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An investigation of nurse education service models in acute care metropolitan hospitals across Australia

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Chapter 2: Literature Review

An investment in knowledge pays the best interest

-Benjamin Franklin-

2.1 Introduction

Ongoing education and training for nursing staff is essential to support the delivery of quality patient care. The delivery of continuing education is an important role of the nurse education service. The presence of an education and training service for nursing staff within hospitals has been demonstrated to be essential to support the development of nursing knowledge and skills, improve performance and influence clinical practice (Covell, 2009; Czurylo, Gattuso, Epsom, & Stark, 1999; Waddell, 1992).

A variety of nurse education service models are used within acute care metropolitan hospitals around Australia but to date little research has been conducted to investigate the efficacy of these different models. This study assists in addressing this gap by identifying the nurse education service models being used across Australia, investigating the different models and making recommendations to ensure the sustainability of nurse education services within healthcare organisations into the future.

In January 2013 and January 2015, a systematic literature search was performed using CINAHL, Medline and Google Scholar Databases to identify literature published in English. This literature included staff development and nurse/nursing education, structures, organisational design and models. Google searches were also carried out under the topics of centralised and decentralised organisational and management models. It is usual to do a search for the previous ten years plus any seminal works but as this topic had limited contemporary publications the search included publications of any date. Documents were included if they discussed staff development or nursing

education departments within healthcare facilities and were a discussion or research paper. Articles found in the Google search that addressed the general concepts of centralised and decentralised organisational models were also used.

The first section of this chapter describes continuing education and outlines the importance of continuing education for nurses. The chapter then discusses nurse education services and the factors that influence the functioning of nurse education services within healthcare organisations. It concludes by focussing in detail on the different nurse education service models outlined in the literature.

2.2 Continuing Education

‘Continuing education’ is a term that gained popularity in the late 1960s (Houle, 1984). It was developed to describe a systematic approach to maintaining knowledge and competence. Continuing education is education and training provided for adults after they have left the formal education system, consisting mainly of short or part-time courses. This education is designed to give an individual further knowledge and skills to support them in undertaking their line of work (Gallagher, 2007). These programs often cover aspects of the employee’s job, such as new advancements in the workplace, and are used to develop an individual within a given field. Continuing education can also be used to develop staff in the more corporate areas, such as management and leadership training. Continuing education may be optional for some, but others may be required to undertake continuing education to maintain certification or their licence (Munro, 2008).

Nurse continuing education refers to a variety of formal and informal education and training activities that aim to improve nurses’ knowledge and skills, with the ultimate goal of improving the delivery of patient care (Quinn, 2001). Continuing education is a component of lifelong learning and consists of planned educational activities that build upon the educational and experience base of the professional nurse for the enhancement of practice, education, administration, research or theory development (American Nurses’ Association, 1984).

These planned learning activities are delivered to nurses after completion of their pre-registration nursing education program. Continuing education is necessary to allow nurses to maintain currency with the scientific and technological advances that are constantly changing the nature of nursing practice; it is now accepted practice in all healthcare facilities (Griscti & Jacono, 2006). The concept of continuing education in nursing is not new and has been mentioned in the literature since the beginning of the nursing profession, with Florence Nightingale encouraging nurses to continue to learn throughout their nursing careers (Gallagher, 2007).

Nurses undertake continuing education for a variety of reasons. It allows them to maintain, improve and broaden their clinical knowledge, expertise and competence. It also supports the development of the personal and professional qualities they will require throughout their professional lives (Nursing and Midwifery Board of Australia, 2010). The presence of education and training for nursing staff within hospitals has been demonstrated to be essential to the development of nurses' knowledge and skills and to support nurses in their delivery of quality patient care (Covell, 2009; Czurylo et al., 1999; Okougha, 2013; Waddell, 1992). For nurses, engagement with continuing education activities is influenced by a number of factors, including the need to develop professionally, the need to acquire a new technical or clinical skill, the financial cost incurred, the academic level of accreditation, and the potential for recognition or reward through career development (Munro, 2008).

The importance of continuing education has been highlighted recently in Australia, with the implementation of the National Safety and Quality Health Service Standards (NSQHSS). In recent years, the need to ensure the safety and quality of patient care has prompted the government to implement the NSQHSS across the Australian health system. These standards outline a number of requirements for organisations across 10 clinical areas of practice, including ongoing education and training for clinical staff (Australian Commission on Safety and Quality in Healthcare [ACSQHC], 2012).

The requirement for continuing education is also embedded within nurses' professional competency standards and performance appraisal processes. The Nursing and Midwifery Board of Australia has developed the National Continuing Professional

Development Registration Standard and the Registered and Enrolled Nurse Competency Standards to assist nurses in systematically evaluating their practice to identify learning and development needs and to demonstrate their continued competence to practice. The board sets standards for participation in continuing professional development and performance evaluation (Nursing and Midwifery Board of Australia, 2006, 2010, 2016).

Challenges to organisations successfully delivering continuing education include barriers that inhibit staff from being able to undertake the programs and lack of changes that occur as a result (Gallagher, 2007). Factors that inhibit staff from undertaking continuing education may include the availability of sufficient opportunities, the cost, lack of awareness, staff shortages, family commitments and lack of encouragement from managers. It is also important that continuing education is seen as effective and can demonstrate outcomes such as changes in behaviour, attitudes or improved patient care (Gallagher, 2007).

It has been proven that continuing education can increase nurses' knowledge and skill levels, change behaviours and attitudes, and have a positive effect on nursing practice (Covell, 2009; Czurylo et al., 1999; Waddell, 1992). For nursing professionals, continuing education is essential to maintain competence in practice and deliver effective nursing care. Studies have reported improvement in patient outcomes following nurse participation in continuing education, such as symptom management and the prevention and reduction in adverse events (Barriball & While, 1996; Cervero, 1985; Salahuddin et al., 2004). An examination of these studies indicates that reported improvements in patient outcomes can be achieved following nurse participation in continuing education if the program facilitates change of professional practice and uses ongoing learning activities over an extended period to sustain the changes (Barriball & While, 1996; Cervero, 1985; Salahuddin et al., 2004).

