivated, knowledgeable mentors willing to explore the needs of the participant and capture not only the clinical skill exhibited but also promote the most effective learning style to maximise new learning. In a pressurised healthcare system, mentors have to find the time and energy to invest in the student nurse during the early months of the nurse education to give them the solid foundation they need to build on for subsequent years (Andersson & Edberg, 2010). Performing the right procedure, using the most appropriate skillset, at the right time, to the right individual involves a multitude of differing decisions. If lip service is paid to the first year competencies, this may be detrimental to the quality of competence attainment in later years. What is heartening is how the participants appear to have a relatively smooth transition to qualification with little additional support from the curriculum. It seems a logical move to concentrate on clinical skills before moving to the more holistic care packages seen in the third year. Questioning these two key concepts by it very nature must question the decision-making abilities of practitioners as competence and clinical judgements/decision-making are so closely linked (Hansen, 2003; Allen et al. 2008).

The role of the mentor and decision-making

The role of a mentor is to create a supportive learning environment (Jokelainen et al. 2011). In particular, Pellat (2006) proposes a mentor should be a supporter, feedback giver and a role model, essential characteristics that enables the student to practice, challenge and reflect on practice (McCall, 2006). The seminal work by Darling (1984) identifies three essential components of the mentorship relationship. Participants may not explicitly mention the terms formulated by Darling, but the context and nature of the mentorship relationship is implicit within the collected data.

- Attraction – admiration of the other person
- Action – invests time and energy in the relationship
- Affect – positive feelings towards the other person

It is clear that participants feel more comfortable with a mentor who has good interpersonal skills, knowledgeable and is deemed to be competent.

Yeah that's right, my mentor is lovely here, really good [yeah] if I don't understand anything I will ask and she seems quite knowledgeable and she will fill me in. Part 1.2 0838

A good mentor … … um I don't know I learnt more of a newly qualified of my first ward. She will make a fantastic mentor whenever she takes her mentorship. I was really unlucky that she hadn't done it, as I would have really have loved for her to be my mentor. Um she was just really approachable, up to date, no bad practice you know. [um] Up to date on research, research papers, new clinical procedures coming out and someone who is quite knowledgeable? Part 1.7 0530

There is an expectation that after a short period of time post qualification the natural progression is to become a mentor (Ali & Panther, 2008). Although it is clear in much the same way that not all could teach, so it is the case that it takes a particular type of individual to become a good mentor. Morton-Cooper and

Palmer (2000) suggest that the aspiring mentor should be aware of their skills and deficiencies, as they will be required to take on the following roles:

- Advisor
- Role Model
- Coach
- Counsellor
- Guide
- Problem solver
- Teacher
- Supporter
- Organiser & planner

In fact, accepting the role of mentor is more than giving back to the profession but conscious commitment because the mentor's attitude and clinical skill guides a student ultimately shaping the end-product, a registered child health nurse (Sherwen, 2003).

The Mentor – The first year

The criteria proposed by Morton-Cooper & Palmer (2000) demonstrate the wide-ranging skills needed by the mentor to support the neophyte student nurse. The old adage of the mentor being a friend, teacher, advocate and a facilitator appears important for the developing student nurse (Neary, 2000). Hodges (2009) explores the role of the mentor in guiding the student through the potentially stressful first few months of clinical practice encountered during the first year, not only is it important to understand the needs of the participant it is equally important that the mentor understands their own role within the clinical environment.

This category explores the importance of routine and the mentor's role in the development of decision-making. The participants' ability to work out the day to day running of the ward, with the support of their mentor, and the ability to look busy is important to the participant in their quest to appear useful. All participants discussed the importance of routine in their decision-making development (Scarlett, 2011). In fact, a successful outcome, at the end of the first year, from the participant's perspective is the notion of being 'ward wise' and a number of students took on additional bank shifts in the early stages of the course for the specific reason of feeling at ease within the ward environment. This right of passage allows an element of autonomy in the early stages of their nurse education and promotes confidence in their ability to react and ultimately make decisions (Pellatt, 2006). These decisions are rudimentary and in many cases involve no more than seeking clarification of action rather than discussing clinical care but requires direction from their mentor to point out the key processes in ward routine. This appears to be the foundation of the decision making process as it focuses the students' mind on the daily clinical interaction necessary for a smooth running of the ward environment. It also builds trust between mentor and student and as a result there is a greater likelihood that the mentor will push the student to become more proactive and confident in the clinical care they deliver and the decisions they make (Morgan, 2002).

if my mentor wants me to do anything I'll go off and do it. Part 1.5 0616

I kind of like being told you know either go off and do this. I don't like oh you might want to do this or….. Part 1.5 0626

If it is a new ward I would usually ask what you like to do first. And they would normally tell you that they like to get the washes out of the way and they've got all this [unsure of next word] to write it all down and then. Breakfast would come along and they would give you a brief of the morning and I would just get on with it. Part 1.9 1411

Throughout the three years of the nurse education programme ward routine is seen as the cornerstone that all aspects of care are built upon (Oliver et al. 2010). Without this structure, participants find the ward environment difficult places to showcase their skills to their mentors (Ellison, 2010). One thing that all first year students crave for is to feel that they are useful entities within the child health team. In the early stages of the participant's nursing career the clinical environment is unfamiliar and they are uncertain of what to do next. The identification of the ward routine and their involvement in this process seems vital in the early stages of nurse education. Role identification demonstrates how the participant comes to terms internally with this stressful and at times difficult concept. The data suggests three components to role identification:

- Looking for tasks
- Wants to be told, and
- Conscious of uncertainty

One of the great fears shown by the participants in the early stages of the course is the feeling of not being useful. They quickly look for the skills that were taught in University such as vital signs and plot out their shift around these skills. This familiarity is seen as a safety blanket allowing the participant a small amount of independence from but directed by their mentor.

Um ah just general things about the ward like where things are kept, obs and that. Um the way they do, the way they go about things the way they do the paper work, things like that you know. Part 1.7 0402

Um … … the first few weeks I was very unsure of the … of everything really [um] it was very daunting because I have never been on the ward before, so I would stick to what I know the obs. Part 1.7 1216

[The ward] we went to was really really busy and as a first ward it gave us a really good insight [yes] as a nurse, with you knowing what to expect and to get into a routine of how to be with the patients, just the basic skills of sitting down and talking to them [yes], doing the observations and reporting back to the nurses the findings. Part 1.2 0020

Yeah and as a first year student you are given the mundane sort of jobs because sometimes they need doing and you've got and you can't contribute to anything else because your skills don't allow. Part 1.8 1612

The next statements demonstrate the feeling of despair and lack of confidence generated when the routine is unfamiliar or not clearly identified by the participants.

Yeah otherwise you are just sort of standing there on the outskirts and not really knowing what's going on or what to do. Part 1.5 0032

But when you have not got a routine you don't know where you are going and who do I follow and stuff like that. Part 1.1 0613

As a student you are just sort of wondering around and you have got this lost look about you. Part 1.6 1051

Decision–making in the early stages of the first year is limited and the student is passive in the mentor/student relationship. Participants found it reassuring if the mentor took control and task allocated throughout the shift leaving the student little opportunity to make decisions for themselves.

It was almost like I needed approval to do things you know like is it all right if I do this, but things like getting the water or do you need a box of tissues [yeah] or things like that or just basic little things that you can do I would carry out myself, things like that. But the tasks that were needed or required I think that I did rely on my mentor more for. Part 1.8 2733

I found that my mentor would give me a bay and the first day I would shadow my mentor a lot I would follow her but then I would start to drift of and go off on my own but she would tell me what to do. Part 1.6 2200

It would depend what it was because like I would go in and do obs but the more complicated things I would wait to be told. Part 1.5 0926

It appears the enormity of the tasks undertaken as a nurse soon hits home from a participant's perspective. Participants displayed concern about the amount and the complexity of work, or felt that they were not helpful to the nursing team as they deem themselves as just doing basic routine tasks

Ah this needs to done or this needs to be done and I would just do the obs. Part 1.7 2014

And they would always say in new situations, 'have you seen this before' – no I am only a first year student [laugh]. And you would think oh that line saved me again that did [laugh] Part 1.2 16.03

Then there was other things that were thrown in that I just didn't understand and obviously I would go and have a look and read and see what I was talking about. But then going out there I would think oh I wish I could be more helpful. Part 1.6 0641

Yeah you do and I think I will always remember my first placement. And I will always understand someone on their first placement when I am qualified as well [recalling the feeling of helplessness] Part 1.6 1257

I did not expect what happened on that first placement at all, I don't think I was any help at all. Part 1.1 0114

Um, I think that in my head I am like gosh what am I doing here? What is all this? It is like right do obs first or do this, I was kind of like I was told to do everything for the first couple of weeks. Part 1.1 0433

I just wanted to be included sometimes because they just go off and they say follow me. It's like well where are we going, what are we doing but they didn't really want to tell you anything only follow. Part 1.5 0155

Like one of the nurses came out because I was really under confident and I said I can't do it and she said ' Have you practiced and have you learnt……' and I said yes but I said I just don't know how to do it [um]. Part 1.6 0532

The mentor's role is of paramount importance in the early stages of the nurse education programme. Participants are uncertain of the clinical environment and need direction. With limited experience and lacking a routine the mentor controls every action and the participant is happy to directed initially. The following sections explore the thoughts and feeling as the participants adjusts to the new sights and sounds of the clinical area and starts to learn the ward routine.

Participants found it difficult to apply theory to practice when in the clinical environment. Skills taught in University took on a differing complexity when it had to be performed on a live human subject. Skills that the participant felt were well practiced in University proved stressful and participants questioned their own ability to perform the tasks. Mentors identified deficiencies and promote confidence in these early stages through demonstration of the task when a clinical skill needs to be mastered.

It was a really good team of people and they were good at transferring their skills and sort of teaching me the ropes and showing me what to do and what not to do and where to go for advice and things. Part 1.8 0216

I will go back and say I am really unsure still [yeah] can you come with me again to do it to show me again. Part 1.6 2426

[talking of a clinical skill] I don't know what I am doing and so what does this mean and like [laugh] she, my mentor she was really good and she would say "right we will go in and just talk to her and this time I will show you for a couple of days and then you will go in and you will tell me what you are doing" and she was really good mentor. Part 1.1 0651

I just got told [yeah] Yeah my mentor would be like, yeah on the first day my mentor was like right ' we will put our pinnies on and we will glove up, you look behind the cupboards and their soap will be there' Then you would need to fill up the bowls so I would spend my time filling up the bowls. Then I went to each person with my mentor to clean. Then as I went through that placement I knew the routine and I knew that ah right, then my mentor would say go and do so & so and I would pinny up and put new gloves on and I would what ever. But for the first time I had to be told what to do because I didn't know. Part 1.1 1322

I think where there was, where there was specific tasks that need to be carried out I relied a bit on my mentor to guide me through the task. Part 1.8 2733

The data suggests that the student, possibly because of the nature of their relationship with their mentor, felt protected or even immune from responsibility of their actions. Students who had a supportive mentor found it limited their stress within the clinical environment and allowed them to concentrate on the allocated tasks. It also allows the student to be guided along almost taken on a journey.

I think you would always feel secure that, knowing that you are first year student and you are almost untouchable and you are allowed to make mistakes. You were allowed to be guided along [yeah] because it was fine because you are a first year student. Part 1.2 1603

But I don't think we were given many big decisions that we would have to, it's not crucial type thing. Part 1.8 2436

Although mentors are seen as a protective force, participants were reluctant to challenge other members of staff who allocated them tasks above their ability. This is an interesting finding as individuals new to the profession are placing themselves under pressure to perform. Whilst analysing this from a decision-making perspective it would be worrying to think that students may be placed in a position where they feel pressurised by staff to make decisions they are not capable or prepared to make.

It is like the expectation at the end of this year is there of us to do those things you know? Like get on with it. Part 1. 8 2827

If you asked to do something and it assumed that you can do it and you are a bit frightened to say that you can't do it. [Yes] If I haven't been able to do something, it has been a bit eyebrow raised [by mentor], why can't you do that? Part 1.6 24.26

Sometimes described as a defensive mechanism 'mirroring' is a social device that helps individuals fit into larger groups (Iacoboni, 2009). The way we learn, interact and reflect on extraneous factors is innate and allows us to identify the 'learning moment' (Crawford, Dickinson & Leitmann, 2002). Subconsciously,

participants absorb the actions and reactions of others manipulating the good and poor experiences we encounter whilst learning the art of child health nursing (Frith & Frith, 2011). This section will explore this phenomenon from the student's perspective.

But then in other ways like communication and whatever that was just like on the ward stuff like just learning from watching other people. Part 1.1 1034

I could watch them and then they would teach us and then they would watch us then so I think it was a bit of both so that was good. Part 1.4 0808

you are just like a sheep and you follow them around and do what ever they do. Part 1.4 1953

Um … … … … … I probably watch what my mentor has done during the day. You know what she has taught me and what I have seen from other members of staff, you know following people [yeah] patients. By watching you can see what works better than previously. Part 1.9 0911

Um the way they do, you just watch the way they go about things the way they do the paper work, things like that you know. Part 1.7 0402

Yeah you do pick up on things by watching what they do, the good things. Part 1.7 0712

Um and I found that my mentor would give me a bay and the first day I would shadow my mentor a lot I would follow her. Part 1.6 2200

For participants in this study 'mirroring' was as much aspirational as the acquisition of new interpersonal or clinical skills. The participant captures the way qualified nurses approach and interact with children and families. Interestingly, this process is more than mimicking, it is the adaptation of personal behaviour using the good and bad interactions witnessed during the

clinical day. It appears that the participant is building a schema or continuum of nurse characteristics based on the ability to engage and demonstrate high quality interpersonal skill. On the one end of the continuum you have the poor nurse and the other a practitioner who exhibits high quality characteristics. The participants appear to be judging themselves along this continuum self-assessing where they are now and where they would look to be at the end of their nurse education.

We know now the way we have been spoken to and the way we have been treated badly, we know now that we would never do that to a student do you know [yeah]? So it does, so it doesn't influence you to copy the bad behaviour [yeah] it makes you, it makes you more adamant that you are not going to copy them you know. Part 1.7 0736

Whereas decision-making now is based on the professionals I have seen in practice and [yes] I would like to aspire to be like. You look at some girls that are good and you look at some of their skills and that is how it is done and yeah that was good. Part 1.8 2526

The neophyte participant is also trying to get to grips with the role of the nurse and the characteristics that makes a good practitioner. This is seen in the statements below where the participants are almost idolising what is perceived to be the characteristics of a good nurse.

I put her on the pedestal and sort of allowed her to guide me everywhere you know and went to her if I was concerned about anything. Part 1.2 0313

No I sort of look and think one day I would like to do what you are doing and maybe have my own little student. And yeah I do look around and think to myself yeah I would like to be you [smile]. Part 1.5 1204

you see how each one of them works, you tag onto the one that you aspire to be like [right] and then follow them. Part 1.3 0623

Definitely, I was role modelling myself I was picking up on who I thought was a good nurse as it were and then taking a lead from them I think. Part 1.3 0556

The complexities of learning their role within the multiprofessional team, mastering clinical skills and the development decision-making strategies to promote high quality care and personal competence are evident in the data. This section explores the role staff play in this process in particular this section deals with the participant's perception of a good mentor. Trust takes a differing perspective in this section, if the participant has little or no trust in the quality of their mentor it stifles participant development, confidence and ultimately decision-making. The participant needs to feel wanted to get the most out of the learning experience. If this emotion is not experienced then participants feel disenchanted with the clinical experience and are less likely to engage and ultimately make decisions. The data suggests that the concept of 'feeling wanted' can be divided into the following four elements:

- The disinterested
- Unwelcomed
- The forgotten ones
- Acceptance

Participants found mentors displaying the characteristic of appearing disinterested made for a difficult mentor/participant relationship for the participant in particular. The disinterested mentor fails to motivate participants and made the achievement of aims or clinical competences difficult if not impossible.

We were not really allowed to do anything, it was like when we came to the Children's ward it was like you are only here for two weeks so wont be able to sign you off for anything and when I was with the mental health I was like in a day unit, there was nothing I could be signed off for there. Part 1.1 1140

Yeah, because they just give you the impression that they never really want you and they don't quite know what to do with you [right] and I think that because you are first year they just think oh all right Part 1.5 0127

if [the qualified staff] they are not keeping up with research and things like that and what have you it's like they come in day to day and just do their job and there's nothing interesting, it's just like they didn't inspire you. Part 1.7 0637

I think that they get fed up of having, I don't know, I feel that sometimes they have students so much that they don't make so much effort. Part 1.9 1551

Linked closely with the disinterested is the mentor who makes it painfully obvious they do not want students allocated to his/her area of the unit.

The staff's attitude isn't it; if they were welcoming I suppose and make you feel that you could ask questions. I am not afraid to ask questions and I ask loads, but at times you know to keep you mouth shut. Part 1.3 0856

Yeah, there are days when I am not sure who the staff are on the ward and they don't talk to you and you are pushed out a little bit and you don't know what to do when it is quiet on the children's ward, you don't want to stand around but there is only so much checking you can do. Part 1.9 1525

Another characteristics that is linked very closely and appears very annoying to the participant is the mentor who gets on with her work forgetting to involve the student.

Um………….. Someone who doesn't let you do much and forgets half the time, Oh I forgot or sorry [mentions student's name] you could have done that but I forgot. Do you know what I mean they forget they are a mentor? Part 1.1 2234

Yeah, because they are used to having people students all the time I think that maybe they forget to you know talk to or introduce themselves to you and things. Part 1.9 1601

The overwhelming issue from the participant's perspective is to ensure that they are accepted as one of the team. From the early stages of the first year the participant is attempting to be useful member of the team and is reluctant to do anything that may affect this. Seen in the literature there are numerous student accounts of the same phenomenon (Goodall, 2005; McCall, 2006; Lett, 2013).

You could well be working back on that ward when you qualify so you don't want to disgruntle the NA's, that's not a good position to be in. Part 1.3 1131

Definitely, and I think that applies anywhere really [um] as otherwise, because no matter how much you want to try if you are not accepted well then there is not much you can do then. Part 1.4 1612

We know now the way we have been spoken to and the way we have been treated badly we know now that we would never do that to a student [yeah]. So it does, so it doesn't influence you to copy the bad behaviour [yeah] it makes you, it makes you more adamant that you are not going to copy them. Part 1.7 0736

With fifty per cent of the course scheduled for clinical practice, the allocation of a solid motivated mentor is vitally important to development clinical confidence, competence and ultimately promotes decision-making strategies (Ali & Panther, 2008). Mentors are under tremendous stress providing care for their client group whilst also mentoring first year students who are very dependent on their time and emotional energy (Gopee, 2008). Much of the first year development is based upon social mirroring of the mentor as the participants observe their actions and reactions as they perform their duty. These observational strategies allows the participant to identify routine, watch interpersonal skills in action and investigate how procedures and skills are performed in differing situations and the decisions that are made whilst assessing need (Shakespeare & Webb, 2008).

The Mentor – The second year

Data analysis of the second year of the nurse education programme provides evidence of the mentor's role and the development of participant's decision-making strategies. There appears to be an interesting change in the relationship between the two parties. The first year data shows a dependent decision-maker unsurprisingly being guided and directed throughout the clinical experience learning routine by their mentor. It appears that the beginning of the second year sees a change in student attitude and understanding of their role within the clinical environment, in particular a movement away from dependence toward independence. These are embryonic in the early part of the year but grow as the second year progresses.

The ability to work independently and react to the clinical environment is controlled by the mentor. When asked the participants are very forthright about the supporting role of their mentors and generally the role is seen in a positive light. One participant suggests that it is not until the second year of the nurse education programme that the student truly understand the mentorship role

Like I didn't even know what the mentor's role was, what her role and what my role would be but in the second year going in you knew what the mentor was, the responsibility was and what yours was and I was more comfortable asking questions saying 'can I do this and can I do that?' Part 2.2 0358

The vast majority of participants develop a good interpersonal and working/professional relationship with their mentor. When satisfied with their mentor's performance there is little to no mention of other team members' role in the participant's development outside developing team-working skills. If dissatisfied with the mentor's performance, it appears the participant looks around to see how other student/mentor relationships are developing

There may be another nurse that may have different qualities that I like as well 'oh wow she is really good' so when I am working in a team I do look at nurses and perhaps pick a few of the nurses on the ward and pick a few of their qualities and

then I would like to combine those together to be that person type of thing and I would try to work with them [said with a broad smile on her face]. Part 2.4 1952

When the mentor is lacking confidence in their mentorship role or perceived as not being a good role model, the participant feels as though they are being held back or getting a bad deal from the relationship. Two participants were very vocal about their relationship suggesting that their mentor acted like a gatekeeper restricting their opportunities to develop as a nurse by allowing them to do only basic tasks

Some mentors out there are very um, because they are qualified and it is on their back [yeah] perhaps um will um only let a student do the observations for example. Whereas other mentors want you be to be a good nurse. Part 2.4 0604

Yes and I think its not very good because if you have a mentor that's like that and you feel like that then its just the day comes when you are qualified and [laugh] you think I wasn't taught this or I wasn't allowed to like, not like you would but because obviously other nurses would but you feel stupid asking. Part 2.3 1425

It appears that mentor's lack of confidence stifles the learning environment and does not allow the participant to develop and mature through the clinical placement. From the limited data available in this area, if the mentor is seen as indecisive, defensive and overly protective the participants becomes dependant upon them and stalls the process of independence until they have moved to their next placement/mentor (Hodges, 2009).

So when I went to [local district general hospital] and I tried to get them all signed off [participant is referring to her competencies] then [yeah] but it was but again it was making me feel stressed out because my mentor was asking other peoples' permission to sign me off when I was sat there doing drug calculations. I was sat there with the booklet and she knew what I was doing and I was asking her and getting it right and doing the meds and she was still like still asking other people if she could sign them off and she didn't have enough confidence in herself and didn't have enough confidence in me [laugh that's right yeah]. I didn't exactly do anything

off my own but I always checked with her, can I do this so it was a bit like [yes] shadowing her and asking for permission all the time. Part 2.3 163

it was really busy and I offered on nights like you know students can do NG feeds and you can come and check that the pH things with you is fine [um] but they still refused so like although they were like crazy and really busy all we could do really was just obs [yes]. It kind of like made you feel helpless because like everyone is running around like crazy animals and I was like let me help, I know what I am doing you know [yes] I have been taught this in Uni if you can just supervise me to do at least one and I can show you what I can [student gulped] sorry what I can do and just let me do it but they wouldn't. Part 2.3 1425

It appears from the data that a confident mentor inspires students to work independently and start to embark in the decision making process. Participants' openly discuss the change in relationship with their mentor where one student flippantly suggests that in the second year they are seen for the first time as valuable member of the nursing team. This statement relates to the participant describing her mentor's attitudes to her in the first year and how it changed in the second stating

So it made you feel like you were part of the team and not just a student which is quite good because I think you kind of open up more if you are not just seen as a student then. The student can do this, the student can do that, they actually refer to your name now. Part 2.3 0751

By taking an interest in the student the mentor is unwittingly creating an environment that starts an open and honest dialogue between both parties.