In 2014, Lee, Kim and Kim undertook a nursing study within hospitals to investigate the relationship between nurses' knowledge and outcomes in nursing performance. This study involved a survey of 192 registered nurses in three large healthcare organisations across South Korea who had at least one year of nursing experience. The

survey asked questions about demographic characteristics, implementation of core knowledge, management factors and outcomes of nursing performance. Outcomes of nursing performance examined included performance competency, performance attitude, willingness to improve performance and application of nursing process. The findings of this study identified a knowledge-sharing culture and organisational learning as core factors improving the outcomes of nursing performance. The study concluded by highlighting the importance of nurse educational systems and programs to encourage nurses' professional improvement.

As well as providing personal and professional outcomes for nurses, continuing education can have organisational outcomes. Several studies have highlighted that access to and support for educational opportunities can be major factors influencing nurses' job satisfaction (Bjørk, Tørstad, Hansen, & Samdal, 2009; Kuokkanen, Leino-Kilpi & Katajisto, 2003; Wilson, Squires, Widger, Cranley & Tourangeau, 2008). Continuing education has also been highlighted as an important factor in motivating staff, encouraging social networking and assisting in the recruitment and retention of nursing staff (Covell, 2009).

2.2.1 The Importance of Continuing Education in Australia

The importance of continuing education as outlined above cannot be underestimated as Australia's nursing workforce is facing significant challenges. Such challenges are well documented and include an ageing population, increased demand for health services, increasing expectations for service delivery and the changing burden of disease (Health Workforce Australia, 2011).

It is predicted that in the next 50 years Australia will experience significant nursing workforce shortages (Health Workforce Australia, 2012). In 2013, Health Workforce Australia (HWA) undertook a review of health workforce programs to try and support the development of an increased number of practitioners to meet their forecast of critical nursing workforce shortages by 2025. Requirements identified were the need to enhance nursing workforce retention by offering nurses the opportunity to upskill and take on more senior and diverse roles. To assist with the retention of nurses in the

nursing profession and to support the large number of new nurses that will be needed, the provision of ongoing quality education and training is essential. This training must address the professional requirements for the job by developing nurses' knowledge and skills to support the delivery of quality patient care, while also supporting the development of management and leadership skills. This will allow for the promotion of nurses' personal and professional growth and support their progression into senior roles (Darbyshire, Downes, Collins & Dyer, 2005).

Global health trends such as the rise in chronic conditions, the growing threat of communicable diseases and the increasingly complex and varied healthcare environment mean that effective continuing education is vital to enable healthcare professionals to respond appropriately to the needs of contemporary health services (Clark, Draper & Rogers, 2015; WHO, 2013). Competency-based continuing education has been seen as a potential solution to predicted workforce shortages and has been championed as the way forward in health professional training (WHO, 2013). Outcome-focussed continuing education supports mobility into and across different nursing speciality positions within health and supports nurses in expanding their practice to function at the full scope of their role. These approaches will assist the system to respond in a timelier way to provide the workforce required to meet the expected changes in population health needs (Health Workforce Australia, 2013).

Hospital-based education services are vital in supporting the nursing workforce to meet future healthcare needs. A continuing education program is essential for the promotion and expansion of nursing knowledge, clinical wisdom and the transition from novice to expert practitioner (Darbyshire et al., 2005).

2.3 The Hospital-based Nurse Education Service

To support the need for continuing education, education departments and services have been established within healthcare facilities. These education departments have multifaceted roles, including the induction and orientation of new staff, competency

management and training to support practice, and continuing professional development (Narayanasamy & Narayanasamy, 2007).

As well as delivering continuing education to staff, the education department has an important role in the overall success of an organisation (Burke & Hellwig, 2011). Hospital education departments are able to align themselves with the strategic direction of the organisation, prioritise work processes and focus on what matters most to the organisation. The education department can play an essential role in creating a culture of learning within the organisation (Burke & Hellwig, 2011). A supportive learning environment within the organisation is important in supporting continuing education and ongoing development of staff to improve service delivery and patient care (Burke & Hellwig, 2011).

Some of these hospital education departments are established as one service that supports the diverse education needs of all of the different occupational groups within the hospital, including nurses'. Other hospital education services are divided into separate streams within the service that cater for a specific group of staff within the organisation, such as the nurse education service (Narayanasamy & Narayanasamy, 2007). As both of these approaches support the delivery of education for nurses within the hospital, the author has referred to both as nurse education services, even though the scope for one is bigger than just delivering education to nursing staff.

The hospital-based nurse education service is involved in the planning, design, implementation and evaluation of educational activities for nursing staff, including provision of educational services to meet regulatory and registration requirements (McAllister, Oprescu & Jones, 2014). The nurse education service delivers training to maintain and increase nurses' competence in their delivery of patient care and collaborates in the process of quality improvement and risk management by responding to the need for educational activities (Haggard, 2006a).

In times of rising demands on the healthcare system to deliver safe patient care within ever-increasing budgetary restrictions, the nurse education service needs to justify the importance of its place within the healthcare organisation (Menix, 2007). The literature

has identified a number of factors that can affect the functioning of the nurse education service within healthcare facilities. These have been presented as a conceptual model (see Figure 2.1) and are discussed in detail below.