Yeah you can have a joke around and stuff like and you talk on break or like whatever and ask questions about what you are doing in your personal life and stuff. Part 2.3 0751

We did, especially on the paediatric ward I was on in my first year because I had the same mentor in my second year. Even though it has been a good few months

since they remembered you and remembered what you did back then [yes]. And they can see what you are developing like and the way you are going [Yes]. So that helped me having the same mentor. Part 2.4 1429

Or in one case the mentor obviously realised that a participant was not emotionally dealing well with a young child who was critically ill and spent time discussing the case and giving the participant time to reflect over the events that occurred during her shift

Yes yes definitely it um it takes it does take a good mentor to pick up if, if you are, if after a situation you are not quite dealing with it and you are still thinking about it in your head. I had a mentor who said how did that affect you because the child was very ill and transferred out and then it was good for her to pick up that I was a bit dazed by the situation because I was newly in my second year and only my second shift and the child was critically ill and I had never seen a critically ill child before [yeah]. I hadn't, I hadn't really seen a critically ill adult because I didn't have that opportunity on the ward it was a bit of a shock for me so it is important for them to pick up on that and it does make a big difference because if she hadn't like reflected with me I would still be going over it in my head like 'why did that happen?' 'What was that?' you know [um]. So she can sort of like break it down then and talk through it because like that does help. Part 2.2 2540

This demonstration of empathy creates a close bond between participant and their mentor and fosters a new respect that allows participants to offer opinion in the safe belief that they will be given constructive criticism that they can build on.

[Yes] positive feedback from your mentor makes a big difference they say when I go back and say they need paracetamol blah blah blah and they say well done or good idea then it's positive feedback and it just reinforces what you thought in your head. [referring to the decisions they made] Part 2.2 0709

I think that it gives you self confidence in the sense that um when you are giving the right answer [referring to a decision they have made and clarifying this with their

mentor] and you seem to know what you are talking about, they kind of guide you to do other things with them. Which um see more things, do more things on your own um you just feel like um I don't know you feel that they have respect for you. Part 2.6 0307

Another strategy that appears to work for participants is the mentor's questioning nature. This allows the participant to think through their actions and means that decisions are thought through and considered rather than spontaneous and lacking an evidence base. The following statement demonstrate the mentor challenging the participant to provide an evidence base for the decision made

Some mentors might be well ok I'll show what I am going to do and whatever and then I want you to go and research why I have done it and so they'd would explain what they were doing and why [yeah]. Part 2.1 0756

Your mentor would be questioning you all the time and asking you look up things and asking you why you were thinking that you should give that type of care like you are. Part 2.4 0740

Other mentors see themselves as positive role models encouraging questions to be asked or directly asking questions about the care package devised by the participant.

Whereas in my last placement [student coughs] the mentor was more like 'what do you think you should do?' By the end of that placement it was like Ok she has got a temperature I am going to take the blanket off is that OK. It was more like I am going to tell you what I am doing and just double-check with you at the end. [Right] I think that all developed during that last placement. Part 2.1 2135

She would like put me on the spot and ask me questions like and like she took me, she took me away and we sat down and we like did basic like all of the like regular medications that they used, how and how much they used, why they used it and obviously like the pain killers which would be the best to use and the side effects

and so then when she was questioning me like on the ward she was like 'why are we going to give Paracetamol instead of ibuprofen?' and like I was able to answer then so it was more like a team then because I felt like I could ask her more questions and if I had a problem I could go to her a bit more and like and stuff then. Part 2.3 0653

And I suppose it does depend what type of mentor you have got too. If you have got one that is really encouraging and supportive then that boasts your confidence and you think that actually I can cope in these new situations now. Whereas if you have one who's not allowing you to do as much as you would like to do then your confidence doesn't really grow then. Part 2.5 2001

Alternatively, the participant would learn through observation but this differs from the first year because the mentor is demonstrating so that the student will then, if confident and competent act independently

Say for example, how they put a urine pad in, I would learn from them and then do it [right], because then I would do it the right way and I wouldn't think or question myself because I would know that it was right then. Part 2.3 0357

It became more natural because I could see my mentors doing it [demonstrating a procedure] so I could feel confident to perform this by myself. Part 2.2 0709

So I have been lucky that my mentors have been very, you know letting me get the experience and the hands on and the care that I need really. Part 2.4 0640

It appears that the mentor is encouraging and remaining positive throughout the clinical stay pushing the student to aim for independence especially when the participant's confidence level is low.

I used to feel sometimes like ' I don't know if I can do this, this is a bit too much' and she would say 'you can do it don't underestimate yourself,' you know you are a second year student now and you have done your first year bit. In other words it is

out of the way and I think that if I hadn't been in that situation I um like twenty times more confident now to do things [great]. Part 2.6 0414

Well for the first week they sort of suss you out to see what sort of capabilities are, how interested you are in the placement [yes]. And then they sort of give you jobs tailored to your needs really and push you [yes] where they think yes you can do this there is no reason why you can't is there? Part 2.5 1049

It appears that mentors, from the participant's perspective, are judged in the level of confidence and competence in their role. There appears to be a link between students' confidence to take the tentative first steps towards independent practice and ultimately making decisions and the mentor's perceived competence as seen by the participant. The data suggests, that participants assess the depth of their mentor's knowledge as much as to their own. The participant is only likely to overtly make decisions if they have faith in their mentor's competence and knowledge to perform their role and that they are confident that the mentor has the capacity to truly judge the participant's ability to make decisions and work independently. This becomes more acute in the third year data analysis where the participant is reluctant to step forward and decision make if they feel that they are being used as a pair of hands.

The Mentor – The third year

During the third year of nurse education alongside the development of the individual as a competent decision-maker there is a need to allow responsibility and independent learning. There are many accounts where the participants perceive a change in their mentor's expectation of their role and performance as they enter the third year.

Sometimes I feel it is people's expectations of you when you are actually working on the ward. You are in your third year and then some people [mentors & qualified staff], not everybody, but some people expect you to know everything [yeah] and to take up the batten and run with it. Part 3.2 0046

Ummm a bit of both really, obviously in the third year we are expected to know a lot more from experience as well what they have seen you doing. Part 3.4 0612

I think my mentor there, she had so much faith in me in that sense so really made it quite clear that I had the potential to look after a child and have patients on my own [yeah]. She gave me a bit of a drive because she had so much faith in me that I went on it and I wanted to prove to her that what she was saying was right and she could trust me and she could have relied on me to be quite competent. Part 3.6 1613

Coming here they said that by the time you finish here you will be able to manage the nursery. So I think straight away I started to gain a lot more responsibility [yeah] in the third year. Part 3.1 0821

Of course with increased expectation comes responsibility and the participants quickly realises that there is a need to act more independently within the confines of being a student. In previous sections, we have seen responsibility for action discussed but in this category we see responsibility as a realisation that the mentor is not always looking over their shoulder and as a result they need to decide when to act in isolation or refer the decision to their mentor.

Yeah like before it would have been I am the student so if anything goes wrong then it doesn't really matter because the mentor has come behind and checked all the time. Whereas now I am more like, I know that I am part of a team but I am more alone now, I stand alone more now like and its like ok did I do that, did I do that, did I write it in the notes 'Yeah I did all that' [yes] Yeah I do take it more home with me now. Part 3.1 1438

They can leave you [mentor] and you are more responsible [yeah] very much so. Part 3.2 2411

Yeah they are a lot more trustworthy in you and that you should know what you are doing really [yeah]. Part 3.8 0243

In fact, participants appear to get a strong message whether this is implicit or explicit that there is a need to 'get on with it'. In other words, as a third year student they need to prepare themselves for qualification and the consolidation period is a time to start that process, if not already considered by the participant. Some sees this as a motivator; the development of independent working and making decisions in isolation matures at different rates and needs to be assessed by the mentor. As a result, the data presents two differing opinions on how this aspect of being a third year is received.

Yeah definitely, definitely but she knows me as well so I suppose that's made a difference she very much let's me get on with things. She is watching and that but she is happy and she just ups the game a little bit. Part 3.5 0744

You hear it um some people were saying 'oh we have got third years here now they can do it all' Part 3.2 0150

Other participants still crave for the support and security of the mentor to check and recheck every action.

Whereas personally I feel that um the staff that still realise that you need supporting are the ones that get the most out of you because they let you run it but they are always there [yeah]. Rather than saying you are now a third year and you

are on your own [yeah] and get on with it [laugh]. And without mentioning any names some people are like that [yeah] but I don't personally feel that that gets the best out of me [no] Part 3.2 0046

Um … … … still no not really because obviously I am responsible if anything was to happen but I still want to be overlooked by a mentor and everything is checked by them so it is still their responsibility. Part 3.7 0440

What is seen in a majority of participants is their ability to be more assertive in the mentor/student relationship. The giving of options and challenging decisions first seen in year two is further developed in the third year where the participant takes ownership of the care delivered to children and families with the care seen as their responsibility resulting in the development of a professional tie.

I have got a fantastic mentor, she is lovely she is great but she does let me think for myself as well. Part 3.5 1254

Yeah I give them more of an option, you weigh up the options and then you say shall we do this one instead. Part 3.8 0350

I'm quite, not head strong in a sort of arrogant way, but head strong because if I believe something is right I'll go with and I find that I will speak up for myself a little bit more [you are more assertive?]. Yeah not to the point of arrogance but to a point where you are respected and its ah I think its helped that I have had really really good mentors, I have got on with them as well they have always pushed me towards that path to try to get it out of me as well [yeah] to try and you know because unfortunately Doctors and Nurses some things do happen you know and she said that if you really believe in something against the doctor or something you go with it you know. Part 3.6 2148

The student - mentor role dramatically changes as the course progresses. The first year see a mentor who, if motivated, assists, directs and shepherds the student through the early stages of the course. The second year sees a subtle a change where there is more trust and the student is encouraged to work more independently, yet still use the mentor as a sounding board to ensure the

decisions made are appropriate. The third year sees the participant take greater responsibility for the decisions and the care they deliver. They are much more likely to give options and challenge decisions of others if they feel that their way is right. The mentor's attitude toward the student is essential in this process; if disinterested and unwelcoming the participant will revert to observation and subservience. If the mentor is a motivator the student is more likely to work independently, take responsibility for their actions and make decisions.

The process of making a decision

Applicants enter nurse education with a variety of vocational skills and personal experience. Some have worked in healthcare as support workers or nursery nurses whilst others have come straight from school with little or no experience outside of the family home. This presents a number of challenges both for the participant and for curriculum development to ensure that, by the end of the three-year course the registered practitioner is a safe and competent critical thinker. This phase of the project allows the participant to reflect back and to examine the key factors that influence decision-making development, in particular self-assessing their performance during this period. The following pages will start to categorise the development of decision-making during nurse education programme giving the reader insight into the participant's world and the pressures involved as they mature into a registered child health nurse.

Decision Making – The first year.

The first year of nurse education is a time of uncertainty and participants need to feel useful and be a productive member of the nursing team. There is a distinct difference between the first and the final placement of the first year where familiarity with the placement, additional experience and competence allows the participant to start the process of thinking through the problem at hand and migrate from the phase of 'guidance' to that of 'options'. Participants describe the emotional shock and the overwhelming feeling of uncertainty experienced during many of the first year clinical placements. This section demonstrates that decision-making was low on the participant's priority.

I think I was too scared to use my own initiative or make a decision, [right] I think that in my head I am like gosh what am I doing here? What is all this? It is like right do I do obs first or do I do this, I was kind of like I was told to do everything. Part 1.1 1433

I really think that decisions were at the end of our scale during the first placement. In that, the decisions were really made for us [um] to go out and to carry out the tasks. Part 1.9 2436

In the early stages, the decisions were more orientated about what to do next rather than clinical decision-making or critical thinking skills. The participant was more concerned about deciding what was the next nursing priority or task and how this meets their client's needs.

That's just what you are instructed [in these basic skills] to do isn't it I would never act of my own [right] that sound terrible doesn't it. Part 1.3 1421

You follow them around and do whatever they do, you know but then as the weeks went on then you know the routine and so without your mentor you would go off and start your own care then you know. And decide what comes first or who to see to first or what to do first you know. Part 1.4 1953

I just like kind of go with the flow and try to mingle in and like if my mentor wants me to do anything I'll go off and do it. Part 1.5 0616

Sort of allowed her [her mentor] to guide me everywhere you know and went to her if I was concerned about anything. Part 1.2 0313

As the first year progressed the mentor appeared to change tact with the student moving from a very directed approach seen above to a more facilitative, progressive and less ritualistic, task orientated style of mentorship allowing the student to make decisions about workload planning. This change in mentor approach is based on participant confidence and competence but more importantly from the participant's perspective stemmed from the use of constructive criticism and praise. This atmosphere of gently loosening the bonds between mentor and student nurse that occurred during the first year help participants be more self confident to look for work themselves and make basic decisions based upon their clinical findings at the end of the first year.

Yeah I felt that she did and that she really um, she knew I could do it [yeah]. And if I said to her I don't think I can do that she would say ' I, I know you can do it so. Go

and try and come back and tell me what you would do' and she would say – she would always give me a lot of praise [right]. And her criticism was always constructive it was never she was never, I don't know, negative towards me in any sense. Part 1.6 0944

Certainly in the first few weeks they would tell you what to do [right] and I would do that. Part 1.4 2148

And you were given your own sort of, if this happens what would you do type of thing [yes] but it was very much the basic skills that you had that you made decisions on. And you would look at obs charts and report back and things and it is your decision then thinking oh this looks a little bit out of sync [yeah] it has gone up a bit or it has gone down a bit and you would report back then and the decisions like that. But I don't think we were given many big decisions that we would have to, it's not crucial type thing. Part 1.9 2436

Decision-making - The second year

The second year of child health nurse programme sees the participant truly come to terms with the decision-making process. In the first year, there was an acceptance that the mentor would direct, guide and support the participant through the span of duty organising their day for them. Although in times of uncertainty during the second year the participant reverts back to this mind-set but overall the participant is seeking opportunities to be proactive in the decision-making process, giving clinical options to their mentors rather than awaiting direction. Importantly, the participant wishes to be challenged on the decisions they have made by either seeking evidence or readily presenting evidence for the decisions they wish to make when challenged.

When asked about the decision-making process during the second year the participants generally suggest that they are happy to take decisions within their comfort zone. This relates to an understanding of the general routine of the ward where the student is able to structure their day allocating activities into slots of time. These skills have been acquired from the first year of nurse education resulting from familiarity with the environment and being 'ward wise' to key events that occur through the span of duty. This identification of routine remains an important factor in the student's working day. Indeed, it could be argued that the student is using these key time sensitive events as a scaffold that ultimately builds as the participant is exposed to more clinical experience.

You start with like you would go and look at your own patients so you would go around and you know as you would normally do you would look at who needs what priority time wise. Things like that, I am quite sort off I don't know OCD because I to have things quite structured I like my times you know. I have got my ten o clocks, my two o clocks and so you you know you go and you give a certain time to do, you know, notes and your writing and I know that it doesn't always go that way but [yeah] but I think you are sort of taught to use your time and to use it effectively as well and I think that is from the last year [yeah]. I think then in the second year I could apply that the way I could apply it to myself to make you work a bit more efficient. Part 2.6 0525

I am just looking at the charts and watching the clock because I am trying to think what do I have to do next. Part 2.7 0917

At times, the participant undermines his or her own ability to make a decision. There is a realisation that they are making decisions and making a difference but the importance is questioned. The participant appears to see their role in procedure such as observations as being menial suggesting it not an important decision compared to the decisions made regularly by qualified nurses.

I think in the second year you do start to make your own decisions but they are really not that important as in it is 12 o'clock and I am going to do the obs now. And that's kind of routine and then, if like for example, the temperature went up then that is not really a big decision. Well it is decision-making and it is more than I would have done in the first year but I think there is still a long way to go yet to get to to be like that a qualified nurse making big decisions that matter. Part 2.1 2035

Because I was going onto my first paeds ward in the second year. I am going on there and I have got my basic knowledge but its kind of like going into the unknown again because everything is different all the ranges are different although you have been taught them [yeah]. It's just all the equipment they use is different and like the blood pressure you don't do that as frequent and its just things like that. But um it didn't take long for me to become comfortable and then start making decisions. Part 2.2 0806

This self-doubt is evident throughout the second year of nurse education and in some cases increases as the participant moves towards the end of the second year and starts to contemplate their movement into the third year of their nurse education.

When you are in your second year placement you are in contact with third year students and see them going and doing it and seeing other people doing it gives you the confidence to do it yourself. Part 2.2 0709

Yes I suppose so but the other side of it is the reality of becoming closer to being a third yearer and that sort of knocks your confidence a little bit, where you are thinking 'oh my gosh! It's coming too soon now' [yes] and it does. Part 2.5 2001

The participants explicitly link decision-making and experience. The ability to recognise an event and either to have practiced or having seen others dealing with a case or condition assists decision-making. It can be seen in the following statements that the participant is aware of decision outcome but relates to making 'minor' decisions based on their confidence to handle the situation they find themselves in. The statement by the participant below emphasises this point where making a decision to re-evaluate before consulting her mentor was seen as a big step in becoming a second year child health nurse.

Because there are things you should know as a second year student, where I would feel quite comfortable if somebody had a little high blood pressure not to say anything. And I would personally take it on myself to monitor that for an hour for a couple of hours and if it kept repeating I would go to my mentor and say this has been happening for [yes] x amount of time um and I am not very happy about it and compare and contrast with the sort of things you are used too. Part 2.6 2449

This can also be seen in the statements below where the participant is obviously coming to terms with the movement from being a first year student and becoming a more experienced second year student. It appears as though the participant is weighing up the risk between self-directed working and the safety net of the mentor.

So obviously then during the second year then and by the six week placement then you knew things, you saw things and you recognised things which I never thought I would be able to do and you start acting on them. Part 2.6 1846

Its like the bigger decisions I have to ask someone [mentor] still because I still get a little worried like what if I didn't do that. Like you have always got to think ahead like a worse case scenario like if I didn't do that then something is going to go wrong. Part 2.3 2541

Yeah in the second year, especially as they know that you are a second year student, I feel that it is my responsibility to be capable of more and I wouldn't want to be incapable in my second year. Part 2.2 1025

When the unexpected occurs the participant quickly realises that this newfound confidence to decision make is transient until the next learning experience.

In the first year it was like ohh I can do the obs but now, just do them ever couple of hours and there is no thought. And in that way I am developing as a nurse [yeah] but then when the new things come along like putting NG tubes down and that that is when it is like I'm still not a nurse yet. Part 2.1 1131

And because my first paeds placement was in winter time, a lot of them was bronch [referring to bronchiolitis] and things like and asthma and respiratory, so you get to know the conditions and it becomes that you see a baby come through the door and you know straight away that they are a bronc and they are this or they are that you know? [yes] So you just know the route you just know the routine of treating these babies. Part 2.2 0806

It appears in the second year of nurse education that the participant has moved away from accepting direction from her mentor and now actively seeks evidence to either support their viewpoint or examines why his or her mentor has made a particular decision or acted in a particular manner. Firstly, the act of allocating workload appears different from the first year with participants actively aware why the mentor is allocating tasks with the participant starting to determine patterns of care required during their span of duty.

I think it is a role switch from the first to the second year. In the first year you are waiting for them to tell you and in the second year you are just waiting for them to give you feedback so it is that step forward. Part 2.2 1025

Yeah I would say it becomes more of um like you ask or do rather than just following them and watching what they are doing [referring to her mentor]. It

becomes more like um you kind of ask more so I am going to do this so why am I going to do this? Part 2.1 04.25

So I think, I think that you need to take responsibility on yourself because you can't have your mentor saying you need to do this because then they are taking responsibility for you. So you need to be autonomous and take it on yourself. Part 2.2 10.25

I think decision-making in the second year, I would make a decision and I would be confident enough to present it to my mentor rather than waiting for her to tell me what to do. So I would present it to her and if it was right then well done to me, and if it is not then I am happy for her to say the better thing to do would be to do this [yes] I feel more confidence but obviously you want to gain the consent of your mentor. Part 2.2 1914

I wouldn't just go and make a decision on my own I would always ask someone else like for example say, oh I can't really think of an example but say it was something to do with care and say doing it say every two hours or something and I didn't think that it was good enough then I would say look maybe we should do it hourly instead. So I would always ask someone else because I am not qualified yet so I wouldn't go and change the plan of care because it is my mentor who is signing on top and so I am kind of like her little shadow [laugh]. Part 2.3 2612

Yeah I probably would give a decision now, whereas before I would have been an indecisive person so I think where I am more confident in giving it then I will [yes] yeah I would probably well I am more able to give a decision than I used to be [right]. Whereas before I would have been 'well I don't know what do you think?' Now I would be able to be a bit more, I don't know what's the word, I could do it on my own I could make my own decisions. Part 2.7 2456

The ability to plan and manage their daily activities is seen by participants as an important juncture in the second year. Using the mentor as a sounding board rather than being directed and allocated tasks promotes a sense of independence and sees the participant making decisions that prioritise care, organise their workload and ultimately initiate the embryonic stages of censoring information

for mentors. Participants see prioritising and being selective with information as a rite of passage with the participants believing that they are now truly in charge of the situation and the mentor's role is support and guidance.

They have given me [allocated] a baby, which is different this time. I am just looking at the charts because I am trying to think what do I have to do next. Part 2.7 0917

Perhaps making the decisions is easier but the organisation and putting them into the order of what to do first I am still trying to work it out. Part 2.4 0903

I perhaps know what's gotta be done [yeah] but it perhaps prioritising and I am still in that frame of mind where I can say that this is all the information that I have got and what is the most important, I am still going through that sort of phase [right] what's most important that comes first. Part 2.4 0918

Yeah definitely because you prioritise as soon as you been handed over report you're highlighting. I would I would get out my red marker and highlight say if so so had a temperature or there was a patient who hadn't passed urine or whatever anyway whatever patient that was highlighted, then this patient would need to be seen first. Part 2.5 2107

I think it is more prioritising isn't it rather than routine. I mean the routine of doing things like your obs when they need doing that is still routine which is good because it can structure the day and you know where you are isn't it? [Yes] but it's more or less its more individual care as opposed to being led isn't it. Part 2.5 2207

Oh yes I am looking at the charts and I am like planning for the next thing I have to do for the baby or if I have to tell the parents anything so yeah. Part 2.7 0944

Yeah, I'm good at organising myself so I made a list in my head and I work my way through it. I know going through the process that's more or that needs to be seen before that and that needs to be seen before that but as in the way I organise

myself it has always been the same to make a list and see my way through it like. Part 2.1 1646

In these cases, participants are developing of an attitude towards lone working, with a movement away from mentor dependence seen in the first year. This issue of autonomy is mentioned in context of trust in that the mentor is happy for the participant to have some independence

I think I am a little more autonomous I'll always if I'm ever going to do something honestly, well just basic things then I would obviously just do but if I was going to do something on my own accord I would always check with my mentor because you should anyway. But rather than ask mentor what to do I would tell her I am going to do this and just look for an OK [right] rather than just ask what to do [yes]. Rather more gaining her consent rather than gaining her feedback. Part 2.2 0517

Yes I would be more, yes I trust my decision-making more now I think I did very little decision making in the first year it was more learning the basics. Towards the end of my placement I would like start to take things upon myself. Part 2.2 1914

This can be seen in the way participants start to describe clinical situations and how they prioritise or make a clinical decisions. It can be seen that in the first year they would ask their mentor a question and then act on instruction. In the second year, they act and then seek reassurance that the decision was the most appropriate choice.