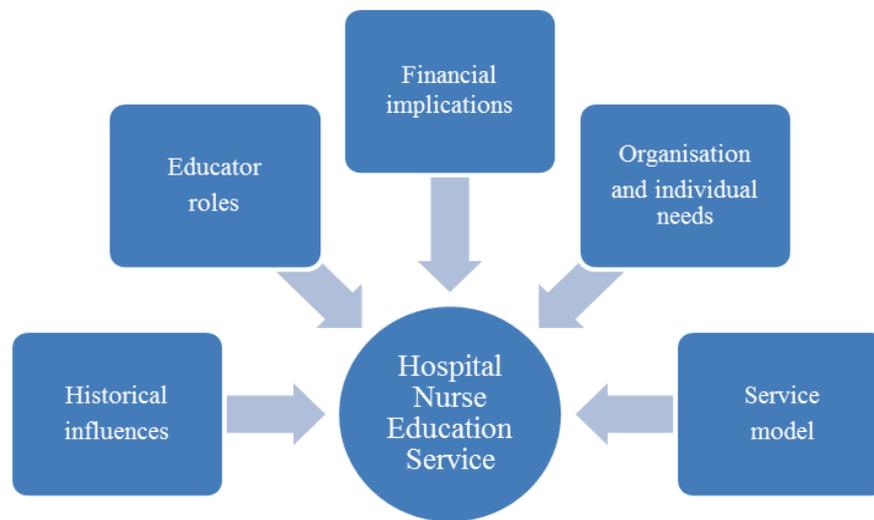


Figure 2.1. Conceptual Model of Factors Affecting Hospital Nurse Education Services

2.3.1 Factors Affecting Hospital Nurse Education Services

Many factors affect the functioning of nurse education services within healthcare facilities. These factors include historical influences, the nurse educator role, financial implications, the organisation and individual registration needs, and the service model in use (Haggard, 2006b). The principles of adult learning (Knowles, 1980) that outline the factors motivating adult learners were also considered when reviewing the literature, but as they do not affect the functioning of the nurse education service, they are not discussed. The factors affecting the functioning of nurse education services are examined in detail throughout the remainder of this chapter.

2.3.1.1 Historical Influences

The history of nurse education is intertwined with the history of nursing and nursing's quest for a professional identity (Allen & Allison, 2006). Education has been vital in providing the knowledge, skills and ability to deliver quality care to patients, elevating nursing to a profession and gaining the respect of other professions. The path to

nursing's identification as an independent profession has not been easy, as nursing, dominated by women, was initially bound to the Victorian ideal of women and to the hospital's needs for an inexpensive source of workers (Allen & Allison, 2006).

In 1860, Florence Nightingale established the first nurse training school at St Thomas' Hospital in London. The curriculum was largely based around the nursing practice of that time, including instruction on the need for hygiene and task competence. The first trained Nightingale nurses began work on 16 May 1865 at the Liverpool Workhouse Infirmary. Florence Nightingale wrote 'Notes on Nursing' in 1859, which was used to support the curriculum at the Nightingale School and other nursing schools at that time (Florence Nightingale Museum, n.d.).

In Australia, the system of training nurses based on the Nightingale system was imported from the UK in the late 1800s to early 1900s. It was a vocational training program that included a theory and clinical component during which trainee nurses would be provided with board and receive the minimum wage. In exchange, the students were expected to provide service to the hospital (Russell, 1990). Trainee nurses resided in the nurses' home during the training period, where they were under the control of the home sister, who herself was a trained nurse. This 'living-in' was seen as an essential component of the program (Smith, 1969). During the training, nurses were rotated through specific clinical areas within the hospital to gain experience under the direct supervision of a nurse in each area. This clinical area was the main learning environment, with trainee nurses learning by doing and by trial and error (Russell, 1990).

In this system, the educational needs of the trainee nurse were secondary to the service needs of the hospital. The limited theory given was delivered by doctors, matrons or other healthcare workers in classes that had to fit around the requirements of the hospital. There was no separate budget for the education of nurses, with all hospitals offering nursing training courses at this time (Russell, 1990). These hospital-based training courses consisted of a subject syllabus that focussed on medicine and surgery rather than on nursing. The teaching of nursing care was relegated to the sister tutors, who were often unqualified educators. Smith (1969) noted that early hospital-based

nursing schools were little more than protected environments in which young women carried the major burden of nursing patients and were often required to teach younger students as well. Mary Nutting, one of the early leaders for reforming nursing education, was credited as the first nurse to evaluate the educational status of nursing in 1906 (Reilly, 1990).

Continuing education was used to correct the deficiencies in hospital-based training and provide information on modern trends and nursing research by offering short courses that focussed on nursing (Piercey, 1991). The initial continuing education programs for nurses were sponsored by the alumni associations of schools of nursing. These programs and postgraduate courses provided by hospitals were an effective means of complementing and updating the nurse's professional education (Piercey, 1991).

Although short courses for nurses were sponsored by The Teachers College in New York City as early as 1899, most colleges and universities became involved in providing formal continuing education offerings in the 1920s (O'Connor, 1986). In W.A. as early as 1910, nurses became aware that they needed to stay current with medical advances, motivating them to organise doctors to deliver lectures to them at their monthly meetings (Piercey, 1991). By 1954, the W.A. branch of the College of Nursing Australia had developed a training program to keep nurses up to date with any new developments in nursing. In the late 1950s and early 1960s, hospitals in Perth began offering a small number of continuing education courses (Piercey, 1991).

The changing nature of healthcare delivery had a significant impact on undergraduate nurse training. To keep up with the changes occurring in healthcare, undergraduate training began to develop and change its focus to include health promotion, health maintenance and prevention of disease (Piercey, 1991). Australian undergraduate nurse education changed from the Nightingale system of on-the-job training to professional preparation in institutions of higher learning (Spillman, 2008). In the late 1970s, the Royal College of Nursing Australia was the first to offer a pre-registration nursing course that was a non-hospital based training program that eventually developed into the Diploma of Applied Science (Nursing). In 1975, W.A. followed by becoming one

of the first states in Australia to commence delivering nurse education at higher level training institutions (Piercey, 2002).

The transfer of nursing education into the university sector continued throughout the 1980s, and gradually hospital schools ceased operating. In the early 1990s, universities granted nursing qualifications at bachelor degree level, rather than at diploma level. The first baccalaureate nursing program developed was the Bachelor of Applied Science (Advanced Nursing), a post graduate degree that required registration as a registered nurse as a prerequisite to admission and completion of 16 units (Russell, 1990).

In 1987, the implementation across Australia of the new national career structure for nursing, which included the implementation of a nurse education stream, was a major contributing factor to the expansion of continuing education and set the scene for the nurse education practices occurring in healthcare facilities today (Piercey, 1991). This development necessitated the employment of nurse educators.

2.3.1.2 Nurse Educator Role

To support the provision of nurse education in hospitals, the nurse educator role was developed, even though there have been women appointed to teach nurses since the 1870s. The formal nurse educator role of ‘sister tutor’ was first introduced around 1918 (Brooks, 2007). Prior to this, an informal ‘home sister’ position was used in the Nightingale system to provide moral guidance for student nurses (Brooks, 2007). Throughout the history of nursing, nurse educators have played an important role in the professional development of nurses (Conway & Elwin, 2007).

A nurse educator is defined as a registered nurse who assesses, plans, implements and evaluates nursing education and professional development programs (Australian Nursing and Midwifery Federation, 2009). Nurse educators are a diverse group, consisting of those who work in a health service, as well as those who work in the Tertiary and Further Education (TAFE) and university settings (McAllister, Oprescu & Jones, 2014). The role of the hospital-based nurse educator is pivotal in supporting

both experienced and non-experienced nurses to undertake continuing education and apply formal learning to their clinical practice (Conway & Elwin, 2007).

The nurse educator's role is complex and includes the facilitation of an optimum learning environment to include both the development of nurses' clinical practice as well as their personal and professional development. The role consists of assessment of nurses' practice as well as evaluation of their own teaching role in relation to influencing patient care outcomes (Conway & Elwin, 2007). The role of the nurse educator is multifaceted and includes that of educator, facilitator, change agent, consultant, researcher and leader (Narayanasamy & Narayanasamy, 2007).

Internationally, as well as in Australia, there is a lack of a standardised approach to the nurse educator role title, description and scope of practice. The nurse educator working within the hospital especially has an unclear role that is poorly described in the literature (Sayers, DiGiacomo & Davidson, 2011). Role descriptions and boundaries have been found to vary between employing institutions and even between wards and units within the same organisation. There is also a lack of consistency of role responsibilities across a range of different categories of nurses who contribute to the continuing professional development of nursing staff (McAllister, Oprescu & Jones, 2014).

This lack of consistency is highlighted in a study undertaken by McCormack and Slater (2006) that evaluated the role of clinical education facilitators at a large teaching hospital in the UK. At all levels of the organisation, there was a consistent view that the role was needed to coordinate education and training across the site. The position was shown to have numerous tasks as part of the role, which differed across directorates. Core responsibilities centred on the identification, arrangement, monitoring, recording and evaluation of training days in the hospital; induction and mentorship of new staff; collaboration with outside institutions (e.g., universities) in the provision of training; and staff advocacy. However, although there were some commonalities across individual roles, there was little agreement about the core elements of the role or its effect on the learning culture of clinical settings (McCormack & Slater, 2006).

Role overload, a condition in which there is insufficient time to carry out all of one's expected role functions and role dumping in which functions that are not part of the role are given to the nurse educator have also been identified as factors that have added to the confusion of the nurse educator position in Australia (McAllister, Oprescu & Jones, 2014). Standards for the nurse educator role are critical in creating a vision for the role and articulating an expected level of performance. In nurse education arenas, standards have been developed to define the scope of nurse education practice and to advance the role of the nurse educator, although implementing these in a consistent manner has proven difficult (Rogan, Crooks & Durrant, 2008).

This is supported by findings of a recent study undertaken by Sayers et al, in 2015 examining the nurse educator role in Australian hospitals. This study identified that nurse educators can experience high job satisfaction levels, but that role ambiguity and role confusion continue to be issues and can adversely impact on the expectations, responsibilities and job satisfaction of nurse educators. The study concludes by indicating that role clarity, educator competencies and performance monitoring are important to the effectiveness of the nurse educator role (Sayers, et al. 2015).

The lack of clarity surrounding the nurse educator role has led to a shortage of nurse educators, with clinicians increasingly being appointed to or asked to assume positions as educators without sufficient preparation or training (McAllister, Oprescu & Jones, 2014). Novice nurse educators experience an identity struggle when they move from a clinical position into an educational role that is not clearly defined. They can feel a sense of loss when letting go of their clinical role and experience professional isolation as they begin to operate autonomously and independently of the clinical team.

Adding to nurse educators' sense of isolation is the fact that nurse educators in Australia are not required to be credentialed, making it difficult to guide their career progression and monitor standards and accountability (Sayers & DiGiacomo, 2010). There are also clear inconsistencies in nurse educators' access to and involvement in peer support and professional development opportunities (McAllister, Oprescu & Jones, 2014).

To assist in providing some clarity to the nurse educator role and to support the professional interests of nurse educators across Australia, the Australian Nurse Teachers' Society (ANTS) was established in 1975. The society represents clinicians, specialists and academics working within the field of nurse or nursing education. ANTS' aims are to promote and support nurse educators by the development of standards and policies around the field of nurse education and advocacy for nurse educators in political and professional arenas (ANTS, 2012).