Responsibility [yeah you think that has increased quite a bit do you?] yeah I do yeah for me personally it did any way from like taking a back seat and observing [yeah] other people and asking questions all the time and having that one person watching everything you are doing. To in the second year then from developing and learning and watching other people, I then took that in and they would then let me perhaps have my own patients and obviously constantly observing me with medicines and NGs and things like that. But I was starting to make decisions for myself about care as well in the second year and starting to ah do that from the first year then [Yeah]. So for me then it's the responsibility then giving me my own patients. Part 2.4 0103

[long pause] I'll have to give an actual example of if I was to say now you had a child with a temperature [yeah] so you are assessing the child with a temperature, so what is the temperature? If it is over 38 so you are making a decision of what is going on here, looking at the child have you got infection and is the child on antibiotics. And are you going to give medicine and if the child's temperature is under 38 you are going to make the decision of what non pharmacological things you are going to do, perhaps a fan or making sure they have not got too many clothes on and stuff like that. But if the child is ill in terms of the change in it's condition that's when I will yeah [tell mentor]. Part 2.4 2346

With greater decision-making opportunities comes the realisation that the participant is responsible for their actions. As a result, knowledge and evidence for action takes on a greater level of importance.

Yeah definitely [what's been the main difference?] Um [long pause] to be honest [pause] I'm trying to think now about decision-making. Yeah because I didn't have the knowledge then that I do now….. Part 2.4 1518

Whereas in the second year you are going to give an injection so you go and look it up in the BNF in that way you have got more responsibility [right] you start to learn by yourself. Part 2.1 0425

Yeah in the second year, especially as they know that you are a second year student, I feel that it is my responsibility to be capable of more and to know more and I wouldn't want to be incapable in my second year. Part 2.2 1025

In the second year from developing and learning and watching other people I then took that in and they would then let me perhaps have my own patients. But I was starting to make decisions for myself about care as well in the second year and starting to ah do that from the first year then [Yeah]. So for me then it's the responsibility then giving me my own patients. Part 2.4 0103

Um I would say a bit of both because I felt that I wanted to do it to have an understanding of what it is like to care for somebody and you are making the decisions. You are doing that care and you are decision-making all the time and

assessing them. But then I was nervous all the time and thinking that I am only second year [yeah] and its quite a responsibility but then of course I have always known that I have my mentor there if I did need anything you know. Part 2.4 0210

For one participant it was the realisation that once allocated patients and caring independently comes a realisation that if care is not performed there is no place to hide.

Yeah, I suppose so yeah if you miss a feed or something when looking after a baby its like why didn't you feed them or whatever. Part 2.1 05.16

Having taken on the mantle of decision-maker and this new autonomous persona, some participants felt elated that their mentor sought their opinions. It is at this stage that the participants started to truly gain confidence in their decision-making abilities and feel that they are active members of the child health team.

Yeah, like on my first placement, say we had had handover now, um say that the child was unsettled or perhaps unstable throughout the night my mentor would come with me and say right she would like direct what to do [right]. Whereas when it came to the end of my second year if I had had that handover my mentor would have said "what do you think about this?" or " What would you suggest?" Part 2.4 0447

Um I think that last year, I am just considering last year now [yes] I think um as a first year student you are not given a lot of opportunity to do things. Um and as soon as you say you are in your second year they are less cautious to allow you to get involved to make decisions for yourself and things like that. And so your clinical judgement is a bit more respected in a sense [right] in the first year because you are obviously still learning in the first year. Being in the second year I found that they took you a little more seriously [right] in a sense. Part 2.6 0136

And like last year [talking about the second year] you would get asked why you have done that and what do you think about that [yeah] and you would be expected

to know the answer why you did it like. If you thought something, why did you think it? It was nice to know that you did something for yourself you know rather than in the first year you would go around and you would just you go along and do it you know [yeah] and your mentor would come along and check it. In the second year they kind of take your word that you have done it and trust you [yeah] that there is a lot more trust I think in the second year. Part 2.6 2738

It is inevitable that once the participant becomes accustomed to acting autonomously there is likely to be conflict or disagreement between mentor and participant. Although there is no direct challenge of the mentor's opinion one participant put forward an option and felt aggrieved when that decision was not accepted or adopted.

No, its not perhaps they would take it into consideration, you are the student and they are the qualified and there were perhaps one or two decisions where I would said 'I think this' [yeah] and it would be overlooked instead of perhaps taking it into consideration. Only once or twice it happened but you just think well what do I do now in this situation because these people are qualified and have got more experience [yeah] if you have got sometimes that gut instinct you want a – yeah I should have challenged them a bit more in them situations. Part 2.4 2600

Decision-making – The third year

In the previous two years of nurse education the participant starts the decision-making journey by being told what to do and when to do it, there is little attempt to make a decision and every action is checked during the first year. The first year participant is a reluctant decision-maker having little self-confidence in their ability and uncertain of their role within the healthcare setting. The second year participant still seeks the comfort of the mentor's positive reassurance but offers opinion and options to care rather than being truly accepting of all the mentors says. When asked, during both the first and second years, the participant found difficulty articulating how a decision was made and the process they followed coming to that decision. In the third year, we see a confident decision-maker with a realisation that if they don't start being proactive in the decision-making process they will find the transition from student to registered practitioner more traumatic than it needs be, as one participant points out.

In the end, we are going to be qualified and we have got to make these decisions independently [yeah] you know and that does give you the realisation. Part 3.4 1742

Whilst another participant sums up the difference between the third year and the subsequent two years when it appears that they are less reliant on their mentor and becoming more independent as a practitioner.

Now I feel like I can use my own brain now if you know what I mean [laugh]. Part 3.3 1030

This is a general trend amongst the sample there is a more cerebral attitude to their work, it is more than just doing, more than being told what to do, now the participant is thinking more about the situation they find themselves in and attempting to figure out what is the most appropriate action in any given situation.

Yeah I kind of like when I am making decisions, I think I am more like do you know the rationale about it like? I think, I am thinking about things and I am like is it safe, if I did it like this or you think to yourself like 'O what is the protocol for this then?' whereas before I would have just I wouldn't think about it, I would just gone and asked my mentor about it. [laugh] Part 3.3 0947

Yes definitely ummm I have developed and I feel that I am confident and strong to make decisions. So yeah just developed more individually and I have become a confident, independent student. Part 3.4 1531

Yes you know I just feel that I can sort of make a decision, individually, by myself. Part 3.5 2220

I find myself knowing what to do rather than looking for somebody to guide me to what to do. Part 3.6 0632

I will just do it rather than asking you know [right]. Whereas before I think I would have asked and I know that they won't mind, I know what I am doing now I think. Part 3.7 1016

This newborn confidence to decision-make results from a stepping back by the mentors allowing the participant to act autonomously. The participant needs to be fully cognisant that the mentor is not just using the participant as a pair of caring hands but rather fully trusts them as a team member. This trust is important for the participants to start acting in isolation referring to their mentor only to update or discuss care when they are unsure of the outcome.

Definitely they seem to respect you more and they are letting you make decisions and yeah they seem to trust you a lot more as well and they take on what you say but they still question you and what you think this and what you think that but when you are starting to think back you are starting to make decisions. Part 3.4 0549

Yeah I am happy to work on my own, I do like to know that somebody is there um but independently I am happy to make decisions and feedback on things that I have

done and I seem to be doing well with the decisions that I am making, so yeah I am happy working on my own. Part 3.4 1349

There also appears to be a realisation that the knowledge and experiences gathered over the past $2^1/_2$ years actually means that they moving towards registration and that the participant is developing into a competent practitioner who needs to trust in their own abilities.

Over the last three years you have gained and extended your knowledge but you still don't know everything and I think that you have got to trust yourself to make decisions. You have been studying for the last three years, you have got to have some sense of confidence in yourself to make decisions. Part 3.6 2654

An obvious question at interview was 'what has changed?' during the third year. Participants cite a number of differing factors that assists the decision-making process to include the way they look at an incident or clinical issue during the span of duty. In the first two years the focus was on the minutiae of clinical care getting the skills right and ensuring they are seen as being practical, competence and useful. Although these factors are still important, there is a change in the way the participant views the child and family. It appears that the participant takes ownership of the family and as a result they become their personal responsibility in the third year. This is not seen in the first two years where the responsibility of care is deemed to be that of the mentors. One first year participant suggests that

Well not really, sometimes you would but I think you would always feel secure that, knowing that you are first year student and you are almost untouchable and you are allowed to make mistakes. You are allowed to be guided along [yeah] because it was fine because you are a first year student. And you would always say in new situations, have you seen this before – no I am only a first year student [laugh]. Part 1.2 1603

It is interesting to contrast this statement to the same participant in the third year where there is a distinct change in the way she views her clinical responsibilities.

Oh yes definitely, yes definitely um yeah because now your decisions are down to you, still you have the mentor or a person countersigning your stuff but right so you do feel more competent, confident and responsible for your actions for your families. Part 3.2 0932

The nomenclature is also different now that the participant is in the third year. The two statements that follow presents a clear difference from previous years where the participants talk of ***my*** family (Part 3.4 1640) or ***my*** patient. (Part 3.1 1544)

I have got to make sure that they are well, that ***my family*** *is cared for and talk to doctors so yeah for a while I have thought that this is it and I have got to start developing pulling this together. Ummm with every patient [child] really just looking after them from the start to the end you are expected to make decisions and so you do make decisions. So with every patient now I feel that I have got to make decisions on my own now and so I have got to make decisions and I have got to make the right ones. Part 3.4 1640*

I think that because it is my job and these are ***my patients*** *so I need to make, I have to make decisions here you have no option really [yes]. So if I don't decide to feed the baby then no one else is going to feed the baby. Part 3.1 1544*

Some participants postulate that this change of mind-set - the ownership of a patient group - means that they are more than a set of tasks or procedures set out by their mentor but their clients are a bio-psycho-social entities that require broader assessment and interaction. As such, participants suggest that rather than solving individual tasks they are looking at the wider picture and caring holistically.

I would say so yes providing I have got the full information you know. I wouldn't just make a decision you know read the notes, look at the child, listen to the parents

and then by taking that information on board then you make the decision then. Part 3.2 0612

Definitely a bigger picture to do with the family care and everything yeah you get time to think. Like even with my patient today, I could have done this I am going to do this now so whereas before it was more formal reflection doing it step by step in the second year [yeah] whereas now I am just thinking generally of how you can give the whole now really. Part 3.4 0720

But it takes a while I feel to get, others might be really lucky and it might just all clicks into place for them but it's with any task its like lets focus on the task then you start seeing other little things and then the other bigger picture comes into it as well you know. Part 3.5 0602

This appears to be a natural progression where the participant starts to become a true advocate for the family and as such every decision is personal but almost automatic. This is seen in the following statements where the participant refers to the decision-making process as a series of events that just comes together

Yes definitely Yes [right] exactly it has become more automatic in everything I do yeah. Part 3.2 0641

Yes definitely, you come on, you come onto the shift and you do things without even thinking about it or where as before in the first and the second year you'd be a bit um frightened to go ahead. Part 3.6 0521

Yeah it's weird it just comes to you, you obviously get all the information together [um] and then when you have got all that information sort of then comes your decision really just like that. Part 3.8 0308

When this is critically examined through a series of questions at interview the participant is very clear that it is a result of an improved knowledge base that assists this decision-making process.

So I think that my knowledge has expanded a lot but I still think that there is a lot to go as well because you can't know everything can you. Part 3.1 1742

Yeah I think sort of you would question your own knowledge obviously the things you've learnt. Part 3.6 2654

Yeah I think it is the learning and all the knowledge that you are getting really [yeah]. Part 3.8 0333

Yeah you think about it more now don't you? You gather all the information and you research and your evidence. Part 3.8 1427

I think knowledge really behind the decision-making knowing more about the decisions you are making, I think a little more confidence as well. Part 3.7 0957

There is also a need for something to compare and contrast that knowledge against - experience. It would appear from the data that participants are judging their actions against past experiences they have had themselves

Yeah because it's just practice, learning and getting the confidence to [perform] yeah I do tend to do that like if somebody comes in with abdo pain I think oh last time I saw that they went down this route last time [yeah] but this time they are not doing that why? Why aren't you doing it this time? Part 3.8 1456

Yeah ok I know how to do this now and next time I will be able to do it that much better. Part 3.8 2502

I would sort of always make a decision on the basis of um how can I describe it … … knowing that I have done this or seen this before [right]. I know that sometimes you have got to make decisions for yourself. Part 3.6 2524

I do actually because um I'd say a higher proportion of um the decisions I do sort of become second nature. Yeah and um you just do it you know whatever the situation because you've seen it before. Part 3.2 0338

Yes I say I am yes but when I see new things I am like oh I question myself but you will always see new things all the time aren't you [yeah] Its just that chance of getting there but mostly I make decisions when I have done it before. Part 3.3 2222

Yeah definitely from the first year you've got a lot more experience do you know what I mean. Part 3.8 0653

It appears that decision-making at the end of the third year is more than an accumulation of knowledge and experience, it appears that the participants are looking at clinical issues in a different way constantly looking for subtle cues prior to making that all important decision.

Yeah, you are more observant and you definitely look at your patient. Part 3.8 0812

But now in my third year now I can spot if my child is unwell and pick up abnormalities and feedback and make some decisions on what should be done. You know start doing them myself. Part 3.4 0207

[Have you changed the way you look at problems?] Not really I think that if there was a problem I would look at it in the same way but identifying problems is a lot more easier and if I make decisions I tend to be a lot more assertive and just confident in general that I am making the right decisions. Part 3.4 1437

That's right you have really got to look for little cues and start thinking what is going on here something is not quite right [laugh]. Part 3.5 1607

Yeah I do I do think back it's like joining up the dots. [Talking about making a decision] Part 3.7 2754

I don't know it's a priority, I am making a priority in my head putting things together before I do [make a decision] and organise it all up. Part 3.1 1638

No participant would suggest that they are the finished, polished decision-maker and some cases the participant knows there was something clinically 'not right' with the child under their care but not actually what was wrong with the child.

We had a child going to dental [theatre list] and he started to have an anaphylactic reaction. We didn't know what to but I instantly spotted that he was unwell, he was a little sleepy and then he started to go a little red so we called the anaesthetist and called the nurses and within 10 to 15 minutes he was really big, he was really swollen, red and tongue swelling and then we gave him some antihistamines and he calmed down so observationally I knew the signs [yes] also a bit of knowledge as well because obviously I though that something wasn't right but wasn't sure what at the time [yeah] so it is good that I prevented something from seriously happening. Part 3.4 0352

Another participant likened the development of decision-making in the final year to that of being a detective collecting clues and making a deduction based upon knowledge and experience.

You know you you are properly using the holistic care aren't you for three years you [referring to lecturers] bang on about this holistic care and [here we go again laugh] and like oh my gosh yes and you like finally all your detective skills are coming out and you can put it all together. So yes, I do feel like nurses are like detectives in a way they are dealing with um and solving problems … … Part 3.5 1525

This section has looked at decision-making from the participant's viewpoint. The key themes arising from this chapter demonstrate the incredible change between the first and the third year from a decision-making perspective. The way the participant moves from a dependent doer of tasks to an almost autonomous decision-maker who will still check by giving options to their mentor prior to performing an intervention.

In the early stages of data analysis the researcher was looking for themes that explain the maturation of decision-making. Mind maps and development of models are a starting point of decision-making with themes and categories cascading from this. What was evident during data analysis and subsequently when member checking is that decision-making is not seen as an endpoint but a

developing tool that sits alongside competence, confidence and the other themes presented in this chapter. The difficulty experienced by the participant to articulate the concept of decision-making initially evolved as the individual starts to realise the implication of their actions and how far they have developed as a decision-maker during the three years of the nurse education programme.

The following section will pick up on this theme of decision-making and examine how the participants react in the simulated clinical environment.

Observation of simulated practice

The previous sections explored the participants' experiences of decision-making through the three years of the nurse education programme through a series of interviews. The following section will explore how the participants react to two pre-prescribed simulated event as part of the second and third year of the child health curriculum. Simulation is an increasingly used learning tool within nurse education, allowing the student nurse the opportunity to enact a number of differing scenarios in the safety of the classroom setting (Broom, 2009). Both scenarios have been designed to promote autonomous decision-making. The student nurse is told at the start of the scenarios that they are playing the part of a qualified member of staff and they are to react appropriately, seeking additional information either through interaction with the manikins or asking the parent (lecturer) through appropriate questioning. The student has to assess and prescribe nursing intervention before re-evaluating the care they have planned. They need to decide on the course of action by prioritising care whilst in the year three scenario there is additional element where the participants interacts with the doctor on call (lecturer).

The second year scenario is based on a familiar nursing skill to the participant, the collection of physiological data through vital signs. This scenario has a twist because the student is unaware that during the scenario an infant will have a respiratory arrest in an adjacent room that they have to manage by applying their knowledge of basic infant life support and teamwork. The third year scenario has added complexity because the child's condition will improve or deteriorate depending on the student's actions. The key to the scenario is prioritising care; the child needs to be assessed and referred to the doctor on call, who will present the student group with a number of nursing events that need to be performed before preparing the child for surgery. These include fever management, pain management, resuscitation fluids and intravenous antibiotics. Administering resuscitation fluids first will initiate a good outcome whilst forgetting about the fluids or dealing with pain & fever first will elicit a gradual deterioration in the child's condition resulting in possible admission to an intensive care unit.

What follows is an account of the key features of the two scenarios with the researcher highlighting the main themes linked to the decision-making process. Each scenario culminates in a detailed account of the participants' thoughts and feelings of the process immediately following the event through a group debrief.

Analysis of the Field Notes for second year observation

Four groups were observed and data recorded using field notes during the simulation whilst debrief was digitally recorded. All participants understand that this was both a timetabled session and that data would be recorded post event and used as part of this research project. The simulated session was in two parts the first involved the collection of physiological data simulating the vital signs/observation round. The second phase involved students entering an adjacent room following a call from a mother that her baby had stopped breathing. Participants were informed at the start of the simulation that they would be expected to work as a team of qualified staff and that lecturer staff would only impart information when directly asked. Group 1 contained two participants, one less than groups 2,3 & 4 due to student illness.

Lead up to the scenario – Performing the Observation Round

The collection of physiological data in the first phase of the simulation was generally uneventful. This mirrored a simulated event timetabled six months previous and students were relatively at ease performing and evaluating the temperature, heart and respiratory rate. The two participants of Group 1 exhibited interesting and worrying traits during this stage, as they were appearing to be having difficulty locating the radial pulse on the 3 and 5-year-old manikins. The two manikins have a very palpable pulses but it can be weak and requires accurate placement of the participant's fingers on the manikin's arm. Both participants positioned themselves so that they could observe one another's actions and there was constant readjustment of technique and looking for reassurance from their colleague. Year one data analysis suggests that of all the routine tasks encountered in the first year of nurse education, the collection of physiological data of temperature, pulse and respiration was one that was mastered due to the frequency and predictability of the event. Both participants clearly stated that they are skilled in the technique when interviewed but it appeared that during debrief the main reason for their inefficient techniques stems from the use of technology in the gaining of physiological data within the

ward environment rather than following best practice laid down by the Royal College of Nursing (2013) which is taught and strictly adhered to by the child health lecturing team. This raises an interesting dilemma from the participant's perspective as they are clearly taught best practice in University. They are also advised that the manual recording of vital signs takes practice and if not learnt early in their nurse education programme then any resultant reliance on technology would result in deskilling and the inability to check if the technology used is actually giving accurate readings. The RCN guidance is clear that all vital signs should be performed manually before any technology is used to measure oxygen saturations for example. It is clear when discussed with the group at debrief and with other cohort members that the student is reluctant to be seen slowing down routine tasks within the clinical environment, despite the manual techniques being best practice. Participants are deciding to comply with the ward norms of using medical equipment to capture physiological data in preference to their own learning to ensure they fit into the ward team.

Call to Arrest

The analysis of the simulation will focus mostly on the resuscitation phase of the simulation. It is clear that the group knew something different was going to happen but they felt it would happen to the manikins they were collecting physiological data from and concentrate hard on their technique and perform in-depth analysis on the physiological data they have collected. The simulation is designed to take the student out of their comfort zone. Through the first and second year analysis participants talk about being happy identifying routine and then being allowed to undertake those actions, certainly by the end of year two, mostly independently. The lecturing team felt that taking the simulated action to an adjacent room moves them out of this comfort zone and makes the student 'think on their feet' simulating a feeling of being 'out of their depth' and as such causing them to reflect on how they react in this situation albeit in the relative safety of a simulation laboratory. Although this event is a simulation, the need to react to unexpected events is commonly experienced in the clinical environment and has value as well as being an important part of the research process. The

researcher sought a strategic position out of the participant's immediate visual field but in such a location that all events could be easily observed. The call from the virtual mother was loud, clear and portrayed the immediacy of the event. Initially, there appeared to be a few seconds where all participants froze and stopped the action they were performing. What followed was a period of uncertainty with rapid movement of eyes seeking someone who would take charge of the situation. This would be a natural reaction in a ward environment because although the participant may possibly be working in isolation there would be a qualified member of the child health team relatively close to take charge of the situation. In this simulated environment they were on their own. When asked, at debrief, about their thought processes at the time it was clear they were looking for someone to direct them, give them tasks and organise their next move unfortunately this was not available to them. It was clear from further analysis that the participants first to react and move to the adjacent room were the participants with the greatest confidence in their ability, but not unfortunately the best understanding of the basic life support procedure. It was clear that in all groups there were participants who held back, one tried to ignore the call but many waited not wishing to be the first to enter. Many talked of a sensation of panic at this stage, the fear of the unknown and almost on reflection a realisation that until this stage their progression within the ward environment had been predictable and without incident. Even though this was a simulated event they did not know how to react and as a result held back and waited for their colleagues to step forward. Participants referred to their decision-making strategies deserting them using statements such as

I couldn't think in an organised fashion.
Didn't know what to do.
I was scared.
I couldn't organise my thoughts.

It was clear that for some they were momentarily paralysed by their lack of experience in this situation and the realisation that there was no one to direct them or provide their next move. So much so that even though there was a

resuscitation process occurring in the adjacent room, one participant failed to move from her squat position continuing to count the radial pulse and needed to be prompted into action by the researcher. When asked why she failed to assist the student stated that

She missed that session because she was ill [referring to the timetabled Basic Life Support session] and that she hates those sessions where you do the procedure in front of your classmates.

The next key event observed was preparation of the environment and baby for assessment. Experienced practitioners would firstly consider the environment ensuring it is safe for the resuscitation to proceed and making sure there is easy access to the baby before a full assessment is undertaken. Without this short period of preparation the procedure will be ineffective and uncoordinated resulting in greater levels of anxiety and ultimately mistakes. When teaching basic life support, the safety of the rescuer and an assessment of the environment is important in a hospital setting where there is limited space and there is a need to ensure quick access to the child is essential for a successful outcome. When the participants arrived into the room they are presented with a fully dressed infant sitting on a rocker chair on the cot mattress with both cot sides fully raised in a cramped environment with a chair at the side of the cot. In all cases, the participants prepared the environment making it safe for access. Cots sides were lowered but in all cases not lowered to their lowest setting so access to the infant meant stretching over a partially raised cot side. When asked during debrief about their inability to effectively prepare the environment the general consensus amongst participants ranged from disorganised thought processes where the only thought was accessing the infant.

It was difficult organising your thoughts when you are stressed.
I just wanted to strip her and lay her flat.
We all went straight for the baby rather than thinking straight.
I didn't know what to do first.

Another disturbing observation stemmed from a number of participant's who suggest that they did not realise that the head and tail of the cot could be removed.

I was unaware that the cot could be dismantled.
I am uncertain about the workings of the equipment.
I didn't consider preparing the environment for the crash team.