In 2010, ANTS developed the Australian Nurse Teacher Professional Practice Standards, which describe the nurse educator's role and core competencies. These standards contain three domains, including teaching and learning, communication and professional practice. They also list a number of core components of the role, including the planning of quality learning experiences and programmes which support education and nursing practice, demonstrating effective communication and interpersonal skills at an advanced level and demonstrating advanced nursing knowledge and expertise in the context of teaching (ANTS, 2010).

It is of the utmost importance that nurses working within the clinical environment receive appropriate training and the support needed to prepare them to undertake a new role as a nurse educator. Nurse educators require ongoing support and development to foster their progression as a specialist educator and to ensure the growth of the speciality as a whole (Sayers & DiGiacomo, 2010). Nurse educators are instrumental in the preparation of the future nurse workforce, yet without sufficient training, support and leadership the nurse educator can be easily influenced by a number of competing factors (Carr, 2007). The pressure of the current economic climate, changing government policy and the over-emphasis on competency and skills training can force the nurse educator to become reactive, trying to meet constantly conflicting demands, rather than proactively planning comprehensive training with predetermined outcomes that align with organisational plans (McAllister, Oprescu & Jones, 2014).

This pressure on nurse educators from competing demands is supported by Carr (2007), who undertook a study at one London healthcare facility to examine changes within nurse education. Through interviews with nurse educators, it was identified that

nurse education was being affected by four key influences, including the government, health trusts, universities and the Nursing Council, each of which had contradictory visions of the nurse educator role and responsibilities. Among these competing pressures, the major driving force affecting nurse education was found to be government plans for the health services to achieve set performance targets (Carr, 2007).

Nurse educators hold positions of power and influence within healthcare organisations and can use this to influence decision makers. It is important that educators are knowledgeable about the organisation in which they work so they are aware of its values and goals and can tailor their activities to complement the achievement of these. To be successful, the nurse educator must establish effective links with individuals in all parts of the organisation. He or she needs to be politically astute and initiate relationships that will foster the hospital's goals (Puetz, 1987).

As healthcare resources become increasingly scarce, nurse educators will be expected to provide more cost-effective education to meet the organisation's mission and strategic goals (Tanner, 2002). This can only happen when educators collaborate with organisational leaders to identify actual educational needs in a proactive way. Rather than being reactive, educators must use a collaborative approach in forecasting these needs in a consistent and timely manner (Harton, 2007). This is best accomplished when the mission of the nurse education service is clear; the stakeholders are identified; and the tools and processes are in place to assess, plan, implement and evaluate educational offerings (Burk, 2008). One of the important healthcare resources that needs consideration is the financial implications of nurse education. The external and internal funding for education within an organisation is an important factor that can impact the hospital nurse education service.

2.3.1.3 Financial Implications

In today's cost conscious society, it is important to be able to identify and rationalise the true cost of the hospital nurse education service (Tanner, 2002). The ABF system is part of the National Health Reform Agreement, which moves the Commonwealth

Government to a more consistent approach to funding public hospital services based on their activity. This agreement ensures that health services are paid, for every patient they see, taking into account the complexity of the patient's healthcare needs (Health Workforce Australia, 2012). In 2009, the National Health and Hospitals Reform Commission recommended that the cost of clinical education be specifically funded for public hospitals. This was prompted by a concern that education and training may not be continued without specific funding (Council of Australian Governments, 2011).

The development of an ABF model for education and training in Australia is still in the planning phases, with work being undertaken to classify all of the elements of training, including scope, outputs and costs, to enable a model of funding to be launched. This capturing and costing of education as a separate activity in the future will have implications for organisations that may need to re-examine the structure, function and output of their education services (Council of Australian Governments, 2011).

When cost containment is on the agenda, the training budget is often the first casualty (Levett-Jones, 2005). By analysing continuing education and training costs, educators can make critical cost-benefit decisions about training delivery and tailor programming to meet the organisation's needs and budgets (Fisher, Hume & Emerick, 1998). Continuing professional development for healthcare professionals must be cost-effective to avoid a waste of resources. Financial studies examining the service must therefore be of sufficient quality and quantity to allow conclusions to be drawn about the benefits (Brown, Belfield and Field, 2002).

An important aspect in assessing the cost-effectiveness of the nurse education service involves evaluation of the outcomes of training. Resources must be allocated to the completion of thorough program evaluation to allow for the demonstration of outcomes (Harton, 2007). Effective planning with goal setting is a critical element of the educational program evaluation process (Menix, 2007). Without appropriate data and evaluation processes examining learning activities, it is difficult for administrators, educators and other stakeholders to subsequently determine the worth, effectiveness and success or failure of educational programs (Harton, 2007).

With diminishing resources and calls from organisations for greater accountability, educators are applying a variety of methods and processes to conduct program evaluation (Menix, 2007). As more organisations see staff education as an investment and not just an indirect cost of doing business, they expect educators to be able to show linkages between training, staff and organisational performance, and educational goals.

The direct financial return on investment in education and training programs can be determined by using either a cost-benefit ratio or return on investment calculation (Tanner, 2002). The cost-benefit ratio is determined by dividing the program benefits (expressed in dollars) by the program costs. It requires that all benefits be reduced to a monetary figure and is expressed as a ratio of total cost of training versus the return (De Silets, 2010). The return on investment is calculated by the monetary value of the benefits of the program minus the program costs. These are then divided by the program costs and multiplied by 100 to achieve a percentage. These are direct financial gains; however, indirect returns may also be achieved.

Indirect financial returns on investment also need to be considered when analysing the benefits of training programs. This might include a reduction in staff turnover within an organisation that invests in staff education, which will have a direct effect on education service costs as the need for orientation and clinical support decreases. The ability to retain staff by offering them a quality education and training service, which includes development in areas such as leadership and management skills, is crucial in controlling costs (Tanner, 2002). At present, literature evaluating the financial return on investment of continuing education is rare, making it difficult to draw any feasible conclusions regarding the cost-effectiveness of continuing education for nurses (Brown, Belfield & Field, 2002). Nurse educators operate today in an environment of fiscal and human resource accountability. Educators now need to prove that training programs contribute economically and support the organisation's well-being and competitive advantage (Blake, 2000).

2.3.1.4 Organisation and Individual Needs

Hospital nurse education services are also influenced by the needs and demands of the organisation in which they function. The organisation as a whole has a number of mandated requirements that have to be met by the nurse education service. These include training requirements for hospitals to achieve and maintain accreditation status and the registration requirements for the healthcare professionals employed by the organisation.

The NSQHSS were developed in 2012 by ACSQHC with the aim of protecting the public from harm and improving the quality of health service provision. The standards were introduced to provide a quality assurance mechanism to ensure the meeting of minimum standards of safety and quality, and the establishment of quality improvement mechanisms to allow health services to meet their goals (ACSQHC, 2012). These standards highlight the clinical workforce as essential to the delivery of safe and high-quality healthcare. They outline the importance of education and training focussed on improving practices around safety and quality for staff, and emphasise that all staff need to be adequately trained in the roles and services for which they are accountable (ACSQHC, 2012).

The hospital accreditation process is recognised as an important driver for safety and quality improvement. The NSQHSS are integral to the accreditation process, as they determine how and against what an organisation's performance will be assessed (ACSQHC, 2012). Each of the 10 clinical standards (see Appendix 1) have numerous education and training requirements, including staff mandatory skill training that the nurse education service needs to address for the organisation to meet the standard requirements and gain accreditation (Waddell, 2001).

Continuing nurse education is also a mandatory requirement of the national nursing regulatory body, the Nursing and Midwifery Board of Australia, which states that nurses must remain competent after registration and undertake continuing professional development of at least 20 hours each year, with a number of nurses being randomly selected to provide evidence of this continuing education (Nursing and Midwifery

Board of Australia, 2010). Employing organisations have a responsibility to offer continuing education activities for staff to ensure they are able to meet their obligations each year for re-registration, with nurse education services being integral in offering these training opportunities for nursing staff (Allen & Allison, 2006). Aside from all of the factors mentioned above, such as historical influences, educator role variations, the financial implications, and organisation and individual needs, the hospital nurse education service is impacted by the model adopted to deliver nurse education to nurses. This factor has been explored under a separate section below, as nurse education service models are the area of focus for this research study.

2.4 Nurse Education Service Models

Nurse education services can be organised in a number of ways. The primary objective of any nurse education service should be efficiency and effectiveness. The service needs to meet the needs of the organisation and have clear lines of communication allowing nurse educators to stay informed on organisational and clinical activity (Kelley, 1998). The literature suggests that the structure chosen may be dependent on the preference of the organisation's leadership team and the ability of the nurse education service to provide the services required (Haggard, 2006a).

To date, no studies have been conducted in Australia within the area of nurse education service models. Therefore, it is unclear what nurse education service models are being used or the frequency of their use. It is clear that further study using a robust methodology needs to be conducted within Australia in this area, with a view to adding to the existing body of knowledge and providing recommendations to support the delivery of a successful nurse education service. These recommendations will assist nurse education departments in hospitals who in the near future will be expected to clearly define their business and demonstrate the results of their service to justify their cost-effectiveness.

In W.A., there are currently a number of tertiary, general and specialist hospitals that are a mix of public and private organisations. All of these facilities have nurse

education departments that vary in size and function. In the 1960s, the hospital nurse education services all used a similar model, with the clinical nurse instructors reporting to a centralised principle tutor and the matron. However, as mentioned in Chapter 1, in the 1980s and 1990s, a number of events occurred that had a direct effect on the structure and function of these nurse education services. These events included moving to an area model of education service in which education was delivered across a number of different hospitals within a single health service and coordinated from one site; the introduction of the new national nursing staffing structure, which separated clinical, administration and teaching roles; and the reallocation of staff into new clinical divisions. The result of these events was that by the end of the 1990s the nurse education services within the hospitals in Perth had shifted to using a variety of different service models (Sue Davies, personal communication, 15 May 2013; Gavin Leslie, personal communication, 4 June 2013; Piercey, 2002; Spillman, 2008).

In reviewing the literature, three service models of nurse education became evident. These are the centralised, decentralised and combination models, discussed below. In reviewing the literature addressing the three different service models, more literature appears to have been published on the centralised model, requiring the section addressing that model to be slightly longer than those for the other models. In discussing the advantages and disadvantages of centralisation versus decentralisation within nurse education services, it is important to remember that centralisation and decentralisation are opposite points on a single continuum, with the advantages of one often being the disadvantages of the other. All of these models have advantages and disadvantages that can affect service delivery, quality of service and cost (Haggard, 2006a).

2.4.1 Centralised Model

In a centralised nurse education service model, there is an organisational-wide approach to staff training in which a central authority or department has the responsibility of meeting staff training requirements across the whole of the organisation. In a centralised model, all education staff, even those placed within the clinical areas, report centrally to the education department and coordinator. Figure 2.2

illustrates the structure of a centralised model, with the arrows representing the lines of governance from the coordinator of the service down (Cummings & McCaskey, 1992).