This last point raises a number of questions from an educational and clinical perspective. A cot is a basic piece of hospital equipment used on a daily basis and apart from its basic function; it appears that students either as a teaching session or from a hygiene perspective have never stripped a cot. This means that this basic skill is not taught in University or considered by the mentor or participant whilst in the clinical arena.

During the theoretical blocks of the second year the lecturing staff spend a lot of time on assessment. It was pleasing that in Group 2 one participant took complete control of the situation. This participant was so confident in her actions that her colleagues seem to step back and almost admire her actions like a master class rather than assisting or thinking about the next stage of the procedure to be proactive with their actions. Group three saw a delay in action where two participants started to discuss actions before initiating and assessing the needs of the infant. In group 4, one participant looked directly into the faces of her co-workers, obviously she did not get the help she was non-verbally requesting and then promptly started to control the situation by herself. Group 1 saw two participants vying to be the last to respond and as a result apart from entering the room did little else until they were abruptly told that the infant was lifeless and not breathing. Once started, the assessment of the infant was reasonably good when asked about their reasons for not stepping forward participants stated:

I called on my previous experience and that would be to hold back [citing her peripheral role in a resuscitation event within the clinical setting].

Everyone wanted someone else to take charge so I took charge.

When asked about their inaction participants stated confusion and lack of knowledge as the main factors

I had lots of things going through my head.
I couldn't organise my thoughts.
I forgot my technique.

Whilst two participants from differing groups realised that there was a need to be organised, it appears to be the thought of leading others that reduced their likelihood of acting first

We needed to set people roles but I didn't know how to
I was worried about organising others

To ensure teamwork and to add additional stress to the scenario the participants were informed that the crash team was delayed for at least ten minutes in Accident & Emergency. It was hoped that all members would be active in the resuscitative process and become organised as a team. Participants started to use equipment from the arrest trolley such as the Bag Valve Mask (ambu-bag) but found difficulty maintaining a good air entry. Despite poor ventilation it appeared the participants did not have an additional plan to fall back on and rather than trying differing size masks [the ambu-bag purposely had the wrong size mask attached]. One student states that 'I just can't get this to work!' whilst one participant stares at the piece of equipment as if it is the first time she has seen one. In all cases, the students did not resort to manual air entry even though the ventilation techniques using the ambu-bag were really poor. When asked about this situation there was periods of embarrassed quiet but those who did offer an explanation.

I just forgot the technique.
Sometimes I don't think about why I am doing things

And one participant reflected about their lack of clinical skill by stating:

It's a skill isn't it?

To bring the resuscitation scenario to a gradual conclusion the participants were informed that the baby's heart rate was good but was not breathing. In all cases the participants continued with cardiac massage unaware of its implications when discussed at debrief there was little explanation for this failing, except to justify it in the following manner

I was muddled and confused about the procedure.
Some things just go to the back of the mind.

The resuscitation was called to an end after 20 minutes of resuscitation with the participants told that the arrest team have arrived and allowing them to stand down. When asked their thoughts and feelings about the scenario there was a mixed response but one thing was clear the students questioned their knowledge base

I am fearful of my knowledge base I need to revisit this procedure.
This scenario was a wake up call.
Before this scenario I thought I knew the [resuscitation] guidelines
It felt as if everything was crammed into one.

It was clear from the onset that as soon as there was an element of stress added to the scenario the thought processes and the decision-making strategies employed by participants deserted some. It is fair to say that one or two participants dealt well with the scenario and took the lead but the majority didn't. This was considered at the end of debrief with participants being quite reflective about the process

I tried to calm my brain down but it felt as is everything was crammed into one.

And several participants echoed these final statements

I was hoping there would be senior people there.
I realised that someone needs to take charge.
It's scary to think that we will be qualified in just over a year.

Reflection on the simulated event

The second year interviews were scheduled approximately one month after the simulation. It seemed an ideal opportunity to revisit the simulation session as part of the interview schedule (Phase 2) to explore if the scenario helped with confidence and ultimately the decisions they made within practice. There is no doubt that the students found the simulated session stressful and there was a lot of reflective discussion between peers regarding outcome and attempting to make sense of how simulation fits into their professional development as a child health nurse and their overall clinical competence.

The depth of feeling can be eloquently summarised by some of the statements taken at this interview

Oh no I killed that baby! [laugh] I was terrible everyone talks about that still [laugh] some people cried after that did you know that. Oh my god like I didn't cry because it was only a doll but still why did you do that to us? [Laugh] Part 2.1 2302

Awful because I didn't know what I was doing and I will be honest it wasn't just that I that I was thrown right in the deep end but I have never experienced a situation like that before. Part 2.6 2920

Nervous and I was scared because I know it was practice but because you know the adrenaline and everything was going through you and in that situation. Part 2.4 3029

Others rose to the challenge although there is softening of emotions within some of these statements as the participant's reactions and emotions at the time of interview differ from their actual performance during the simulated event..

And I kind of think that I thought that was right [talking about an action the participant initiated during the simulation] and then I thought I would carry on

and you [referring to the lecturer facilitating the simulation] would pick up on it if I was wrong after. Part 2.2 2707

I I enjoyed it it was scary at first but I would much rather do that in simulation than be put in that situation [in the clinical environment] and never know how to deal with it. Part 2.3 3146

It appears during the second year participants gain an in-depth understanding of the ward routine and are relatively content with their academic studies. Second year data analysis shows a participant gaining confidence, competence and a willingness to make decisions that are then ratified by their mentor or participants give options to their mentor whilst becoming more involved in the planning and delivery of care especially towards the end of the second year. This simulated event is designed to bring an element of the unknown into the student's daily practice. One of the attractions of nursing is the inability to predict events and every practitioner reacts differently when under pressure. As the participant starts to feel comfortable making decisions on routine, competent tasks they have developed to date, it came as a surprise to many that the knowledge they thought they possessed deserted them when under stress significantly affecting their decision-making abilities.

Yeah I came to the conclusion that I needed to perhaps to know more. Part 2.4 3333

I surprised myself in how little I knew and how little I didn't know what to do [yes]. I didn't know what I was doing so in that respect yeah in that respect it did surprise me because I thought I'll be alright it either going to be a choking baby or resus I'll be alright. I'll be fine, slap its back if it is choking give it whatever if it can't breathe but then it was different when you were in there. Part 2.1 2718

Oh Crazy, at first I was like fine but when it came to doing that obviously it was quite a shock and I know it's just a doll but then I was thinking oh no what comes

first and I was a bit like I don't know do I do that or do this and then all of a sudden I thought I would go ahead and do what I thought I knew. Part 2.3 2707

This was particularly worrying for some participants because it significantly challenged their own assessment of competence.

I thought oooh and I hope someone has a car crash now so that I can do it [laugh] I actually, it was not that I wanted people to get injured but I thought that one day I hope that I get to have a go [yes] [Participant is referring to how confident she felt with basic life support pre-simulation]. I can do it Mam I can and then I did that session and I said to my Mam "I can't do it!", "I killed that baby today!" and she said "I thought you were in Uni?" and I said "it was a doll don't worry" [laugh]. Part 2.1 2420

I was because I was thinking oh I know what I am doing and then I kind of don't [laugh]. So I was a bit surprised when I was because we were kind of fiddling with and I was thinking if this is a real baby and they are not breathing and we are just wasting times just fiddling around with things. Part 2.3 3010

I was a little bit disappointed with it, I thought I would have been more skilled. Part 2.5 3315

Yeah it did, I was just a bit, I always thought in that situation that your instinct would just come to you and you would just do what you have got to do. But it wasn't like that at all I just feel as if that in a real situation you know [yeah] and it was happening and it did scare me a little bit yes. Part 2.4 3435

When we look back at both the first and second year data analysis it is clear that competence and confidence comes hand in hand when considering decision-making. This simulation saw students totally re-evaluating their student status and how this links to their usefulness within the clinical arena.

And I think that even if you are a good leader in other things when it came to that different situation it was a completely different ballpark, even if you could lead in normal day things that were completely different. Part 2.1 3023

Yeah I did I felt I really felt like a failure that is the only way to describe it I felt like such a failure. Part 2.6 3826

I thought that if I was in that situation [referring to CPR] you can't freeze up can you. Part 2.4 3333

It was clear that a lot of thought had gone into the post simulation reflective process. The initial despair at their poor performance was put into perspective either by personal or peer reflection

We were all ringing each other after it asking what happened, how did you do? Yeah its good because you do get comfortable and you are just plodding along your confidence is building and then something happens like that. Part 2.6 3842

Yeah, definitely and I was a bit annoyed with myself then Oh I could have done this a bit better and um went over it a bit in my mind and if this happened again then this is what I would have done. Part 2.5 3243

Yes I am I didn't think that I would feel as confident as I did because I was always like I can't do this and I can't do that but I feel that I can. Part 2.3 3736

So I think the simulation like the resuscitation scenario really is important because you need to be in that panic mode and know how you will deal with it and then stay calm and deal with the child and then step back in your head and think what do I do know rather than panic. Part 2.2 3146

A number of participants suggest that their lack of performance is related to their unfamiliarity with the event. Having never witnessed an arrest situation in

practice, some sought to explain their poor performance by their lack of experience in this clinical skill.

no it's a bit like panicky but then it's all experience isn't it. This is what it is all based on you get better as you experience more. Part 2.3 3128

Yeah it picked up the pace and it made you realise 'Oh my gosh! this could seriously happen'. We need to start thinking now and definitely this year you need the experience [laugh] Part 2.5 3213

But although as a second year student you get your odd, I did see a respiratory arrest but I wasn't involved in it [yeah] in a sense because they were expecting you to run the ward whilst they were busy, you know not running the ward, looking after the ward. Part 2.6 3007

Whilst others realised that this was out of their area of expertise. A theme that emerges from the data is the notion of a 'comfort zone'. This is an area of practice where the participant feels confident and competent to make and act upon the decisions they make. In this scenario it is an emotional feeling of unease for some students it affects the way they apply theory to practice or the ability to effectively use common ward equipment or even make basic decisions.

I was well out of my comfort zone yeah it's like the thing is we get taught you know so many breathes to compressions the blah blah blah. But that is really the basic if someone was to say ah I have been taught to do resus and yes it is just 15:2 or whatever it is [laugh] I don't know how to resus I thought I knew how to resus 15:2 [laugh]. Part 2.1 2325

I was a bit worried because I didn't know how to get the cot sides down [laugh] Part 2.3 3010

... because I didn't know what we were supposed to do and what was expected of us. Part 2.5 2819

I felt really confident in my second year when I was on my placement it became a little bit within my comfort zone because you were doing your routine and you have your own little ways in your placement. But when you are completely thrown into a different situation all of a sudden um out of your comfort zone [yes] I didn't know what to do and I think now being on different placement and seeing different things and working outside your comfort zone you get to see a bit more of the you know the worst case scenarios and things. Part 2.6 3326

Others relate the feeling of being 'out of their depth' as they realise that the decisions they act on are their own. It's almost an epiphany where students realise the extent to which they rely on their mentor to confirm their actions. Having to make decisions and act upon them put an element of doubt into how effective they truly are as decision-makers.

I still think that I would need that little bit of help just to watch and learn and see and ask so next time I would probably be able to help more [referring to participating in the resuscitative process]. Part 2.3 2749

And then within that second we realised that you weren't going to tell us what to do and so right OK I am going to do this myself. Part 2.2 3436

Whereas on a ward [yeah] you go to the qualified and in that situation they would step in, that day you didn't. And I know that it wasn't a real situation but we were students on our own [yeah] and if that was on a ward we and it was us three [referring to her simulation group] there we had to deal with that situation. Whereas on the ward you would expect the qualified to be there you know, you perhaps still putting that responsibility on others you are not taking in the responsibility you have got as a person. Part 2.4 3230

Yeah it made you think you know, it is not that you are spoon fed in the first and second years there are opportunities for you to go off and make decisions but in that situation you are the person who was making decisions. So you are not looking at somebody else but you are the student and you haven't got that backup you are

signing your own things [yes] so it would be. It made me worry because I thought that if that was me and I had my own student you really need to know what you are doing [yes]. I think it frightened everybody in the sense that you have got; you need to know your stuff basically [laugh]. Part 2.6 3511

Although all participants deem the simulation exercise a stressful event, the reflective process that follows has almost a cathartic effect on them personally and professionally. The participant is forced to come face to face with their competence, knowledge and ability to perform under stress and this does affect confidence. Decision-making doesn't seem to suffer but actually benefits from this exercise as the student re-evaluates their relationship with their mentor and personally renegotiates their relationship with the academic and clinical demands of nurse education. Participants realise that their development as a decision-maker, clinically and professionally is squarely placed on their shoulders and that there needs to be a structured movement from dependence on their mentor as they move towards the third year of their nurse education.

Improvement in confidence yeah able to take any type of criticism, or be able to take feedback, or developing confidence and understanding, and ability to decision making and understanding my role in placement as a second year student in comparison to a first year student. Knowing what is expected of me and knowing what I feel confident in what I am doing, and knowing my own capability, and knowing not to get to ahead of myself because I know what I am expected to do and if you do develop more than that then good for you, but you should push yourself and be honest and open about how you feel and if you don't understand anything just ask because mentors will enjoy explaining things to you. Part 2.2 4032

Yeah definitely and how you deal with situations and it helped improve my last placement then and I practiced that scenario again in placement and that helped me as well [the student re-enacted the simulation during a quiet spell on the ward with her mentor]. Part 2.43548

My first ever shift here I was attending a resus for a newborn baby. Whereas I thought I would be panicking I was so calm and I just thought I am OK with this actually because I felt that I had seen it now [during the simulated event] and I know not to panic and you sort of get to the point where you think I have done it. Part 2.6 3920

Through this simulation participants start to realise, how much they rely on their mentor to make decisions. For some, the simulation gave great confidence and an awareness of embryonic leadership skills. For others there was a recognition that they lacked experience and in some cases, knowledge to act in isolation. In all cases, the students found working without the close scrutiny of their mentor stressful. The empiricist and naturalistic models of decision-making would support the difficulties encountered by participants in this situation. Although many of the participants felt that they had sufficient theoretical knowledge to undertake basic life support prior to the simulation, when forced to put the algorithm into practice and pressurised into a time-limited event, they quickly found that their decision-making abilities deserted them. This is compounded by the fact that the participant is inexperienced and lacking, at this stage of their nurse education, the confidence and the practical know how to deal with the unknown. One other factor that needs to be taken into account is the physiological reaction to stress that influences the decision-making abilities of the participant. The neurophysiology that surrounds the decision-making process lacks clarity, what is known is that there are two pathways to the stress response and both affect the individual's ability to recognise risk by affecting the emotional response of the individual (Starcke & Brand, 2012). The sympathetic nervous system response initiates the immediate release of the catecholamines noradrenaline and dopamine. Neurologically these chemicals heighten conscious awareness of the decision to be made allowing rapid assessment of the situation and assisting the individual to calculate risk (Macoveanu et al. 2013 a). Although affecting the prefrontal cortex in a similar way to the catecholamines, the glucocorticoid cortisol released via the hypothalamic, pituitary, adrenal pathway is released over several hours. There is a suggestion that it is this hormone that influences judgement particularly if the individual is feeling emotionally

vulnerable (Pabst, Brand & Wolf, 2013). What is not clear from the data is whether the levels of stress are raised as a result of participating in the simulation. If this is the case then there would be sufficient time for the release of cortisol that may result in a breakdown of the decision-making process. Alternatively, It could be the fact that due to the inexperience and, to some of the participant's dismay, the lack of knowledge that causes the stress response removing the physiological explanation of cortisol hampering the decision-making process.

In the early stages of proposal development the researcher rejected utilising grounded theory in the simulated environment, as it would not observe the real-world clinical decision seen on the ward environment. Indeed, it would be a mistake to come to any conclusion to suggest that the participant would react in a similar manner if working clinically rather than on university premises. This simulated exercise does show that the addition of stress affects knowledge, confidence and the participant's ability to make routine decisions that they themselves agree they were competent to make before the event. The dependence on mentor in times of stress is greater than perceived by the participant and although no great claims could be made on this small sample, it is certainly an area that requires closer investigation.

Analysis of the Field Notes for third year observation

The second simulated experience occurred at the end of the final theoretical block of the third year as part of the critical care module. Students have, to this point, worked on a variety of critical care settings such as Neonatal Intensive Care Units, Paediatric Intensive Care Units and other specialist areas where they may encounter critically ill children such as Accident and Emergency departments and Burns Units. Following this theoretical block the student moves into the 10 week consolidation placement with this phase of observation occurring approximately two to three months before the final third year interviews. To complete the learning experience the child health team organise a critical care scenario that offers the student the ability to work as a staff nurse within the safe simulated clinical environment interacting with doctors, parents and peers to provide care for a steadily deteriorating 5 year old child.

The learning objectives are based around decision-making, working collaboratively and applying the knowledge and clinical skills they have acquired to this point into one simulation. Students are told at the start of the simulation that they are taking the role of a registered practitioner and they need to make decisions based upon their skills of assessment, intervention and evaluation of the clinical features they observe and the condition of the child. The judgement call is theirs although they are also working collaboratively with their group members. The scenario takes approximately ninety minutes to complete, sixty minutes for the scenario and thirty minutes for debrief. The case presented to the students is a 5-year-old child admitted to the Paediatric Ward from the Paediatric Assessment Unit (PAU) with the history of lower abdominal pain. A variety of investigative tests were undertaken in PAU but no results had been obtained on arrival to the ward. A working diagnosis of appendicitis was given and students are invited to admit, assess and plan care for this child by asking questions of the manikin and/or mother (a female lecturer) to gain the information they require. If a full picture is not obtained from this questioning or if they feel that the child's condition warrants a medical opinion they could contact the on call doctor (the researcher) to examine the child and give advice.

Over the course of the hour the child's condition would gradually deteriorate depending on the groups assessment and nursing interventions. If managed well the child would have been diagnosed with acute appendicitis and early signs of perforation would be recognised. The child would be escorted to theatre for a straightforward albeit emergency surgical procedure of an appendectomy. If managed poorly, the child would become increasing nauseous, anxious and suffer bouts of pain ultimately resulting in a perforation of the appendix with clinical features of peritonitis and the child ultimately becoming critically ill.

This is a tried and tested scenario and has been timetabled and used for the past three years. The scenario has not been changed for research purposes except that debrief is digitally recorded to assist recall after the event. The student cohort was allocated to one of six groups with three or four students per group using the skill groups allocated at the start of their nurse education programme. All groups were observed but three groups contained individuals who had participated in research study previously and were closely scrutinised utilising field notes and a transcribed debrief. All groups knew that this simulated event would be part of the research project and the researcher ensured that environment, scenario and debrief were identical to ensure students did not feel advantaged or disadvantaged by this learning experience, so the recording equipment was left in the debrief room even if it was not used in data analysis.

Sitting after the simulations the researcher spent some time pulling together field notes and thinking about what had been observed. It was clear that throughout the six groups a number of key issues caused concern from a clinical and a decision-making perspective that are summed up in the following accounts taken from field notes. There was no opportunity to interview participants following this observation in a similar manner to the first simulated exercise so responses are brief as they are excerpts from researcher reflections and field notes.

Simulation 1

My overall feeling about this scenario is one of surprise at the student's lack of basic clinical skill. It appears that mentors are not allowing students to perform the most routine tasks such as changing infusion bags or running through infusions. It also appears that they are not involved at all in the preparation or administration of intravenous medication. This is surprising as these are skills that should be taught in first year of training. It was obvious that all three were uncomfortable with the scenario, Sa was the reluctant leader with So and Al both taking a support role. This meant that Sa found herself performing most of the difficult tasks such as communicating with the parent and doing the intravenous infusion. Al took a back seat and should little inclination to interact and was more than happy to be led. She was uncertain and lacking confidence to undertake tasks. This was particularly evident when she went to aspirate the NG tube as she kept looking at her peers for support throughout the task. Sa & Sop debated several aspects of care and this occurred a number of time when there was uncertainty. It was obvious that finding themselves in a situation where they had to make decisions for themselves was a stressful and new event. It will be interesting to see whether 'consolidation' changes their outlook and whether they become more assertive and decisive in the decisions they make.

Simulation 2

This was an interesting 65-minute simulation as it demonstrates how students are very reluctant to step forward and give an opinion or make a decision even in the safety of the simulated environment. Em knew how to manage the child's vomiting by aspirating the nasogastric tube. She offered this information but because her peers did not register it she did not follow it up and so the procedure was not performed for sometime afterwards leading to deterioration in the child's condition. Emm shone as a natural born leader. She quickly took charge of the situation and although a little tentative in the early stages started too organise the group and managed the pace of the nursing intervention. The other students quickly reverted into a student role even though they were encouraged to think for themselves during the scenario. Sam in particular always waited to be told and offered little initiative deferring decision throughout the scenario. Despite being offered a number of very important cues by mum and doctor the team were slow to pick up on aspirations and the administration of bolus resuscitation fluids. It seemed that the management of pain was all consuming and this is probably because there has been little involvement by these four students in the management and rationale for giving intravenous fluids. In fact the lecturers were really surprised on their lack of basic skills setting up and managing intravenous infusions, preparation and drawing up of medication and the process of giving these medications. Although the administration of intravenous medication is not a student role understanding the technique is important and they could learn a lot regarding the care and management of a venflon.

This is not the first cohort where it appears that clinical staff are not allowing students to become involved in the care and management of intravenous fluids and although this is outside the remit of this research project except to say that if this is not rectified in the consolidation period there will be a number of registered practitioner with little experience of this vitally important skill performed regularly on a paediatric ward. This point was not raised directly by the participants and their lack of clinical skill in this area was justified in that the qualified staff undertook this role. The sight of an intravenous infusion is not

uncommon on a paediatric unit and so it is difficult to see how students have managed to distance themselves from such an important routine task especially as routine tasks are something valued by participants from year 1.

Although encouraged to work in isolation during this simulation, the analysis of field notes, observation and debrief revealed a number of key themes many of which we have seen in previous data. Confidence is by far the most frequent theme in the observational data this includes confidence working in a team or being a leader with participants suggesting:

I know I need to be more assertive but I just can't seem to do it.
I'm just not confident to direct others.
There are situations where I need to push myself forward.
I need to delegate more but I am not happy directing others.

At this stage of the nurse education programme participants do not feel confident to direct others. Linked closely to the previous category is confidence in ability, where the participant realises during debrief session that maybe they are not ready for registration and more knowledge or experience is needed to make a truly effective decision.

It's all acting confidently when making a decision but at times I just don't feel confident.
At times you feel you are not good enough and so you step back from making decisions.
You doubt yourself when you make a decision even though you know you are right.
I am able to gather the information but I'm not confident enough to act as yet.

Justifying the inability to make decisions, without the safety net of their mentor, participants refer to their lack of experience as a factor that affects their decision-making ability.

I always feel that I need more experience putting myself in a position to make decisions.
I always feel that I don't have enough experience to make decisions in this situation.
I knew what to do but I didn't know how to express it.
I try to fall back on policy or routine when under pressure.
To make a decision trying to use my experience.

As with previous datasets knowledge is mentioned as a factor that needs attention, one participant suggesting that

I appreciate that I need to take charge of my training.
I need to make the most of consolidation.
I need to take opportunities as they present during the third year.

Rather than worrying about how extensive their knowledge database is the participants are more concerned at their ability to systematically utilise the knowledge and information assimilated. Without this ability it is difficult to accurately decision-make in the clinical environment.