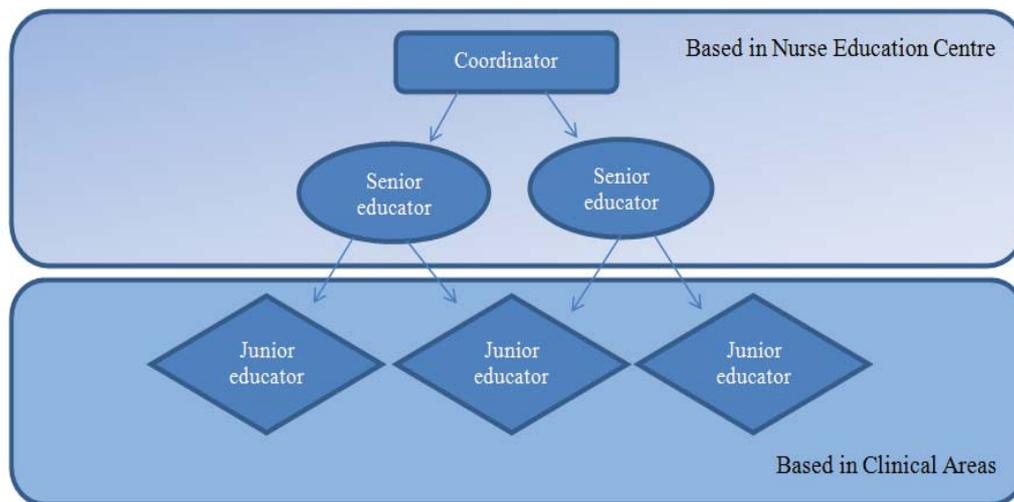


Figure 2.2. Centralised Nurse Education Model

There are many advantages of having a centralised service. A centralised nurse education service allows for the service to have a clear vision and mission. The service is able to plan and develop strategic and operational plans proactively to support the needs of the organisation (O'Connor, 1986). With the coordinator of the service being a member of the hospital executive and/or of high-level committees within the organisation, he or she is familiar with current pressures and future organisational plans and can steer the education service to support the organisation in achieving its goals (Haggard, 2006b).

Changes affecting the entire nursing workforce can be communicated quickly using the clear reporting lines of the centralised nurse education service, and the education and training delivered implemented in a consistent manner. The coordinator of the service is able to ensure it can respond to organisational demands and can monitor and control the pace of change implementation within the nursing workforce to ensure the quality and consistency of practice (O'Connor, 1986).

A centralised nurse education service is considered efficient, effective and economical (Swansburg, 1995). Being centralised allows the one service to have control over all aspects of the training program, including the content, quality and functions such as

staffing, managing the budget and evaluation. With all of the educators reporting to one coordinator, clear evaluation of outcomes and goal achievement for the service is possible, as the service evaluates its effectiveness and impact on the organisation (Menix, 2007).

This is supported by King (1978), who compared different hospital education program structures and uncovered the issues affecting their service delivery such as accountability, communication and cost containment. It was recommended that a centralised model of hospital staff education increased cost-efficiency and accountability due to its ability to pool expertise.

A centralised model also facilitates the holding of equipment and training resources centrally to increase cost-efficiency. The service may purchase common resources for use in departments across the organisation at a more cost-effective rate (Sheriff & Banks, 2001). For example, expensive equipment required for training such as resuscitation manikins and manual handling equipment can be purchased once and used throughout the different clinical areas. Organisation-wide contracts can also be negotiated for consultancy services, information technology and training, instead of each area doing this individually. Support services required, such as administration staff, can also undertake their duties, such as copying and printing, in one central location. Resources can be pooled to meet specific goals when required, as they are all owned by the one service (O'Connor, 1986).

As well as managing equipment, a centralised service supports the sharing of training materials and education staff when required. Organisational-wide educational needs can be met without duplication of effort. Educators from each area need not 'reinvent the wheel' when developing teaching materials such as PowerPoint presentations, as these are held by staff in the central department and shared as required (Sheriff & Banks, 2001). Training programs can be developed so that they can be used across several different areas within the organisation, reducing duplication. When necessary, educators can move between areas to fill vacancies or provide cover, as the training delivered is standardised across the service. A centralised model also allows for equity

across the organisation, as resources and staff can be distributed as required to meet changing needs (Phelps, 1990).

This view is supported by Smith and Rice (2014), who outlined the advantages of developing a centralised service to organise education across a region that included 16 healthcare facilities. The service coordinated a centralised orientation program, nursing leadership development courses, and speciality specific and continuing education programs for nurses. The benefits of this model were found to include the ability to share educational materials and resources across sites, as nurse educators could be deployed from one site to another to either respond to situations requiring urgent intervention or collaborate on a joint project (Smith & Rice, 2014).

A centralised nurse education department or service also facilitates support of education as a specialty within the organisation and provides a career pathway for nurses (Haggard, 2006a). Most nurses move into the education role as expert clinicians, but with little formal qualifications in education. It is important that when commencing in the educator role, nurses are given adequate education, training and support by the nurse education department so they can develop into effective educators (Donner, Levonian & Slutsky, 2005). In a centralised nurse education service, educators benefit from close collegial relationships with other educators with whom they can share and build their identity as education specialists, as well as from the leadership provided by the coordinator of the service (Gilbert & Womack, 2012).

The centralised service model also allows the nurse education service to have a corporate presence within the organisation (Ferris, 1988). The centralised service can nominate educators to represent the service on committees and attend meetings so they are engaged at every level of the organisation and are kept up to date with any new developments (Sheriff & Banks, 2001). This presence and engagement allows the staff within the education service to see the bigger picture and react to change in a timely manner. The corporate presence of the department also allows it to be seen as an advisory and resource service that is valuable to the organisation and individual managers (Horner, 1995).

A centralised nurse education model is well placed to address the number of credentialing, licensing and accreditation requirements of the organisation and the individual. A centralised service model with administrative and information technology support can develop systems to maintain records and monitor the competencies of staff. This can assist the organisation to achieve certification with specialist bodies such as the Royal College of Nursing, or to become a Registered Training Organisation, as governance is possible over education and training standards across the organisation. This governance is enforced through the development and implementation of policies and procedures supporting quality education and training (Brunt, 2002).