I missed a lot but I wasn't thinking systematically.
I found it difficult to logically think a situation through.
I am trying to think more systematically.
I'm not always confident with the knowledge I've gained to independently apply it.

One factor that hasn't been seen until this point is the participant's pre-occupation with insufficient time to synthesise and analyse the information collected to make an effective decision. In some cases, it appears the participant wants to step back to make an effective decision or being able to systematically organise their thoughts.

I just need time to think [in the clinical situation].
I am still learning the skills of thinking on your feet.

I need to take time to make a decision.
I found organising myself difficult when I am rushed.
I need time to think more before I communicate or act.
It's difficult not to panic when you are under pressure.

It appears throughout the observed simulation that participants are keen to be led either by students who show even the most rudimentary ability to lead or would much rather leave decision-making to their mentor.

I like to be structured by my mentor I like to look for advice and guidance from them.
I feel that I need support from others.
I am hesitant to make decisions by myself.
I quite often talk through what I am doing as I second check my decision.

It appears that this is closely linked with the greater realisation that with decisions comes responsibility. Participants are very aware at this stage of the nurse education programme that if they make a decision or influence a nurse intervention then they will need to stand by that decision and possibly justify their action.

I am aware of the implications and the need to be safe.
Now I know more so I know that I am concerned that I will make mistakes.
I am just paranoid that I might get things wrong.

The debrief seemed to be a reflective and cathartic experience for participants where they start to give context and perspective to the experience they have encountered and how they need to move forward.

Its horrible (simulation) but it helps with reflection and what we need to know.
You can see the changes in you, as I didn't think of these issues or fears last year.
Simulation helps me reflect on the knowledge and skill I have gained up to now.
I will be thinking of this simulation when I am sitting at home.

You start to think more about rationale/ why I am doing things.

Analysis of the data suggests that prior to consolidation participants have a tendency to refer to others for decision–making even though they are reasonably confident in their ability to make that decision. This simulation seemed to be a catalyst to become more proactive in their own learning, to push themselves forward and more importantly to remove some of the self-doubt that is evident in all participants that stifles decision-making and hinders confidence.

Although the observation phases were performed in a simulated environment it proved a useful mechanism to explore the decision-making strategies employed by participants. It allowed a comparison with the interview data and gives context to many of the emerging themes. The observation phase demonstrates one of the disadvantages of interviewing as a method, as it was apparent in some accounts that the positive picture painted by some participants did not truly become evident in the simulated environment. Where participants suggest confidence in the decision-making process, these same individuals were seen to be lacking confidence and were very dependent decision-makers without the reassurance of a mentor to guide and direct working practices. The researcher is cognisant that this could be a factor linked to the simulation rather than a true reflection of the participant decision-making skills but never the less there was a dramatic difference with some participants.

Chapter 6: Discussion

Having completed the data analysis and presented the results, the next step in the research process is to compare and contrast the findings with the wider body of knowledge (Oliver, 2010). The researcher is cognisant that this ethnography is pertinent to this cohort only but similarities can be explored (Lacey & Gerrrish, 2010) and the section starts with the category personal ability.

All the decision-making models agree on one thing and that is to make a decision requires information/knowledge (Botti & Reeve, 2003). We subconsciously or consciously collect information to make decisions that see us through our daily lives. The way a decision is processed by an individual is unique but can be adapted or taught and this has implications for the way nurse education is structured (Bate et al. 2012). The way information or knowledge is accumulated and packaged influences the manner in which it can be utilised and applied in our day-to-day practice. To be an efficient and effective decision-maker in the healthcare setting requires domain and context specific knowledge (Dreaver, 2008). Data suggests that the participant is focused on finding information that would make them a practical help on the unit with little regard to the decision-making process, in the early stages of the nurse education programme. During the first three months, participants are sensitised to the clinical infrastructure. Participants become aware of the language, sites and sounds they encounter; learning the skills required by the role that builds into an understanding of the profession they have entered (Andrews & Chilton, 2000). Decisions are focused on successfully completing these commands issued by their mentor. This is seen as a stressor because once a task or outcome has been identified, the participant may have to ask a mentor or another member of the team for advice on how to fulfil that task. In this situation the participant can either apply the theoretical knowledge acquired in University, comparing this experience to events previously encountered or look around with the view to copying what they see. The data analysis appears to suggest that participants in the early stages of the nurse education programme employ the latter. This is not surprising as the participant is likely to resort to regressive learning styles when confronted with

a limited knowledge base and little clinical experience. To gain the information necessary to complete the task the participant resorts to observational learning utilising social mirroring and vicarious reinforcement through watching others. At times, the data suggests the participant may even limit the number of questions they ask or seek enough cues to ask more relevant or pertinent questions linked to the mentor's command rather than appearing completely out of their depth (Cherry, 2014). Proposed by Bandura (1977b) Social Learning Theory demonstrates how factors such attention, retention, reproduction and motivation assists learning from one another through imitation, observation and symbolic modelling. This facilitates the learning of tasks, especially if there is motivation to replicate the behaviour or performance of others (Olson & Hergenhahn, 2009).

Holyoak & Morrison (2013) suggest that working from a hypothesis or in this case an idea, outcome or command results in the participant searching or finding information or cues necessary to fulfil the command and is termed 'Backward Chaining'. Inexperienced individuals who have not encountered a particular event or lack an appropriate skillset to assist the making of a decision may use this process. The participant is given a task and then has to enact it by seeking information, with a limited knowledge base, there is no embedded personal set of norms that the participant is able to readily recall and apply. Students mention issues related to poor skill acquisition and the need to constantly practice clinical skills that although were originally taught in University, take on a new and real perspective in the clinical environment. The very nature of the knowledge disseminated in University is questioned especially when students are unsure of the events, experiences and types of decisions they are expected to make or encounter from day one. It appears that this situation of observational learning occurs whenever the participant encounters a new event but decision-making gradually becomes

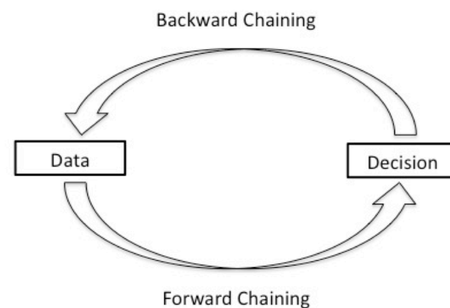


Fig 20: Chaining

easier as the participant becomes more experienced and in particular more familiar with the environment. Not realising the purpose and the nature of the handover, the significance of the nurse call system or the feeling of inadequacy when finding themselves in isolated situations performing basic and emotionally charged, private events such as toileting suggest that maybe the early stages of the education programme is not truly 'fit for purpose' as the participants feel unprepared for these situations. The acquisition of information or knowledge from mentor to participant in this situation results in a participant who is dependent from day one of the clinical placement (Baxter & Boblin, 2008; Tayyeb, 2013). Participants seem unaware of the significance of events and it's the day-to-day task allocation that is deemed more important as they seek a list of tasks from their mentor to plan their day.

The data implies that some of the commonly used decision-making theories may be inappropriate or poorly representative of the inexperienced participant. The empiricist viewpoint is based upon probability (Bradley, 2007), theories such as hypothetico-deductive approach, suggests a rational and logical mind to interpret the situation the participant find themselves (Gillespi & Peterson, 2009). The premise is that the participant has the ability to reliably recognise situations and allocate value and hierarchical structure through decision trees (Karni, 2009). The neophyte participant has a poor context specific knowledge base and a limited variety of tools to assist them to make an effective decision (Brouwers et al. 2010). The ability to prioritise in the early stages is impractical, as the participant may know outcome but the process of gaining knowledge, accessing reliable sources of information and making appropriate choices from the alternatives available may not be under their control in the dependant state they find themselves within the clinical environment (Lake, Moss & Duke, 2009). When fully immersed in the clinical environment it takes time to assimilate the vast amount of information encountered. Indeed, data analysis suggests that even the more applied humanistic models such as O'Neill's clinical decision-making model (O'Neill, Dluhy & Chin, 2005), would not suit the first year student because they involve pattern recognition and are predominantly experienced based (Bryant, 2002). The data would suggest that knowledge transition moves

through a continuum starting with knowledge diffusion where the individual looks for very specific type of information that makes the participant feel valued in the clinical environment. At this stage, domain specific knowledge is all about understanding tasks, familiarity of environment and routine identification (Baxter & Boblin, 2008). Participants mention doing the observations/vital signs, hygiene and bed bath, procedures that are easily mastered allowing them to feel they are valuable members of the child health team.

As the participant moves towards the end of the first year, there is a report that the theory taught in University is more easily applied into the clinical arena. With little experience in the early stages, it is easy to see how the participant is unable to make use of some of the information on offer in the first ten weeks of the nurse education programme. Having witnessed and experienced the clinical environment, the taught components of the modules become real and useful with time (Brouwers et al. 2010). It is at this point the nurse curriculum starts to converge with the experiences encountered by the participant. The aesthetics and ethical components of nursing promoted in the classroom early on in the education programme such as compassion, care, confidentiality and dignity can only be truly applied when witnessed in action (Coetzee, 2004). Watching the good and the not so good of the nursing profession in the work place brings home the key principles taught. These guiding principles act as a framework for decision-making allowing the participant to compare what has been witnessed to that taught, whilst coming to a conclusion on their current position and whether to continue or change their future practice (Wainwright et al. 2010).

The second year of the nurse education programme sees the participant move into the child branch and feels, in the early stages of the year, that they are starting a new course. The generic content of the first year becomes very child orientated in the second, which is new and unfamiliar. There appears to be greater confidence in their knowledge base and the ability to deal with the basics of care without too much direction from their mentors as the year progresses. There is also awareness that the theory taught in University may differ from that witnessed in practice and although this is disconcerting for some, there is a

realisation that there is a theory practice gap defaulting to the information gained from practice (Dadgaran, Parvizy & Peyrovi, 2012). Confidence in knowledge base increases in the second year as participants analyse the decision-making experiences they have encountered during the first year allowing them to assess where they were in the previous year and compare this with their current understanding of the care they deliver (Baxter & Boblin, 2006). The sureness of knowledge is fragile and new experiences or a differing ward environment, a nature of clinical placements in the second year of the nurse education programme, makes the participant question their understanding of their current status as a student nurse and their ability to act and make decisions in isolation (Etheridge, 2007). Ward routine has been generally mastered by the end of the second year and the data suggests that the student is confident in their ability to interact using appropriate terminology. This is particularly important when conversing with their mentor, as will be seen later in this section, because if you wish to question the decisions of others the participant needs to be self assured of the quality and depth of their own knowledge either to challenge the decision or to suggest a pathway of their own (Heiden & Bockmann, 2013). Initially in the second year, the participant is happy just being contextually content in the clinical environment and there is little evidence in the data collected that knowing or appreciating rationale of action is of primary importance. There is a change later in the second year where the participant is not primarily concerned with what they are doing but enquires why they are doing a procedure and carrying out cares in a particular way (Elwyn & Miron-Shatz, 2010). This is embryonic and gradually increases over the next year, but this is important from a decision-making perspective as the participant is questioning their own knowledge base and to do this will question the literature and importantly their mentor as they carry out their day-to day practice or encounter new learning.

The third year sees a participant feeling reasonably content with their understanding of the basic principles of the care delivered. The influence of the mentor, and its impact on confidence and competence on this process will be dealt with later in the section but cannot be divorced from the way the

participant assimilates and applies their knowledge. Confidence in knowledge comes from a wide variety of sources in the third year. Working in specialist areas and a newfound independence, that comes with being a third year consolidating student, means that they have to constantly refer to their ever-expanding knowledge database to manage their day. Independence means that the multiprofessional team, peers, junior students, children and family are cognitively challenging them and their mentors are allowing the participant to time manage themselves and possibly others (Doody, Tuohy & Deasy, 2012). Some participants talk of not understanding the confusion around them, in the first year, the participant being unable to see the 'wood for the tree'. In the final year, there is almost a 'cognitive epiphany' where all their experiences comes together and there is a true understanding of the events around them and they are at ease and comfortable with their understanding of information or evidence that surround them (Gillespi & Peterson, 2009). Accompanied with a caveat that they are not completely competent, albeit by the interviews of the third year, a majority of the participants suggest that they are ready or at least safe for registration.

As the child health student enters the nursing profession they are bombarded with new experiences, develop new skills and observe, witness and learn about new conditions and the way these conditions affect the lives of children and their family (Silva, Sorrell & Sorrell, 1995). Knowledge can be defined as the facts, feelings or experiences known by a person or a group of people (Chinn & Kramer, 2008). This is a reasonable working definition but it does not convey the full gravitas of what knowledge is and how assimilating information and understanding of the events that the child health students' experiences during the three years of the nurse education programme. It could be argued that knowledge is the information that has been manipulated, organised and applied or given context for a specific purpose (Stoll, Fink & Earl, 2003). This knowledge allows the child health student to accumulate understanding over time to assist with problem solving and essential aspects of the decision-making process. How knowledge is defined depends, to a certain degree, on your philosophical stance, a three-stage mapping of knowledge in practice is presented by Dreaver (2008).

This framework highlights the multiple means by which knowledge can be acquired to effectively function within the clinical environment. Knowledge for practice mirrors the empirical patterns of Carper's (1978) work as it is formal, research-generated information that is passed on by experts either in the classroom or through the written word (Cochran-Smith & Lytle, 1999). This equates to the knowledge synthesised by the participant whilst in the formal educational setting or reading that may be performed in the participant's free-time. Knowledge in practice, explores the accumulation of practical skills and the manner in which the individual develops 'craft' knowledge, giving the ability to be hands-on and show dexterity and mastery of the process of nursing. Learnt through enquiry and reflection in and on action (Schön, 1983) the data shows how valued this particular exemplar is to the developing child health nurse. The ability to showcase clinical skill is seen as the great motivator during all three years of the nurse education programme. Knowledge on practice is the sum of the parts merged with the practitioner starting to appreciate through systematic analysis and critical review of self, the gains that have been accumulated and ultimately achieved. This equates to the 'cognitive epiphany' mentioned previously where the participant is confident with their knowledge base and is keen to share this with others either through teaching or being assertive with their own decisions or challenging others.

As the participant enters the final stages of the third year there is a movement towards understanding 'why' and this is termed propositional knowledge (Dreaver, 2008). Propositional knowledge interconnects personal and procedural knowledge to give a rounded understanding of the environment a participant may find themselves in. Personal Knowledge is referred to when an individual is only deemed to have knowledge if they are familiar with the experience they encounter. To possess this knowledge the individual has to experience or witness an event and come face to face with a situation. For example, to know love you have to have experienced love. Procedural Knowledge is gained when the individual knows how to do something or has developed a skill. Propositional Knowledge, from an epistemological perspective is of paramount importance. Propositional knowledge underpins knowledge

development and is primarily concerned with fact that the knowledge or information acquired is the truth. Acquiring 'propositional knowledge' will not give you personal or procedural knowledge but gives you 'know how'. Propositional Knowledge is the knowledge of facts, the rationale, its knowing how things work or information about something. For example, I may know how to change a car tyre but I have never performed the act.

Christensen (2011) proposes that an advanced practitioner moves across a continuum of knowing what to do to knowing why it needs to be done as they progress through their professional career. This continuum initially devised by Fulbrook & Rolfe (1998) could easily be applied to those new to the profession. The main difference being the neophyte practitioner is that they are predominantly fixed in the 'knowing that' end of the continuum but eager to cross to 'knowing how'.

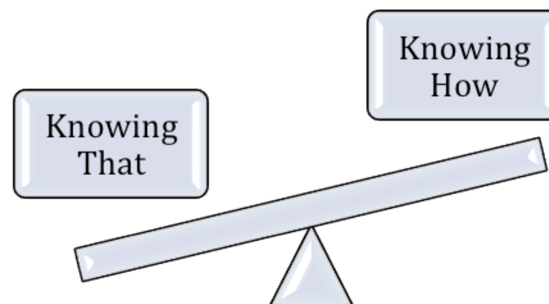


Fig 21: Knowing that/Knowing how

As the participant completes their training they appreciate that they have embarked on this journey toward "knowing how."

Reflection takes a prominent role in the development of their understanding of the situations they find themselves in and the quality of the decisions they make. Heath (1998) sees the development of clinical experience through the reflective process, being an amalgam of knowledge and experience. As the participant develops as a practitioner both components mature and become greater than the sum of its part with the new found understanding of the clinical experience encountered blending seamlessly into everyday professional practice (Billington, 2013). Reflection is a key component of the participant's learning experience during the first year. The theory of reflection is taught and assessed formatively through the e-portfolio and summatively in assignments submitted by the end of the first year. Reflection is a term that the first year participant is happy to mention and will give numerous of examples of where they go away and think about a situation that improves their practice (Horton-Deutsch & Sherwood, 2008). Data suggests that, in the first year, the participant is clearly fixed in the phase 'reflection on action' (Schön, 1983), where the participant takes a retrospective perspective of what has occurred to them following an event or during the previous shift. This gives the time necessary for the participant to review new learning and gives this acquired knowledge context to compartmentalise and start to build the patterns that are widely explored in the naturalistic decision making theories (Burton, 2000). Participants report needing time to think and relive the events at quiet periods following the clinical shift. This gives opportunity to synthesise the experiences they have encountered and assess their own personal performance based on outcome and way peers handle similar situations. An increasing knowledge base, experiencing differing situations, finding innovative solutions and living through personally ground breaking scenarios builds a database that is constantly reviewed, updated, enlarged and adjusted to provide the context specific knowledge essential to the decision-making process.

To make a good decision participants need to critically analyse performance and their ability to perform. How an individual reacts and behaves in a particular situation is dependent on a number of external variables some under the control of participants others perceived and developed over time. Fishbein and Ajzen

(1975) proposed a Theory of Reasoned Action that can be applied to the reflective journey encountered by participants in this study. External variables such as year of training, attitudes to goal and contextual awareness are individual, unique and motivators for behaviour modification. The journey to a reasoned action will differ but much depends on factors outside of the individual's direct sphere of control and develops, as the participant understands what is happening to them as they mature into their role. This is particularly important in the first year as participants have little control on their working practices as their mentors allocate them tasks and it is only as the first year progresses that they start to directly influence their environment. The diagram below outlines determinants such as beliefs, outcomes motivation to comply, and subjective criteria that develops with experience and through the relationship with their mentor. What ensures that the participant finally becomes autonomous and reflective practitioners is their perceived ability to control and take charge of a situation or as Ajzen (1991) describes the subject's ability to recognise and control the factors that will ultimately shape their professional destiny. Ajzen (1991) terms this amalgam a Theory of Planned Behaviour. When merged with the original Theory of Reasoned Action it presents a framework that demonstrates how a subject starts to assimilate reflective thoughts into

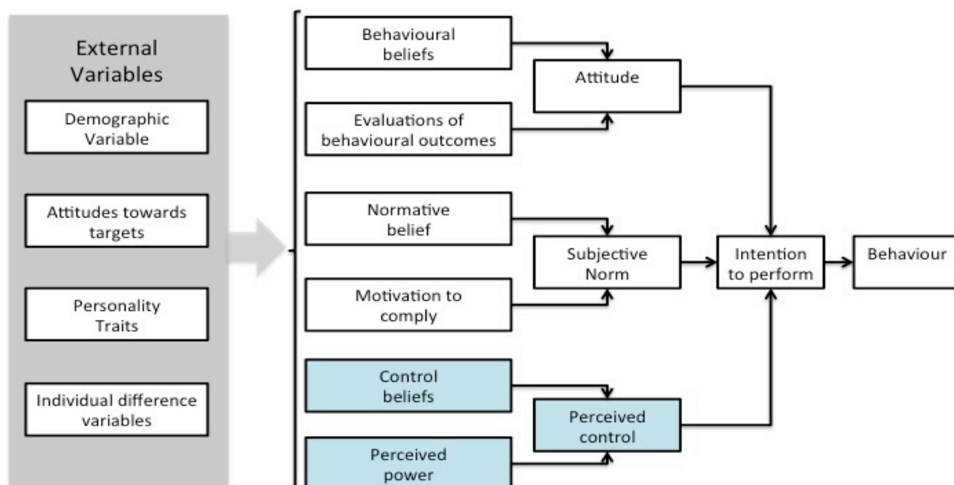


Fig 22: Theory of Planned behaviour (Azjen, 1991)
(The light areas show the original Theory of Reasoned Action)

intended action as they become more responsible and in control of their environment.

Confirming its importance to the process of decision-making, Standing (2008) adds an additional category to Hamm's (1988) continuum of clinical judgement termed 'reflective judgement'. This sits in between the concepts of intuition and peer & patient judgement within her cognitive continuum theory to emphasise how reflection influences the development of critical thinking and ultimately decision-making. Being reasonably proficient with the basics of care and knowing the routine and the ward infrastructure seen at the end of the first year and more established in the second year, allows the student to look more holistically at the care they deliver. There is a distinct movement from looking for tasks that will keep them busy and useful to incorporating the skills learnt or newly acquired and applying them as a care package. This emerging holism sees a reflective shift where reflection in action is used to explore performance at the time of event (Archibald, 2012). Based primarily on procedural or single events in the early stages this shows confidence in ability as the student starts to critically self-evaluate performance. To assist the reflection on action process, events could be further divided into categories to allow participants to self assess performance and allow them to fully conceptualise what is happening. Breaking down the experience into reflective fragments that are easier to assimilate by the developing participant such as task related competence (technical reflection), interpersonal communication (practical reflection) and the power relationship with peers and mentors alongside the ethics and morality (emancipatory reflection) of the situations they find themselves in (Taylor, 2000). This in no way replaces the 'on action' reflection seen in the first year but does show a movement toward a more universal approach to reflection developing in the second year. The data also shows that reflection in and on action is important when testing their knowledge during the decision-making process and how they judge their performance against their peers and the way they compare their own interpersonal ability with those they aspire to be and those characteristics they do not wish to replicate (Gillespi & Peterson, 2009).

The third year presents a participant who possibly follows the more traditional ideals of a reflective practitioner, where 'in and on action' is utilised seamlessly and at times participants suggest subconsciously. Participants refer to care as a

package and so reflection is on the whole encounter rather than focused on the procedure or a distinct event. Participants start referring to the notion of intuitive care and the ability to act without knowing rationale (Benner & Tanner, 1987). Intuition as a concept is well described in the literature and cited regularly in the decision-making genre (Perry, 2000). Participants imply that they just know what to do and find it difficult to articulate or give foundation for that 'gut feeling'. Gerrity (1987) and Traynor, Boland & Buus (2010) define the concept in a similar manner to participants but generally see this concept as an experienced practitioner trait and although the student is reluctant to state that they truly understand this concept, they just believe that they are in tune with the needs of their clients. Banning (2008) in his review of a variety of decision-making models explores the intuitive-humanist model that examines the relationship between experience, previous experiential learning and a contextual awareness of how these two components merge to create this 'gut or intuitive feeling'. It is difficult, as part of this study, to propose that participants are comparatively performing at an expert level as suggested by Benner (1984) and it could be argued that such nebulous descriptions of intuition offered by Schraeder & Fischer (1987) may be no more than a best option or lucky guess termed satisficing (Misuraca & Teuscher, 2013). What is clear is that during and after an event the participant is coming to a conclusion that something isn't right and has, in the final year of the nurse education programme, the confidence to act upon this from a decision-making perspective. Definitions of intuition are broad and at times a little non-descript such as Benner & Tanner's (1987) definition '*understanding without rationale' (p.23)* although the description of intuition most fitting the participants account comes from Gobet & Chassy (2008) where they propose that intuition is the

"…. rapid perception, lack of awareness of the process engaged, concomitant presence of emotions and holistic understanding of the problem" (p.130)

Participants neatly fit the criteria of this definition that was originally proposed for expert practitioners rather than the student nurse. When you explore the accounts of participants in greater depth it is more likely that they are unaware

of the process of seeking and retrieving knowledge necessary in the early stages of the course. This process is not second nature and almost subconsciously absorbed as well as actively sought. Gibson's work (1986) explored visual perceptions of pilots before moving into the area of 'direct perception'. His conclusions suggest that individuals look at a scene holistically taking in all manner of sensory cues. This rich and complex information is directly perceived without the need to recall data or experiences. This work has been further developed with the suggestion that the informational basis of the decision is almost hard wired and as such the individual has no perception of it's recall resulting in a decision that stems from the subconscious (Effken, 2007).

Many of the attributes that make the individual uncomfortable or euphoric during the decision-making process can easily be ascribed to a physiological response (Doya, 2008). The subconscious understanding of events, instinctively knowing what to do and the intuitive 'gut feelings' described in the literature (Dayan & Daw, 2008) and seen in the data analysis links nicely with the neuroscience described earlier in this thesis. The biochemical responses and the way the body and mind adapts can not be ignored if a rounded picture of the decision making process is sought and should be as important in the teaching of the decision-making process as understanding the anatomy and physiology of the heart when teaching the care of a client with a cardiac condition.

Dopamine is instrumental in a number of essential systems within the nervous system such as the nigrastiatal system that controls movement, the mesolimbic system or sometimes referred to as the 'pleasure system' as it is involved in reinforcement, reward and excitement and the mesocortical system that co-ordinates planning and problem-solving (Rushworth and Behrens, 2008). This excitatory and inhibitory function of Dopamine works as a 'go - no go pathway' where the release of Dopamine stimulates adjacent neurons initiating or inhibiting an action potential (Frank & Claus, 2006). The strength and influence of this excitatory process initiates a reward like phenomenon that promotes the decision-making process and/or a feeling of euphoria depending on the neural

structures involved, whilst the 'no go' pathway inhibits this process (Doya, 2008).

Serotonin mediates between two loops that are essential to the decision-making process. The limbic loop consists of the orbital frontal cortex, amygdala and the ventral striatum and initiates immediate response decision-making that is impulsively based on rewards, threats and is key in the emotional state of the individual (Homberg, 2012). The cognitive loop consists of the dorso-lateral prefrontal cortex and the dorsal striatum and is more concerned with long-term future perspectives (Roberts, 2011). The interplay between these two loops moderated by the neurotransmitter Serotonin allows the individual to make decisions but not participate in overtly risky behaviour (Macoveanu et al. 2013). Studies based on gambling addicts clearly demonstrate that participants with low levels of Serotonin exhibit poor decision-making and impulse control (Koot et al. 2012). Similarly, studies of participants given low Serotonin diets exhibit poor decision making skills, an increase in aggressive behaviour and emotionally fragile (Long et al. 2009; Seymour et al. 2012).

Noradrenaline is known for its systemic effect on arousal from the fight/flight response seen when an individual is stressed or frightened (Tortora, 2013). The neurological properties of this chemical are still open to speculation but what is clear is that noradrenaline is involved in the decision-making process (Eckhoff, Wong-Lin & Holmes, 2009). It appears that noradrenaline acts on two specific receptors, $Alpha_1$ receptors are involved in excitation and $Alpha_2$ receptors promote inhibition. Noradrenaline, in conjunction with a Locus Coeruleus modulates behaviour associated with arousal such as sleep/wake cycle, sexual drive and cortical function that influences attention (Jepma et al. 2010). The Locus Coeruleus/Noradrenaline pathway is highly regulated as too much or too little limits performance, this forms the basis of the adaptive gain theory (Aston-Jones and Cohen, 2005). O'Carroll & Papps (2003) suggests that many of the decisions mediated by noradrenaline are performed initially subconsciously. The developed somatic marker hypothesis suggests that when offered a choice with relative risk noradrenaline is released by the amygdala that marks the event or

provides a somatic marker (Gutknecht et al. 2012). This noradrenergic release is described as a 'gut feeling' by the host and provides the cognitive feedback that influences the processing of new memory but would also systematically be perceived as a fluttering, flighty experience (Damasio, 1996). Mason & Fibiger (1979) indicate that noradrenaline may have a role with selective attention assisting the cortex to filter information ensuring that information of little importance, in conjunction with the Locus Coeruleus, hippocampus, cortex and cerebellum, are not laid down as memories and reduces motor or procedural learning. In experiments with laboratory rats results show that when noradrenaline secretion is pharmacologically inhibited it affects the animals' ability of extinction; in other words the learnt procedures or memories that are imprinted are more difficult to be unlearnt (Dalley, Cardinal & Robbins, 2004).

Although not scrutinised during this research project there appears to be a symbiotic relationship between the neuroscience and decision-making theories explored that may give rise to the intuitive feelings experienced by participants in this study. Reflection, on the other hand, appears to follow a sequential process as the participant gains experience, exerts greater control over their environment and mastery of the art and skills of nursing. In the early stages of the course, reflection on action is the predominant form of reflection. The participant critically reviews their personal performance and actions of others, away from the clinical environment. Being proficient in reflection gives a framework to understand what is happening around them and how this changes over time (Hatlevik, 2012). The second year progresses with a greater control of their workload and alongside improved time management skills find that they are able to reflect in action albeit on isolated events of procedures. Year three develops this process further as the reflective process matures with the participant in control of their workload and often very critical of their personal performance. Reflection occurs before, on and in action, seeing the individual preparing for the shift, reflecting on their clinical skills and ability to interact within the clinical environment and reviewing performance following the shift (Boud, 1995). Reflection is not isolated to personal performance but also extends to significant individuals around them. The way the mentor and qualified staff

interact and perform is reviewed and added to the participant's personal critique of the event bringing context and a record on how they personally perform compared to others.

A rollercoaster ride would be an apt way to describe participant's relationship with confidence. A participant may have all the attributes to be a good decision-maker but without confidence to act on them results in a participant who is likely to shy away from problem solving leaving decision-making to their mentors (Hoffman et al. 2004). Confidence figures highly in the discussions held with participants throughout the three years of the nurse education programme. A participant's confidence is influenced by lifestyle and success prior to nurse education but the differing environments and situations the participant encounters appears to affect even the most confident during the three years of nurse education. The concept and maturation of confidence during nurse education is unique to the individual and dependent on a number of positive and negative attributes (Perry, 2011). Many of these attributes are easily mapped to the participant's account of their abilities during their training (Fig. 23).

Positive Attributes:

- Emotional intelligence
- Emotional competence
- Resilience
- Attitude
- Cognitive ability
- Trust
- Intuition

Negative Attributes

- Narcissism
- Depression
- Doubt
- Uncertainty
- Negativity

Fig 23: Confidence Attributes

Described as a 'baptism of fire', the early stages of clinical practice appear initially to create a dependent decision-maker. The first clinical placement places the newly enrolled student into a busy clinical environment. The participant perceives that they are ill prepared with little practical preparation for this experience. The timetable of the first 10 weeks of the nurse education programme should be a full preparation but contains little allocated content to discuss the sites and sounds of the clinical environment, or from the participant's perspective contains sufficient content to appreciate the role the first placement

student is expected to adopt. Analysis of the timetable shows little timetabled time devoted toward discussion and practical advice to survive the opening placements. It would appear that a beginner's guide to clinical placements containing information on common practices, roles of staff, the clinical environment, routine and the handover would make these first weeks a lot less stressful and would reduce the dependency on the mentor that is obvious from the participant's statements in the first few months of the nurse education programme. Many would suggest that fostering a dependent student in the early stages is good for the participant and reduces errors with the mentor being in control of the student's working day (Mellers, Schwartz & Cooke, 1998; Ellison, 2010). This pedagogical approach may be convenient but means that the participant is, in many cases, a causal bystander watching the work of the mentor but passive in all but the most basic care (Andrews & Chilton, 2000).

With a sound working understanding of the ward routine and an appreciation of the basics of nursing care, the second year sees the participant build on the limited confidence gained from the first year. Branch specific teaching and the pressures of being a second year student in the speciality of choice made some participants reflect on their abilities and stifled or at least reduced their confidence in the short term. Relationships with mentors change at this time with more attention given towards the participant managing their own time (Doody, Tuohy & Deasy, 2012; Lundgren & Segesten, 2001). Although the mentor is always close at hand, when accustomed to particular events, participants are confident in their actions and as the year progresses become more assertive with their mentor suggesting outcome or direction. It appears that this confidence is fragile and in situations of unfamiliarity the student will revert to dependency and seek the support from the mentor (Baird, 2007). A number of participants mention the term 'comfort zone' where they are able to manage their own time doing procedures or tasks that they feel comfortable and competent to perform without resorting to the advice of their mentor (Andersson & Edberg, 2010). With an ever-expanding archive of knowledge and experience to compare and contrast against it can be seen that the participant would feel a valued and competent member of the team (White, 2003). Participants suggest that a

facilitative and open mentor is important in this process allowing the participant to suggest ideas and decisions without fear of derision. Several participants suggest that being involved or even witnessing the caring for a critically ill child helps with confidence as they feel that if they could handle that situation then they could cope with most things they may encounter during their routine day to day practice. For others when this newfound confidence is achieved there is an attempt not to place themselves in unfamiliar situations to maintain the status quo. Mentors need to be aware of the student who is a useful and functioning member of the team but withdraws from making decisions or managing their time especially as the participant moves towards the end of the second year (Spain, DeCristofaro & Smith, 2004). This was particularly evident in the simulated experience where participant's stepped back and waited to be led.

A number of participants mention the term self-doubt as they move towards the end of the second year. Seen as a lack of confidence in one's own ability, self doubt appears to acts as a firewall against participant's being over confident in their practice (Schaffner, 2004). There is a fine line between autonomous decision-making and taking risks. By questioning their own ability it acts as a self-assessment of their competence in any given situation with the default being when in doubt 'ask your mentor'. This seems an important stage in the decision-making process, as the students have to decide which decisions they are able to make in isolation or whether to refer the decision to their mentor (Costello, Elrod & Tepper, 2011). With this emerging autonomy comes the realisation that it would be easy to appear over confident, some participants start the process of offering options or solutions to their mentor rather than truly acting in isolation. This is a process that we see develop more fully during the final year of the nurse education programme and acts as a fail safe as the participant realises that with autonomy comes responsibility for actions (Elwyn & Miron-Shatz, 2010).

The third year places the student within specialities such as Accident & Emergency Departments, Neonatal Units and Paediatric Intensive Care Units. The development of skills and the expansion of knowledge and experience assist participants as they move into the consolidation process at the end of their

training. Consolidation is a twelve-week experience that allows an amalgamation of all things learnt to this point with the mentor pushing the student forward and is commonly referred to as the management block. Participants are encouraged to think for themselves during this period and start to feel that they are becoming integral to the child health team which improves participant confidence, encourages independence and promotes active decision-making (Girot, 2000). Participants recall how they commence a dialogue with their mentor about best course of action, challenging decisions and directing the multiprofessional team. This is a significant change in attitude as the participant is seen as active in the decision-making process happy to take responsibility of their action (Thompson et al. 2001).

Confidence is explicitly linked to self-belief and an ability to adapt to the surrounding environment (Kukulu et al. 2013). Those lacking confidence are more likely to see events as a threat or onerous task rather than a challenge to be tackled head first. Dweck (1986) in her early work postulated that student behaviour is influenced by their attitude towards a problem, the difficulty of the goal and the individual's level of confidence to attain it. The manner in which an individual tackles a problem is based upon their confidence to succeed (Breen, Cleary & O'Shea, 2010). It appears that that when the participant tackles a problem their success or positive feedback they gain from attempting the task will ultimately affect their confidence. Middleton and Spanias (1999) explain that students who believe that success and failure is based on ability are more likely to attain a positive outcome if they are malleable and grow with the experience. Termed an incremental theory of intelligence, this is in contrast to those who Bennenson & Dweck (1986) suggests satisfy the criteria of the Entity theory. These individuals have a fixed mindset and are likely to give up easily, do not take on constructive criticism and have little self-belief. Those who show incremental traits are likely to understand that it is the amount of effort that results in success (Dweck, 1986). From a practical perspective, those students who are motivated and intrinsically engaged in their own professional development and have an open mindset to the problems they encounter are more likely to gain success and have higher levels of confidence (Arsaga, 2011).

This has implications for a nurse education, the data suggests that, in the early stages of the course the stress and intensity of workload experienced, combined with the dependent role within placement could, if not addressed, result in those individuals with a propensity towards the characteristics of the entity theory, displaying avoidance strategies, possibly feeling threatened by tasks or interaction with others and avoid the challenges of nurse education. With early identification and appropriate learning strategies, these individuals could be recognised and given coping strategies to remain motivated and gain confidence during the early traumatic stages of the course.

This section concludes the personal ability theme. Knowledge, confidence and reflection are uniquely linked and although many of these themes will be of little surprise to the reader, the participant's perspectives of how they influence the maturation of decision-making during placement demonstrates that as nurse educators we need to critically review the curriculum. The following section starts to explore the practice ability theme and its role in developing the decision-making process starting with competence.

The next section moves into the Practice Ability category by exploring the theme of competence and its influence on the decision-making process. Fifty per cent of the nurse education programme is devoted to the assessment of competence. A clinically competent practitioner, at the end of training, is one that has the skills and the ability to practice safely without the need of supervision (NMC, 2013). The King's College (2009) suggests that the terminology used and the criteria adopted to assess competency needs further investigation. This is supported within the literature as a number of authors point out the subjective nature of the assessment tools (Norman et al. 2002) and the differing quality of mentor training and its application within the clinical environment (Ness et al. 2010). There are a number of theories related to the development of competence. Miller's (1990) Pyramid of Competence is frequently cited in the medical journals as a model that promotes direction for the development of competence but also acts as a framework to develop competency assessment (Wass et al. 2001). The simplicity of the model masks the complexity of the process as the practitioner moves from acquiring understanding of what needs to be performed and the information/knowledge behind that action to a knowledgeable doer with mastery of the skill. In nursing, the competence process is divided into three criteria that need to be satisfied. Mentors assess the students' performance in relation to the achievement of pre-set practice outcomes (NMC, 2010) by directly observing and questioning the student regarding their performance. This allows the mentor the opportunity to assess the student's skills, knowledge and performance of the practice outcome, alongside feedback from others, registered practitioners and scrutiny of documentation produced by the student as evidence of outcome completion.

Whichever way competence is assessed it can be reduced to three main components – knowledge of the skill, task or clinical encounter; professional attitude to the role; clinical skill or the mastery of the procedure (Garside & Nhemachena, 2013). Southern Health NHS Foundation Trust (2014) promotes the novice to expert continuum based upon the work of Benner (Benner, 1984). What is interesting is that the level descriptor range from zero (Novice) to 6 (Expert), the minimum requirement for a competent practitioner on this scale is

a 3 based upon the NMC definition of competence (the figure 24 contains the first three levels as the remainder equates to qualified staff). Level 0 – 2 equate to the level attained as participants progress through the three years of nurse training, or could be similarly applied if a qualified practitioner is deemed incompetent (NMC, 2013). At the end of nurse training all student nurses should be working at level three.

	Level of Achievement	Level
Novice	Cannot perform this activity satisfactorily to the level required in order to participate in the clinical environment	0
	Can perform this activity but not without constant supervision and assistance	1
	Can perform this activity with a basic understanding of theory and practice principles, but requires some supervision and assistance	2
Competent Practitioner	Can perform this activity with understanding of theory and practice principles without assistance and/or direct supervision	3

Fig 24: Levels of competence

One surprising aspect of data collection is lack of importance placed upon competence in the first year by the participant. The completion of the first year competencies is seen as a 'tick box' exercise rather than a document that should structure clinical learning. The data shows that it is the mentor who deems the student as suitable to progress to the second year with the participant only apparently concerned with getting all the boxes signed. This is particularly interesting because if not deemed to be important by the participant then it appears that the first year is based upon seeking routine and appearing to be busy and useful, rather than a structured development (Price, 2009). All participants state that the area that they feel most competent undertaking is the observation or vital signs round. This is seen as a task that all can complete with relative ease and that the role of collecting physiological data is seen as unimportant and a student role. This is particularly concerning as the collection of physiological data is the cornerstone of the clinical assessment process and is the basis of all nursing intervention and decisions made (Oliver, 2010). If the observation/vital signs procedure is not perceived as important by students, in the first year, either by its perception of being a simple task or because it is seen as unimportant and not a qualified nurses role then the whole premise of nursing assessment informing intervention and its re-evaluation becomes flawed as it is not given the gravitas

it requires (Bird et al. 2009). The literature abounds with missed opportunities to recognise the deteriorating child with worsening of clinical features and more importantly with subtle changes in physiological trends being overlooked or misinterpreted (Felton, 2012). This is one nursing skill that requires an effective decision-making strategy and an opportunity is possibly being missed to truly demonstrate and develop this nursing skill (Broom, 2007). A great deal of importance is placed on this issue when the student enters the child branch in the second year but little time apart from the demonstration of the skill and the recording of the data is taught within the first year of the nurse education with the misinformed assumption that they will apply this information whilst in practice. Clinical decisions made on weak or incorrect data will be poor decisions (Yukalov & Sornette, 2011). This issue requires attention both in the Higher Education Institution's (H.E.I) and clinical practice where junior students or unqualified staff, such as healthcare support assistants performs one of the most important clinical nursing skills.

There is a shift in the importance of competence in the second year compared to the first. Moving into the child branch may be the reason for this where participants start to consciously think of becoming skilled in the art of children's nursing. There are descriptions in the data of a 'rite of passage' and 'personal discovery' with the realisation that the competence process is a two way process and that participant has a role in the development of their own competence (Cassidy et al. 2012). Context specific practice and, at the end of the second year, the added responsibility of entering the third year leads to the student being more active in the competence process.

The third year sees the participant looking towards and starting to consider registration. There is reference in the data relating to trying to get as much done prior to registration, the fear of qualifying and not knowing how to do particular clinical skills and the need to get the competency documentation complete, is particularly important for the student as there are additional management competencies to complete in the third year. Apart from a more proactive student it appears from the data that working in isolation is sought where the participant

self-checks rather than asking first, resulting in a more considered approach to the decision-making process. It would appear from the data that the student is making a deliberate ploy to ensure that they have considered all possibilities before either making a decision or referring that decision on to their mentor. This is also reflected in the literature with a paper by Andersson & Edberg (2010) suggesting that the 'rookie' newly registered nurse is seeking to consolidate the skills of self-management, prioritisation of care and the burden of responsibility gained during the final months of their training. Participants start to refer to procedures as becoming 'second nature' as they master tasks and techniques but significantly they imply that the procedure is not now seen or performed in isolation. It appears that the mind-set has changed and competence is now seen as a holistic package with knowledge, skills acquisition, experience and competence merged to provide an integrated and seamless package of care to the children and families in their care (Dane, Rockmann & Pratt, 2012). This ability to multitask or the merging of a numbers of differing skillsets and tasks performed seamlessly and competently appears to be a significant event for the participant and shows the ability to perform, evaluate and demonstrates complex decision-making attributes (Alnar et al. 2010).

Although coming under different themes confidence and competence are symbiotic when considering the decision-making process. Governing bodies and educators place importance on the competence process but this appears to be disregarded by participants in the early stages of the course. The need to develop confidence within the clinical environment before taking on board the complexities of the competency process is their first priority. Competence in the early stages is left to the mentors' opinion with little input from the participants in this study. This factor amongst others will be explored in the next section of this discussion.

As would be expected there are distinct changes that occur throughout the three years of the nursing programme in the student/mentor relationship. The mentor slowly relinquishes their controlling role and allows managed independence during the consolidation period allowing decision-making to flourish (Jokelainen

et al. 2011). It appears that the quality of mentorship, as perceived by the cohort, was on the whole good although most encountered what Darling (1984) terms a "Toxic Mentor" (Fig.25). Participants have experienced many of the characteristics described by Darling at some time during their training and this not only affects confidence but also affects the likelihood of independent practice. Gray and Smith (2000) suggest that when the participant encounters a 'Toxic Mentor' they embark on a strategy of keeping a low profile or even resort, in the first year, to seeking advice from unregistered practitioners such as Health Care Support Workers. A fascinating point arising from the data is the manner in which participants seek reassurance in the mentor's knowledge and understanding of the art of nursing. It appears that this results in the same coping strategies and mirrors the reaction seen when encountering a Toxic Mentor, in that the student is unlikely to act independently, stifling learning and in particular participants refrain from making or discussing any decisions they wish to make. There is no reference to this finding directly in literature except where there is a personality clash. Work by Morton-Cooper and Palmer (2000) suggests that as the relationship between student and mentor develops over time and they pass through these three distinct phases seen in figure 26. It appears that during the initiation phase the working relationship is set for the remainder of the placement (Ali & Panther, 2008). What is also clear in both the dataset and the literature is the attitude of the mentor not just to the mentorship role but also to the profession is fundamentally important to the participant (Chow & Suen, 2001). A mentor who enjoys their work provides an infectious atmosphere,

Fig 25: Characteristics of a toxic mentor

Avoiders	Where mentors make themselves scarce
Dumpers	Throwing students in at the "deep end"
Blockers	Refuse to meet students' needs
Destroyer/Criticiser	Either subtly or overtly undermining ability
Refuser	Can't learn that skill now, later in your training
Withholder	Information, knowledge or skill

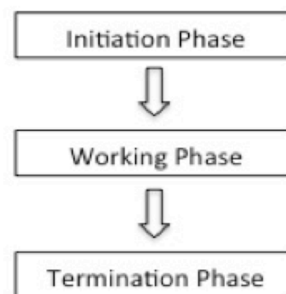


Fig 26: Phases of mentorship

promotes confidence in the mentor's ability and encourages the participant to be open and honest about the care delivered and the planning of any future care (Warren, 2010).

The student mentor relationship is essential in promoting the art of nursing, it is equally important in the development of an autonomous critical decision-maker (Ali & Panther, 2008). Data suggests that the personality and teaching ability of the mentor enhances and promotes a proactive thinker or if poor, effectively holds back and frustrates the student. In the early stages, the role of the mentor is to direct and allocate tasks (Gray & Smith, 2000). There appears to be little rationale for action given by the mentor in these early stages and the data would suggest that this suits the participant who 'wants to do' rather than truly 'know' the rationale behind the process. There is so much to learn and experience that the participant is happy to do routine, repetitive tasks initially. The feeling of being useful and the development of trust seems a trend that evolves throughout the three years of the training (Gibbons, Dempster & Moutray, 2011). The data suggests that the feeling of trust is a two way process seen by the participant. There is a need to feel that the mentor is happy with their performance and the participant will carry out any task allocated to them without question. It also appears that the participant is judging the clinical and interpersonal skills, competence and knowledge base of the mentor, before deciding whether or not to trust the mentor. When seen as trust worthy, the participant appears more likely to question decisions and actions and take on additional responsibilities believing that the mentor has the right skill set to appraise the participant's ability. Throughout the first year, the student is assimilating new learning, gaining clinical skills and gradually moving towards the end of the year, working without the mentor directing the participant's every move. Rather than following the mentor the participant is looking for roles they can undertake and feed back data or decisions they have made or would like the mentor to make. In the early stages of the first year, the data demonstrates that the participant feels little responsibility for their action. In one case the participant goes so far as to suggest that they are 'untouchable'. Few decisions are made in isolation and the participant constantly refers to the mentor before enacting a task or care. As the

participant moves towards the end of the first year there is a realisation that as the participant demonstrates greater skill, competence and independence. This culminates in greater mentor expectation, resulting in the participant needing to be more responsible for their actions.

The role of social mirroring should not be underestimated in the development of a critical decision-maker during the first year (Crawford, Dickinson & Leitmann, 2002). Trust and the feeling that the mentor has your best interests at heart gives security but watching the mentor and comparing them to other qualified staff allows the participant to develop a schema for the way to act, interact and conduct themselves during the caring process (Ellison, 2010). They witness the mentor's actions and attribute value deciding whether that trait is desirable and should be mimicked or discarded or seen as a characteristic that should be filed as a way of not behaving or performing cares in the future. The motivated mentor has a profound effect on participants who are more likely to emulate their mentor's actions and take measured risks such as being more questioning or being a little more autonomous compared to a participant who is not truly happy in the student/mentor relationship. Greater attention to the characteristics of a mentor and the important role they play in developing the student's decision-making skills is something all higher education institutions should consider (Pellatt, 2006)

The second year builds on the first year where the participant instigates a move from dependence to independence that continues to registration. Trust in the mentor becomes a significant issue in the second year especially when the mentor is deemed to lack confidence in his or her own ability. Data suggests that the participant perceives the mentor is holding them back or even being a gatekeeper restricting access to independent practice or hampering decision-making opportunities. This is not an uncommon issue and needs further investigation as not all registered nurses make good mentors (Barker, 2006). In a study performed by Bellefontaine (2009) it is suggested that this is a commonly unreported issue that needs to be addressed by higher education institutions.

In stark contrast, a confident, aspirational mentor is seen as a facilitator to new learning opportunities allowing open access to the clinical arena and fostering an environment for the participant to expand, investigate and decision-make albeit under the close scrutiny of the mentor. Built on empathy and a real participant belief that the constructive criticism, questioning and challenges of the mentor are there to encourage autonomy and to encourage and ease the participant into making self-directed decisions. The importance of this mentorship relationship cannot be underestimated as the student is encouraged and empowered to make decisions and to start to think through problems they encounter in practice (Lo & Brown, 2000). Interestingly, one participant remarks that although they have been mentored through the first year of the programme, it is only in the second year that they truly understand the role of the mentor in their professional development.

The third year sees a clear focus and the data demonstrates that the student is concentrating on registration. Mentors appear to have a similar outlook and there is a general sense that the participant is encouraged to be more independent and autonomous in practice (Gordon, 2000). Participants feel a distinct 'get on with it' attitude from the qualified members of staff on the unit and this seems to be generally embraced with the expectation of additional workload and responsibility that independent practice necessitates. The data shows the development of an assertive decision-maker with the participant questioning and challenging not only the mentor but also other members of the child health team. This demonstrates confidence in knowledge, ability and competence to be vocal whilst still undertaking a student nurse role. There is trust and a questioning attitude developed by the student as they start to see themselves as an autonomous practitioner. This is particularly important from a decision-making perspective as there needs to be independence and an understanding of their role as they come closer to registration (Brooks & Moriarty, 2009). As discussed in the theme 'knowledge', we find the participant judging themselves against their mentors and showing additional confidence when the mentor seeks an opinion from them. The consolidation period sees the participant undergoing their management competencies, and decision-making

takes on a differing perspective as they are now held accountable for their actions or omissions during the shift. Erdem & Aytemur (2008) propose that through the development of trust in the later stages of the course the student learns to become confident to make decisions and feels that they are becoming a nurse ready for registration.

The final theme is that of the decision-making process itself. Lofmark, Smide & Wikblad (2006) suggests that nursing students are no better at making decisions on qualification than they were at the start of their educational programme. This is strongly disputed by Thompson et al (2002) who suggests that decision making and its maturation over time is more than hypothetical guessing and more systematic. Analysis from a decision-making perspective stems from a nurtured and matured set of cognitive skills that are experienced, internalised and applied over time (Taylor-Seehafer et al. 2004). Harbison (2001) who based her work on the six modes of enquiry practice developed by Hamm (1988) suggest that in the early stages, decision making is no more than a best guess, being unstructured, ill defined and no more systematic than picking the most likely option from a series of events, termed intuitive judgement. This builds from ill structured to the well-structured tasks; where hard science provides evidence to support the higher functioning cognitive modes allow true analysis of the situation. Although the participants are using words such as prioritising and analysing it is clear that they are looking at the options available to them and coming up with a best choice to proceed rather than the recognised meaning of the phrases. What is witnessed is the movement through three distinct yet interchangeable phases of being dependent, proactive and independent as the decision-making process matures. Decision-making cannot be viewed in isolation and the nature of this category is dependent on other variables discussed within this thesis. Diagrammatically the development of the decision-making process can be portrayed as a continuum with the first year seen as a time of uncertainty, assisting colleagues by collecting information and reporting to his or her mentor who makes the decision and directs the participant to act, through to ownership of the event where the participants strives for independence within the limitations of the nurse education programme.

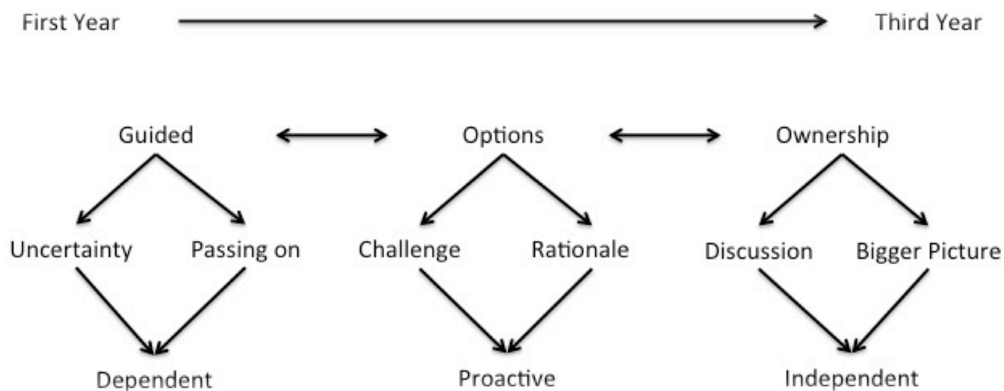


Fig 27: Decision-making development

It would be easy for the researcher to compartmentalise the three main categories into each of the three years of nurse education but this would not take into account the fluid nature of decision-making process as participants accumulate additional knowledge, skills and experiences at differing rates.

In the first year, the data shows that participants feel scared or never even considers making decisions within the clinical environment. The very notion and process of referring to their mentor rather than acting on the information collected is a decision in itself and as a result identifying the characteristics of what is a decision would be a useful from a curriculum perspective, as participants appear not to appreciate that they are making clinical decisions in the first year of the course (Baxter & Boblin, 2008). The participant is seeking basic skills and looking for the individual most likely to pass these skills on rather than asking the more influential mentor, outlines the uncertainty inherent in the early stages of the first year. Health Care Support Workers are seen as non-threatening individuals willing to lead the uninitiated. This is a problematic as the foundation of care and the decisions resulting from these teachings have their underpinnings from an unregistered practitioner. In the participant's quest to be a useful member of the nursing team they have a tendency to look for those individuals who are doing the routine tasks. This includes fellow students who are seen as colleagues to run ideas by, to test their decisions or even make a collaborative decision before placing this before their mentor. As a result,

decisions are based on what to do next in a ritualistic manner rather than proactively thinking through the care they deliver or their clients needs. It is worth noting that later in the first year participants report a change in the mentorship style becoming more facilitative rather than ritualistic encouraging the participant to offer opinions. This loosening of the mentor/student bond is essential as the participant moves into the second year but does come at a cost as participants start to view the tasks they perform as menial and doubt their decision-making abilities initially. This lack of confidence in ability is transient and the data suggests that the way they utilise their mentor from a decision-making perspective changes as the participant uses self-checking prior to mentor report. This self-assessment is important because it starts to demonstrate a more autonomous decision-maker using their newly developed skills of clinical judgement and thinking through a problem rather than immediately seeking a solution from a third party (Uys et al. 2004). There is also a testing of this newfound knowledge, experience and clinical competence as the participant starts presenting options rather than waiting to be directed. This is significant from a decision-making perspective because the participant is re-evaluating their action, using the data collected from the children in their care and deciding whether they are capable to act or refer the information to their mentor for action. The data suggests that the mentor is now used as a confidante where the participant is seeking clarification rather than direction. This process initiates the concept of prioritising with the participant starting to demonstrate the ability to decided when to re-evaluate care or refer the information on to their mentor (Lynch, 2012). This is rudimentary at this stage but forms the basis of a more inventive and innovative decision–maker in the third year of the programme. As mentioned previously the evolution of self-assessment, prioritisation and a more autonomous, independent student further enhances the student/mentor relationship with the mentor asking the students opinion at times that further increases confidence but more importantly promotes trust (Erdem & Aytemur, 2008).

The third year sees a number of differing characteristics, the participant strives independence but as with other domains already explored they will always

default to seeking mentor assistance when new experiences arrive. Some participants mention a break in trust where they deemed to be used as a 'pair of hands' rather than a valuable member of the child health team. Although not registered, the participant perceives himself or herself working and acting as if qualified during the consolidation process and feels betrayed if this is not fully respected. There appears to be an attitudinal change that occurs in the third year linked to the decision-making domain. There is a change in discourse in that the child and families are referred as **'my child'** or **'my family'** this is more than semantics, it is a principled statement that the children under the care of the participant are now their responsibility and as such the care delivered or the decisions made are now personal and not the responsibility of the mentor as seen in earlier years. This is a natural progression as we see a decision-maker striving autonomy but ensuring that the child and family are at the centre of everything they do by acting as the client's advocate (Andersson & Edberg, 2010). Data suggests at this stage of the education programme, that care is more than a bundle of procedures and tasks and the participant is now looking for the subtle cues and changes that builds into a full holistic picture of the children and families in their care.

The movement from dependant follower of actions through to a proactive confident decision-maker is clearly captured by the data during the three years of the nurse education programme. The accumulation of domain specific knowledge, the development of decision-making process plus maturation based on experience allows the participant to evolve into a competent healthcare practitioner (Botti & Reeve, 2003). The movement from a very routine task orientated neophyte to a mature student nurse ready for registration, with the knowledge and experience to make decisions in difficult time limited situations differentiates the clinical experts from ancillary staff (White, 2003). There is a distinct change in the decision-making processes utilised by participants as they progress through the nurse education programme. There appears to be little difference in the way the more mature individual or school leaver experience the clinical environment or learn the skills of clinical decision-making when they enter the profession. The vocabulary, the clinical environment, the workload and

the multiprofessional team all evoke the same feelings and responses. All participants have to understand the environment they find themselves in, define the roles and functions of the multiprofessional team and experience events and situations that most members of the public would shy away from. In the early stages, routine, tasks and following direction is the main priority; making a decision is not uppermost in participant's mind (Rush et al. 2012). An ever expanding knowledge base and experiences to draw from see a more confident second year participant willing to give options, to challenge and to act in isolation albeit under the watchful eye of their mentor. The third year sees a differing mind-set of a participant confident in knowledge, clinical skill and experience willing to challenge mentor and multiprofessional team, able to multitask and importantly seeing the child and family as their responsibility.

The maturation of decision-making evolves over the three years of the nurse education programme and only seems to be of concern to the participant when they are challenged with new experiences or unfamiliar situations. Participants eloquently recall knowledge diffusion and transfer (McCaughan et al. 2002) but the theoretical knowledge gained in University appears secondary and is not fully addressed by participants during the interview process despite direct questioning. In the latter stages of the nurse education programme it is clear that participants are starting to appreciate the developing knowledge base they have accumulated (de Swardt, du Toit & Botha, 2012). The teaching and management competencies of the third year promote a supervisory role towards junior students. This improves personal confidence and brings to the participant's conscious awareness the new learning that has occurred and how different they are now compared to the start of their nurse education programme (Doody, Tuohy & Deasy, 2012). What surprised the researcher, and is of concern, is the lack of timetabled time put aside to allow the student to explore the decision-making process. Document analysis shows that all of the major documents and policies outline the need for a proactive critical thinker with the ability to do the right thing at the right time – a competent decision-maker. From the very clear and concise definition of the nurse displayed in the Tuning Project Report (2005) it appears that the phrase 'decision-making' is used but there is little guidance on

what is meant by the term in the policy documents. The timetable appears to be a washed-out version, where the components of decision-making are evident but the explicit pulling together of these themes is lacking. Without the tools to assist the participant in the early stages and what appears, from the data, to be the lack of preparation for the clinical environment, the participant is left in a very dependent state, having little option but to follow their mentor and await direction. It appears in the early stages of the programme that participants use the opening months as a familiarity exercise rather than focusing on new learning. There is a need to ensure that the foundations of decision-making are explicitly learnt at the start of the course so participants appreciate their contribution and explore their role critically rather than passively. Actively thinking through events, procedures and experiences to develop new learning that promotes and makes sense of the experiences they have encountered and ultimately allows the participant to act on an evolving knowledge base that is in tune and comparable with, the experiences gained over the length of the course to facilitate the making of make sound clinical decisions.

Simulation is not a new concept in nursing education but its focus has been on the management and organisation of skills rather than looking at the complexity of the nursing interaction (Cant & Cooper, 2010). The child health team tried to explore some of the finer aspects of the nursing art by presenting a scenario, especially in year three of the programme, where students are able to lead, make decisions and demonstrate autonomy within a safe environment. During the observation phase of the research the data suggests that when working in isolation and when their knowledge and skills are challenged through a simulated experience, the participant found that they lacked the confidence to showcase their skills or to take the lead. The results seen in this cohort mirrors student reactions seen in previous cohorts but the sessions have always evaluated well and the academic team assumed that the simulated experience was a necessary motivator to become more assertive and proactive as the student gets closer to qualification. Incorporating this simulation exercise into the research project provides valuable insight into the participant's reaction to what they perceive as a stressful simulation exercise. When the exercise is placed

under greater analytical scrutiny of the research process, it demonstrates that maybe the students are not as autonomous or confident as they first appeared. It is also apparent that although they receive leadership lectures they have not truly had the opportunity to apply them in such a way as to feel confident to step forward when the situation demands, even in the safe environment of a simulated exercise. The researcher is mindful that this needs greater research scrutiny, as the results are representative of a small sample rather than a large scale, in-depth study. The move to subservience, stepping back and allowing others to lead is not a surprising finding but needs attention from an academic perspective. Work by Owen and Ward-Smith (2014) sees simulation as a means of teaching critical decision-making skills and leadership and this is an area that we as educators need to be explore further. The dependence on the mentor is not as evident in the interview data where the participant is keen to mention that decision options are presented in the second year and the mentor is used no more than a confidante in the third. When placed under pressure especially in the third year, it is clear that without this supportive infrastructure decision-making mechanisms fail and even peer-to-peer discussion leads to lengthy debate and inconclusive decision-making strategies. The observation phase rather than backing up the key findings of the interviews highlights one of the main disadvantages of the any narrative or discourse method in that it is dependent on the participant's recall and interpretation of events and how they have cognitively assimilated this information and experience (Kvale & Brinkmann, 2009). More research is needed on this area and the researcher is mindful that the stress and artificial nature of the simulated experience may be in itself the reason for the poor performance in the key areas outlined. A comparative study is needed to explore whether the results seen as part of this observational phase mirrors that of the actions of participants within the clinical environment.

Discussion summary: Implications for curricula development.

Four years ago, the author had a naïve understanding of the research process and in particular its application. In the author's opinion, the complexity of the process and the rigor of its action can only be gained and truly understood by doing and is never appreciated through reading. I would find it difficult to say I have enjoyed the process but I do now have a healthy respect for those who devote their professional careers to the pursuit of new knowledge and understanding. Professionally, we strive to collaborate with our client group ensuring that they understand the care delivered to them and strive to promote partnership in the decision-making process. Child health nursing, in particular, has been at the forefront of thinking on this matter (Smith & Coleman, 2010; Shaw et al. 2014) but it is evident that when it comes to curriculum development the needs of the student are rarely considered. The lecturer's perceived knowledge, experience and wisdom pulls together a timetable that ensure registrants are knowledgeable, safe and clinically skilled (Priest, 2006). It is based upon mandatory procedures, themes and trends that are current and pertinent to the needs of society. The intensity of academic and clinical demands placed upon our students mean greater expectation is placed on nurse education curricula than in previous years (Tanner, 2007). The client group we serve, is generally more acutely ill, has greater personal and social needs and is more knowledgeable than clients in the past (Candela, Dalley & Benzel-Lindley, 2006). All these factors place additional demands on the practitioner to make high quality decisions in a time-limited, stressful clinical environment. Decision-making is clearly evident in the guiding documents that form the backbone of curriculum development, but the lecturing team gives little practical advice and support on how to manage this common, yet complex skill within the clinical environment (Shamian, 1991).

At times as the researcher, I asked myself why participant's raise issues related to handover and routine when the study explores their decision-making strategies rather than their working practices. It is only when you truly become immersed in the participant's world through reading the data (Gibbs et al. 2007) and analysing their actions through the simulation that you start to appreciate

that participants need to understand the complexity that surrounds them. They need to be sensitised to the sights and sounds of the clinical environment and require exposure to common clinical encounters such as handover, nurse call systems and clinical procedures such as feeding and toileting. Mastery of these basic nursing procedures and tasks allow the student the opportunity to take charge of their learning and truly feel able to control the environment around them, which ultimately makes them feel confident to make a decision. The experience of being a student nurse cannot be divorced from the decision-making process, to attempt to separate the two shows a lack of understanding of student need and it is this point that justifies the choice of ethnography as a methodology. As an ethnographer there is no need to manipulate or force a viewpoint (Barton, 2008), by letting the participant tell the story of their decision-making maturation they will discuss the factors that they feel are important to them, as a result this study has illuminated an area of nurse education and clinical practice that appears to have been inadvertently overlooked.

If the researcher is truly honest prior to this study there has been little thought given to decision-making when developing the child health curriculum. The first year common foundation was taught generically and the data suggests the early stages of the course did not address the needs of the participant in the early stages of the course. As an experienced academic, I can see the elements of decision-making in the first year timetable but the data would imply that this is not evident to the participants of this study. You could go one step further to suggest that the theoretical knowledge conveyed in University is not seen as fundamentally important to the student whilst discussing the factors that influenced the decision-making process during the first year. It could be argued that the dataset suggests that maybe the first theory blocks should come much later in the first year as participants mention that it is not until they have encountered clinical practice that the theory makes sense. It would be folly to think that the participants in this early stage acquired no new knowledge from their initial theoretical blocks, but it does question the practical use of that knowledge, especially when it is clear from the data that the participants felt so

unprepared for the clinical experience. What shouldn't be underestimated is how quickly student nurses develop a preconception about the process of learning to become a nurse (Gallagher, 2007). The data would suggest that clinical learnt skills are given greater value than that taught in the classroom. With a theory practice gap widely acknowledged (Maben, Latter & Clark, 2006) the data would suggest that the participant is predominantly basing their care on what has been seen in clinical practice in preference to that taught in University or seeking advice from unregistered staff that may have limited skills and knowledge base (Chinn & Kramer, 2008).

There is a wealth of literature available to support a number of different learning strategies to enhance the decision-making process; many full of jargon and management speak (Lauri & Salantera, 1998). This study raised some interesting points linked to the individual's understanding of how they go about the process of making a decision prior to nurse education. The decision-making process is generally unstructured and not thought through making the concept difficult for the participant to articulate (Scott, 1997). There is a need for a more explicitly structured approach to the learning of decision-making ideologies to ensure the participant understands the consequence of actions and to effectively utilise the information available whilst learning his/her craft (Heiden & Bockmann, 2013). Theories that stem from highly structured sequential modules require a very rational and structured mind (Todd & Gigerenzer, 2000). These theories originate from research where there are controls and restrictions imposed during the research process (Djulbegovic et al. 2012) and are not generally suited for a novice who is attempting to make sense of the complexity that surrounds them (Coetzee, 2004). The more naturalistic models seek patterns from experience (Jenkins et al. 2009a) and certainly, in the latter stages of the nurse education programme, these models and theories could feasibly be introduced to try to elicit meaning for participants as they reflect upon their increasing knowledge base, experience and clinical skills that develop in the latter stages of the course. The first year student nurse needs to be reassured that the emotions they experience are not unusual and to give them the skills to minimise rather than promote a feeling of being 'out of their depth' and useless

when they are on their first placements. Addressing confidence and self-belief head on would assist this process. Success breed confidence and positive constructive feedback from mentors helps to fuel the decision-making process (Evans, Pereira & Parker, 2009). Addressing the issue of confidence and professional self-belief in the classroom setting arms students with tools to support and assist them when the inevitable dip in confidence comes (Goodall, 2005). One major flaw, in the researcher's opinion, in the decision-making literature is the division between the psychology and the physiology of decision-making (Dayan & Daw, 2008). Understanding the complexity of the mind gives context to the physiological features experienced by the decision-maker. The neuroscience behind the feeling of nervousness, of being uncertain of next action and the 'gut feeling' that something is just 'right or wrong' gives perspectives of why they feel the way they do. It can give early features of the stress response and is easily explored within the classroom or simulation lab.

Clinicians have a great burden of responsibility through the competency process. As mentors they guide and nurture the novice and instil high quality principles of care plus a professional ethos (Ellison, 2010) and are, on the whole, highly valued by participants. The competency process is divided into a list of statements and outcomes attempting to interrupt the skills and characteristics of a developing professional and has merit (Takase, 2013). Although the data would suggest that this message is not effectively conveyed to the participants during the first year. It is clear that they appreciate the need to complete all sections of the competency documentation, but it appears a one-way process, with the mentor signing off the year and the participant grateful for the completion of the competency document in the shortest period of time. From a decision-making perspective there are statements, contained in the competency documentation, if taken on board and fully explored by the participant in discussion with their mentor, that would act as a solid foundation for the maturation of decision-making strategies (NMC, 2004). In the pursuit of routine and acceptance, for this cohort, there appears to be a lost year where the significance of the competency process is diminished. The elements linked to decision-making within the competency documentation should be used to discuss early decision-making

strategies between student and mentor. What happens in reality is that the student does not effectively engage with the process until the second year. This cohort was allocated timetabled time to understand the competency process and master its administration. In the future more explicit timetabled sessions should be allocated to demonstrate to the student ways to successfully complete the decision-making competencies and debate the types of evidence needed to complete these tasks.

The message that comes from this study is that the curriculum has moved to meet the health needs of society with greater integration of partnership, public health and the complexity of the biopsychosocial needs of our clients (Houck & Bongiorno, 2006). Professionalism, record keeping and instilling the art of nursing has always been a prime directive but with all the changes we have, to a certain degree, inadvertently neglected the skills that differentiates us from our unregistered colleagues, the ability to synthesis the information gained through sound assessment process, to react and prescribe an intervention or action based on solid decision-making strategies. It appears that decision-making is implicitly rather than explicitly taught in nurse education and whereas we have learning themes that span the three years of the nurse education programme, such as vulnerability and safeguarding maybe we should afford the same amount of timetable time to the art of decision-making. This deficit is particularly worrying as practice has evolved into a risk adverse setting where care pathways and early warnings tools assist referral but do not facilitate proactive critical decision-makers (Levitt-Jones et al. 2009). Experienced mentors have the internalised schemas to assist them to decision-make in this new world but unless vocalised, the neophyte will have difficulty conceptualising their clinical experience and instead rely on knowledge diffusion and medical technology rather than their knowledge and clinical experience to decision-make (Cooper et al. 2010). In essence the care pathway or technology is deferred to in preference to personal judgement and this needs to be addressed within the nurse education programme and mentorship training.

The key recommendations that emerge from the data include a relook at the curriculum to ensure participants have the tools to recognise and make sound decisions within the clinical environment. This involves focused sessions on how to collect, analyse and synthesise clinical information adapted to each year of the nurse education programme. Once collated the student should be instructed on how to package information for personal use to make a decision or be able to present the information in a usable format to their mentor for further discussion. The first year should be re-examined to avoid the pitfalls of poor practice preparation by recognising that the clinical arena is an alien and highly charged environment. Ward/unit routine, the use of professional language and common nursing events such as handover should be explicitly explored within the timetable with a period of acclimatisation prior to a full placement that could easily be performed in a simulation laboratory. Similar to our medical colleagues, students should develop a confidence in knowledge and a self-belief in their actions by having a much closer relationship with mentors who truly wish to be involved in the process. The concept of responsibility seems to develop over time but ability to judge the quality of a decision by considering what is right or wrong in their own personal decisions or those made by others promotes ownership from the start of course rather than developing during the final three months as seen in this cohort. The mentor's role and its link to competence assessment should have a greater clinical decision-making emphasis with advice given to mentors on how to promote and assess clinical decision-making in student nurses. Greater emphasis should be placed on the person as a professional through assertiveness training, leadership skills and a more consistent use of the reflective process throughout the three years of the nurse education programme. There is a need to move away from knowledge diffusion within clinical practice and elevate clinical decision-making as a fully developed key skill at the end of the three-year programme.

In isolation many of these points are not ground breaking but combined they build a picture of an essential skill that is neglected and implicitly addressed theoretically and not directly focused clinically. The researcher is aware that this ethnographic study is an insight into the world of no more than ten participants

and cannot be generalised to the wider population. Yet the dilution of decision-making from the curriculum, the inability to act in isolation whilst under pressure demonstrated through the simulation and a first hand account that would suggest that maybe as educators we have overlooked the decision-making process. It could be proposed that, even without additional research, focused attention devoted to this essential skill can only be beneficial.

Conclusion

The frustration of research is evident in the early stages of this dissertation, as the researcher faced disillusionment seeking ethical approval resulting in an evolution of the original proposal into the current ethnographic study. The overall elation of completing a research project outweighs the setbacks and the irritations along the way as themes and patterns emerge from the data and the researcher becomes immersed (Bryman, 2008). The ability to observe and scrutinise the world of the student nurse, whilst considering the stressors of working, interacting and decision-making in the clinical environment has been a privilege and has opened my eyes to the naive way we address this core nursing skill. Having moved from its anthropological roots ethnography has offered the researcher the philosophical underpinning and trappings of research to explore topics close to the heart of society (Holloway, 2010), or in this case the nursing profession, and illuminate this under researched subject (Hoey, 2012). The curriculum as it stands produce quality registered nurses who, on the whole, thrive in the clinical environment and progress to become a credit to the University, profession and society. Having listened and critically analysed the thoughts and feeling of participants it is clear that much more could be done to ensure the maturation of decision-making is a central constituent of the nursing curriculum (Baxter & Boblin, 2008). There is a need to ensure that as nurse educators we formulate a curriculum that is 'fit for purpose' to ensure that student nurses are skilled decision-makers confident in their ability, intellect and competent in their clinical skills and knowledge base (Etheridge, 2007). Although I would not suggest that the student nurse should be a decision-making machine, I do feel educators have over looked this concept when it comes to more effectively utilising the first year placements of the nurse education programme. The feelings of inadequacy and being out of 'comfort zone' means that the principles and essence of being a nurse, a topic devoted time during the first ten week theoretical block, is lost in the myriad of little events that demand the attention of the student nurse. In our haste to teach the research process, physiology, procedures and evidence based practice we have inadvertently failed to explicitly address a frequently performed and essential nursing skill. The role

of the ethnographer is to present the student's story, to shed light on a topic area that has been neglected (Barton, 2008), yet is core to every individual undertaking nurse education. Following members of a cohort of child health students through the three years of their training has been insightful. This project has given the researcher an appreciation of the way qualitative research can promote an understanding of what the student goes through on a day-to-day basis not from an outsider looking in but a real and lived perspective (Bloomer et al. 2012). The narrative of decision-making maturation analysed utilising an ethnographic perspective has brought to life an area of nurse education that is so key to practice but the data suggests is under-represented in timetabled content.

To become a decision-maker is more than just exposure to the clinical area (Arries, 2006). The data shows a complex blend of clinical experience, mentor support, the building of knowledge and crucially confidence to use this knowledge and experience through a process of reflection to gain clinical competence. The literature attempts to explain and define the phenomenon by reducing the decision-making process into individual elements or by looking at the quality of the decision made and how the individual arrives at that outcome (Clack, 2009). In general, the nursing literature focuses more on the experienced or advanced practitioner (Taylor, 2000) and is based on theories that have a track record in psychology and education where a step-by-step process minimises the complexity in sequential or non-sequential patterns (Yukalov & Sornette, 2011). It is difficult to judge whether participants would act any differently if they had been taught decision-making at the start of the nurse education programme. The curriculum as it stands provides the elements or components to make a decision and the reflective tools to review and evaluate that decision but what the timetable does not give is sufficient gravitas to the decision-making process. The participants are presented with no more than pieces of the decision-making jigsaw implicitly presented and there is little to no cohesive way to pull those pieces together except through exposure in the clinical environment. Decisions made in the first half of the course, are seen as unimportant and lacking any credibility by participants. A number of participants go so far as to suggest that they make no decisions at all in the early

stages of the course. One participants sums this up beautifully when asked to précis the development and maturation of the decision-making process over the three years of the nurse education programme

Yeah and it would help if you could see the picture [laugh]. In the first year of your training you can't see the picture, in the second year you can see some of the picture for the jigsaw and in the third year you can see all of the picture and you are responsible for putting all of the pieces together and so in the first year I couldn't see the picture but in the third year I can see the picture now I can make decisions [laugh]. Part 3.2 2233

A jigsaw with a picture that gradually emerges as the student progresses through the course presents a troubling image. It is easy to see why there is a section of the literature that would suggest that in some cases the maturation of the clinical decision-making process is no different than deciding every day events (Thompson et al. 2004) such as choosing to purchase a brand of baked beans from a supermarket. An unique form of decision-making is required to complement the variable, time-limited environments participants find themselves in (Hendry & Walker, 2004). There are several areas that need further investigation to understand if this is an issue that affects nurse education as a whole or is unique to this cohort and the curriculum they have studied. One of the difficulties of an ethnographic study is the issue of replication, by its very nature an ethnographic account is a snapshot and a moment in time that can never be captured or recreated (Hammersley & Atkinson, 2007). The longitudinal nature of the study and the stability of the sample goes some way in providing a consistent account but like most qualitative research (Standing, 2007), it is still the participant's perspective based upon the challenges they encountered at the time of the study and there needs to be a re-examination of current provision in light of the new knowledge and provision attained from this study and the wider body of knowledge. There is a need to understand the way decision-making is influenced by the first few months of training and whether there is a learning strategy that could enhance this period ensuring decision-making is a fundamental part of the student psyche from the first placement

rather than a concept that becomes more prominent towards the end of the first and beginning of the second year. The concept of trust between student and mentor is a factor that can either foster decision-making traits or hold back the decision-making process. Re-examining the importance of the competency process and whether is it truly 'fit for purpose' from a decision-making perspective. Is the competency process the right way to develop the decision-making process and have mentors the skillset to judge and assess the decision-making capacity of the student based on the statements contained in the competency documentation? Despite the importance placed on the competency documentation by the NMC and in the University it is clear, from participant response, that it is no more than a tick box exercise in the first year. The magnitude of the first year placements and, from the participant's perspective, the lack of preparation for these placements means that even though decisions are being made they are not foremost in the minds of the participant. Instead, surviving the early stages of the placement, mastery of the ward routine and gaining basic nursing skills outweighs the subtle complexities of the decision-making process. This raises the question of whether there is a better way of assessing the maturation of the decision-maker through the three years of the programme.

Looking back at the last four years of this project it is hard not to reflect on the research process and whether things could be changed. With hindsight a mixed design could have been used as this study looks at the factors that assist decision-making maturation from the participant's perspective but does not truly explore the decision-making process. As with many ethnographic studies, the original aim was to explore this process but it was obvious that the participant saw the maturation of a decision as a very personal event with highs and lows that are explicitly linked with all aspects of becoming a nurse. The unpicking of the key elements of a decision in isolation would need a method change to allow this aim to be fully met. It would have been useful to capture the participants understanding of the term 'decision' and place this in context. This could have easily have been performed using a more quantitative approach or possibly a Delphi study to formulate a student generated definition of decision-

making at the end of each year and explore how this changes over the course of the three years of the nurse education programme. At times, the researcher felt that ethnography would describe events but not critically get to the bottom of the problem. Having completed the study this couldn't be further from the truth. The researcher is now more aware than ever of the frustrations encountered by child health student nurses and the inadequacies of the nurse education system related to the decision-making process. There is no doubt that further study is required to ensure this has wider applicability and is not a one off cohort event. Qualitative research sometimes solicits more questions than answers and this study is no different (Cassell & Symon, 2004). Despite this, the need to redesign the curricula to ensure that the process of making a decision is seen in the same light as reflection, evidence based practice for example is, in the researcher's viewpoint, compelling.

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Appendix

Consent Form

Title of Project: The development of clinical reasoning in child health student nurses.

Name of Researcher: Mark Broom

Please read all the instructions carefully

	Please initial box
I confirm that I have read and understood the information sheet for the above study.	
I have had the opportunity to consider the information, ask questions and have these questions answered satisfactorily. I also understand that information collected during this research will be anonymous and stored in compliance with the current Data Protection Act	
I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason, without my professional or legal rights being affected.	
I agree to take part in the above study.	

Please print your name, write the date and sign the form in the spaces provided below

Name (Please Print)	Date	Signature
Researcher (Please Print)	Date	Signature

Information Sheet for Child Health Student Nurses

You are invited to participate in a research study being carried out by the University of Glamorgan.

This study is entitled

“The development of clinical reasoning in child health student nurses.”

Research Team: Mark Broom

If you require additional information or you would like to discuss any issue that stems from this research study feel free to contact:

Mark Broom
Room 566,
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Please feel free to use the contact details above to request a summary of the main finding or a full report.

Dear Colleague

You are invited to participate in a research project entitled “The development of clinical reasoning in child health student nurses.”

Before undertaking this study I would like to clarify some issues and give you an outline of the main areas of the study, the time scale, an indication of your rights and what to expect if you agree to participate. Please take time to read this information so that you can make an informed decision to participate in this study. If you require any additional details about the research project then do not hesitate to contact me on the telephone &/or email address given at the beginning of this document. If you would like to explore issues that may cause you concern but you would prefer not to talk directly to the researcher then please contact Elaine Mahoney (01443483129). Elaine is a Senior Lecturer at the University of Glamorgan and is not a research team member but is more than willing to talk to you confidentially about any aspect of this project that may concern you.

What is the purpose of the study?

The definition and evaluation of clinical reasoning, or the way a nurse makes a clinical decision, is reasonably well researched but there appears to be little understanding on how this develops in the student nurse. To meet the aims of this research, this project has been based on pre-defined simulated clinical scenarios that gives the study a clear boundary to work within and presents to you a variety of differing problems that they are likely to encounter in day to day practice. In the researcher’s opinion this area of study will provide new knowledge and insight into the development of clinical reasoning. The emerging theory that will result from this study will provide a greater understanding of the developing thought processes of student nurses and the criteria you use to formulate nursing care. This research will add to the developing literature on clinical reasoning and will assist educators’ to development curricula that is responsive to your academic and clinical need.

Why have I been chosen?

You have been chosen because you are a child health student nurse. This research project is open to all of your peers and you will encounter the clinical scenarios whether you are involved in the research project or not as they are part of the child health curriculum.

Do I have to take part?

The choice is entirely up to you; this information sheet is the start of the process and informs you of the research and how it affects you. Your participation is entirely voluntary and your consent will be sought at every stage of this project. You have been given this information sheet one week before data collection; this will be a “cool-off time” giving you a chance to discuss any issues with friends, colleagues or family.

What will happen to me if I take part?

Audio taped individual interviews will be used in combination with a period of observation to collect data for this study. The observation phase involves the researcher monitoring and recording your action whilst you undertake clinical simulation as part of your educational programme. You may be interviewed more than once but these sessions should last no longer that 45 - 60 minutes and will be organised to minimise the effects of this research project on your academic and personal life. The researcher is very mindful of the effects this may have on you and will ensure that you are not overly burdened.

What happens when the study stops?

The study is complete when no new themes can be found in the collected data. At this stage of the study it is difficult to give a definitive end point except to say that it may take up to three years to

complete the data collection although your involvement will be a fraction of this time. The researcher will supply (if you wish) a summary of the main findings and recommendations arising from the data analysis at the end of the study. A copy of the full report will be made available to any member of the cohort on request by contacting the researcher on the address given at the beginning of this information leaflet.

What about data protection and confidentiality?

There will be no method available to identify you, once the information has been transcribed, so once the information is scanned into a database all safe guards will apply as laid down in the Data Protection Act (1998). The researcher is interested in exploring trends and patterns in the data so the researcher will assign you a code, which will be used during the transcription process and thereafter. The list containing names and assigned codes will be kept in a secure filing cabinet and available only to the researcher. Once your involvement in the study is complete your name will be removed from the list making the process completely anonymous.

Be assured that once received only the researcher will have access to the collected data that will be stored on a secure, password protected University computer server. After analysis only the trend and broad issues raised by the study will be used. These may be discussed with three academics who will act as a supervisory team for this piece of research. During this process this supervisory team will not have access to names as all transcriptions will be fully anonomised.

Who is organising and funding the research?

The researcher is currently enrolled and registered on a MPhil/PhD. The University of Glamorgan is funding and supporting the study. No external funding has been sought.

Who has reviewed the study?

A panel of child health experts has reviewed this study. The researcher has also sought and gained ethical consent for this study from the Faculty of Health, Sport and Science Ethics Committee at the University of Glamorgan.

What happens to the results of the research study?

The findings from this research study will be disseminated to participants and to a wider audience through publication and possibly presentation at conferences. This study also will be submitted to meet the assessment criteria for a MPhil/PhD. Be reassured that it will be the main findings that will be discussed not individual responses as such there will be no specific link to any individual who has participated in this study.

Thank you for taking the time to read this information sheet, if you are happy to be part of this research project Mark (the researcher) will ask you to sign a consent form just before data collection.

Observation Schedule

Contained below is an observation schedule outlining what is to be observed and is based upon LeCompte and Preissle's (1997) criteria for non-participant observation. The observation process for each participant will amount to no more that 45 – 60 minutes.

LeCompte & Preissle's guidance	Likely questions relevant to the study
Who	• Who and how many people are present in the setting or taking part in the activity? • Who are the key figures during the simulation • Who influences the care delivered within this environment
What	• What are the nurses' characteristics and roles? • What is happening in the setting? • What are the nursing actions and rules of behaviour? • What are the variations in behaviour observed? • What factors influences any changes in behaviour?
Where	• Where do the interactions take place? • Where are people located in physical space?
When	• When do interactions occur and at what time? • When do nurses seek advice and from who
Why	• Why do nurses act in the same way when providing care or differ?

LeCompte, M.D. Preissle, J. (1997) Ethnography and Qualitative Design in Educational Research. 2nd Edition. Academic Press. Chicago

Interview Schedule for Phase 0

Ten members of the cohort will be chosen for an initial interview. These will be selected to give as broad a biographical picture as possible. The purpose of this first phase of interviewing is to explore how these newly enrolled students make decisions unhindered by their exposure to clinical practice and simulation. These student nurses are into their first three weeks of their course and have not, at this stage, been fully exposed to clinical decision-making through simulation or by clinical allocation. The data gathered will serve as a foundation to develop schedules for subsequent phases of non participant observation and interviews to capture whether students change or adapt their decision making strategies during their three years of training and how this is influenced by exposure to additional knowledge and clinical experience. It is envisaged that this interview will last no longer than 45 minutes using a semi-structured format. The information will be digitally recorded and fully transcribed.

The following questions will be used to loosely structure the interview process. Analysis of this data will allow the researcher to formulate an interview schedule so that note taking and observation is geared towards factors that influence a decision rather than a descriptive account of the simulated clinical experience.

Some or all of these questions may be asked depending on the student's response and ability to articulate their current decision-making strategies

- How do you normally make decisions?
- How did you decide to become a nurse?
- How did you decide to become a child health nurse?
- Have you a variety of decision-making strategies?
- Think back to a time when you made a good decision
- Can you identify any factors that made this decision easy to make?
- Think back to a time when you made a bad decision
- Can you identify any factors that may have contributed to that poor decision?

Interview Schedule for Phase 1 Questioning

This interview schedule is derived from the analysis of phase 0 interviews. It is clear from this analysis that several key categories have emerged and these will form the basis of questioning for phase 1. Each category will be explored individually and this section will end with a series of questions that will form the general structure of the interviews to be held during October and the early part of November 2011.

Category	Code	Criteria
Previous/Past Experience	PE	• Comparison with past decisions • Education and it use in the decision making process
Peer Influence	PI	• Decision comparison with peers • Perceived peer pressure and possible peer competition • Peer approval • Role modelling
Use of Information	INF	• Application of knowledge • Ability to seek and source information
Personal Characteristics	PC	• Ability to reflect on decisions made • Respondents ability to give rationale for the decisions made • Self awareness – knowing own limitations • Beliefs or moral position on decisions making strategy
Organisation/ Process	OP	• Conceptualisation of the decision making process • Ability to differentiate between planned and spontaneous decision making • Respondents ability to effectively organise self to make a decision
Outcome	OUT	• The ability of the respondent to identify a clearly defined endpoint • The role advocacy has on the decision making strategy • Accountability and the decision making process
Environment	ENV	• The effect on the environment on the decision making process

These categories and criteria are grounded in the respondent's answers to the posed question. The data was analysed using NVivo and by manual analysis and the categories forged after many reviews of the data. The following interview schedule is presented so that the themes link seamlessly rather than moving from one category to the next. A code will be used to help the reader identify how the questions link to any specific category.

Phase 1 Interview Schedule

- How did you find your first placement?
- You must have found yourself in a number of new situations, how did you manage this?
- Did you feel the first six-week theory block prepared you for the decisions you had to make during your first placement?
- Did you find you became more confident making decisions as you progressed through your first year?
- Who would you turn to if you were unsure about the effectiveness of any decision you made during the first year?
- Did you feel that you were influenced by your peers whilst planning care or making decisions?
- Did you ever find yourself lacking sufficient knowledge to make an effective decision?
- Who did you turn to for help so that you could make an informed decision about the care required?
- Did you feel that the theory in the first year helped you make decision in the clinical environment
- How easy was it to apply the information gained in University during your first year?
- Do you think the skills sessions in university helped you make decisions about care during the first year placement?
- Have you found it easy to learn from the clinical experiences you have had to date?
- Have you seen a change in the way you have approached decision-making during the first year?
- Have you ever felt 'out of your depth' whilst making a decision?
- When you first start a shift there are numerous factors that need to be taken into account. How do you organise the first few hours of your shift and what factors influence your decisions?
- The unpredictable nature of nursing requires that you often find yourself in a situation where need to make a spontaneous decision. How do you deal with these unplanned events and what factors influence the effectiveness of any decisions made?
- Becoming a competent nurse is the aim of nurse education, what factors determine whether you feel confident and competent whilst delivering care?
- How do you know that decisions you have made during a shift have been good decisions or alternatively poor ones?
- How important has the clinical environment been in your ability to be an effective decision maker?

Phase 2 Interview Schedule

The following questions have been assembled following transcription and analysis of the Phase 1 interview data. For consistency throughout the years some question will carry over from the last interview session otherwise the interviews will explore in greater depth the development of the decision-making strategies employed by second year student nurses.

- What have been the main differences between the first and second year?
- Do you feel you are confident in the ward environment?
- Do you feel that you are becoming a more confident decision-maker?
- Do you feel you are an autonomous practitioner and are you able/confident to practice alone?
- Whilst making decisions what factors do you take into account:
    - Boundaries
    - Trust
    - Collaboration
    - Mentors opinion
    - Ward practice v's evidence based practice
    - Initiative
- How important is a ward routine in your current practice?
- How do you go about planning your workload?
- How much influence does your student peers have on the decisions you make and the care you deliver?
- Has your understanding of the needs of your client changed over the last year and how?
- Do you feel you are responsible for the decisions you make?
- Do you feel that the decisions you make are influenced by ward practice/routine or your knowledge base?
- Do you feel the application of theory to practice is promoted in practice and are you becoming skilled in this professional skill?
- Do you feel that the way you have approached a decision/care has changed over the last year?
- Has your relationship with your mentor changed over the last year?
- Is the hierarchy of support the same in the second year as it was in the first?
- What do you feel has had the greatest influence on the way you practice in the ward environment?
- Are the skills learnt transferable or do you find yourself relearning skills?
- If you were to look back over the last year what would be the events that stand out the most and have influenced the way you make decisions and plan care?
- Reflection seemed to be an important part of the first year survival. Has this changed during the second year?
- How do you decide that you are competent?
- How do you view the competency process?
- Are there any key time/events that have occurred during the second year of your training?

These questions will be used as a guiding framework and will be reworded to assist a communicative interview style.

Phase 3 Interview Schedule

The following questions have been assembled following transcription and analysis of the Phase 3 interview data. For consistency throughout the years some question will carry over from the last interview session otherwise the interviews will explore in greater depth the development of the decision-making strategies employed by second year student nurses.

- What have been the main differences between the second and third year?
- Do you feel you are confident in the ward environment?
- Do you feel that you are becoming a more confident decision-maker?
- Do you feel you are an autonomous practitioner and are you able/confident to practice alone?
- Whilst making decisions what factors do you take into account:
    - Boundaries
    - Trust
    - Collaboration
    - Mentors opinion
    - Ward practice v's evidence based practice
    - Initiative
- How important is a ward routine in your current practice?
- How do you go about planning your workload?
- How much influence does your student peers have on the decisions you make and the care you deliver?
- Has your understanding of the needs of your client changed over the last year and how?
- Do you feel you are responsible for the decisions you make?
- Do you feel that the decisions you make are influenced by ward practice/routine or your knowledge base?
- Do you feel the application of theory to practice is promoted in practice and are you becoming skilled in this professional skill?
- Do you feel that the way you have approached a decision/care has changed over the last year?
- Has your relationship with your mentor changed over the last year?
- Is the hierarchy of support the same in the third year as it was in the second?
- What do you feel has had the greatest influence on the way you practice in the ward environment?
- Are the skills learnt transferable or do you find yourself relearning skills?
- If you were to look back over the last year what would be the events that stand out the most and have influenced the way you make decisions and plan care?
- Reflection seemed to be an important part of a student nurses' survival kit. Has this changed during the third year?
- How do you decide that you are competent?
- How do you view the competency process?
- Are there any key times/events that have occurred during the third year of your training?
- Are you ready for qualification and how has consolidation helped this process?

These questions will be used as a guiding framework and will be reworded to assist a communicative interview style.