In one of the two studies that have been undertaken in examining the efficacy of nurse education service models, Sheriff and Banks in 2001 conducted a qualitative study evaluating their centralised education service model in an academic health sciences centre. This was a 1196-bed organisation in Southern Ontario, Canada, situated across four hospital sites. Focus groups were held with educators, clinical managers, senior managers and directors to obtain their feedback about the centralised model that was being used. A separate focus group was held for each cluster of participants, with the sessions being led by an experienced facilitator external to the education department.

The results from the focus groups demonstrated that the educators, clinical managers and directors all expressed the desire to maintain the current centralised model. Only the senior manager group felt that they were not in a position to make recommendations about any particular education model. The results highlighted that the centralised model should remain at the organisation, as it was overwhelmingly the preferred choice for educators and clinical managers (Sheriff & Banks, 2001).

The study also stated that it may have implications for other healthcare organisations considering the structure of their education departments. However, this study had many limitations, including that there was no mention of the number of staff who were approached or who participated in the study or how they were chosen. There is also no reference to the questions asked during the focus groups, and no mention of how data obtained from the focus groups were analysed to obtain the results identified. Finally,

this study may have been affected by the bias of the organisation, as staff involved may have only worked in this one model and have been unaware of other possibilities, substantially reducing the generalisability of the results (Sheriff & Banks, 2001).

2.4.2 Decentralised Model

A recent trend in healthcare has been to decentralise or flatten the organisational hierarchy. The net effect of this is to eliminate one or more layers of management and encourage decision making at lower levels. In practice, each clinical nursing area becomes responsible for its own nurse education program (Kelley, 1998).

In a decentralised nurse education service model, nurse educators work within individual clinical areas and are responsible for meeting the training needs of nurses within their areas. They report directly to the nurse unit managers (Cummings & McCaskey, 1992). In this model, individual nurse educators, in collaboration with the nurse unit managers, have autonomy and authority for education within their clinical areas and do not report to an education centre. This autonomy allows each clinical area to develop its own practice. Accountability for nurse education falls to the educator for that area and the nurse unit manager. The nurse unit manager directs the nurse educator and has governance over education (see Figure 2.3).

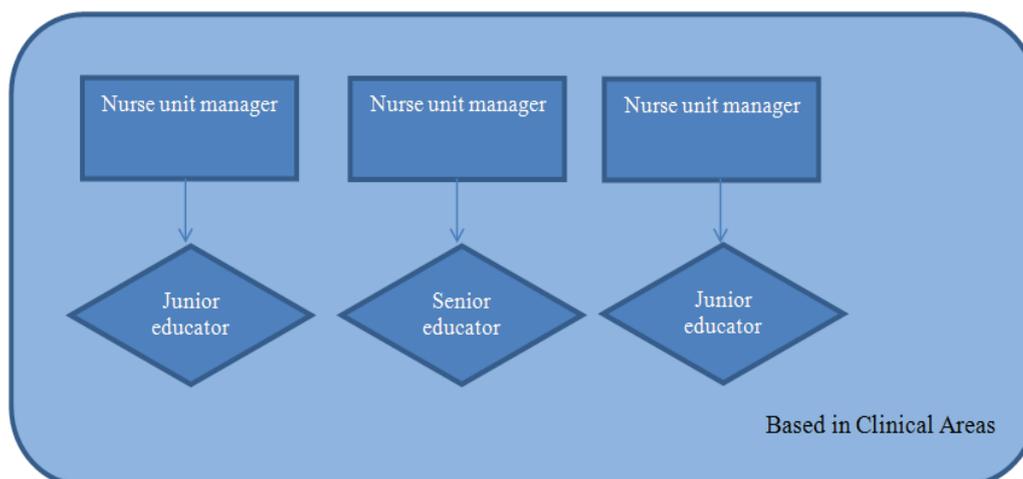


Figure 2.3. Decentralised Nurse Education Service Model

Studies have shown that this lower-level decision making in a decentralised nurse education service can increase productivity, improve morale and decrease absenteeism (Swansburg, 1995). In a decentralised model, nurse educators are more motivated and gain a greater satisfaction from their role, as they have the ability to more directly influence outcomes and the direction of the unit (Iqbal, 2010). This is supported by Zabochnik (2002), who identifies that in centralised management models, when staff are constrained and forced to work on projects dictated by others rather than on projects in which they are personally interested, the hidden cost of trying to motivate them and of their reduced efficiency must be considered.

Working side-by-side with the nursing staff in a decentralised model, the educator maintains a currency in practice that enhances his or her credibility with staff as a nurse who understands the day-to-day problems of practice (Horner, 1995). This connection with practice also enables the educator to retain his or her identity as a nurse. Involvement at the direct-care level permits the educator to both stimulate and introduce innovative approaches to nursing care delivery (O'Connor, 1986).

A decentralised service model gives the nurse educator a more immediate awareness of the educational needs at the local level and the flexibility to respond to them more rapidly, as they do not need to liaise with the education department or have a whole organisation approach, but can work solely with the nurse unit manager in their allocated area (Horner, 1995). This can reduce the time required for planning and the costs involved so that education can more effectively respond to identified needs. This is supported by Iqbal (2010), who states that one of the advantages of decentralisation is that the people closest to the issues are able to make more timely and appropriate decisions.

As well as enabling educators to be the decision makers at a local level, a decentralised service allows independent nurse educators within clinical areas to maintain their expertise in specific clinical specialities, rather than spending time delivering generic topics to the larger organisation (Haggard, 1984). As educators in a decentralised service are not involved in delivering organisational-wide programs, such as orientation, or required to cover areas other than their own unit, they can focus on, and

develop their knowledge and skills in, their one area of expertise. A decentralised nurse education service model is a less complex model and supports clearer role definition, as educators' responsibilities are narrowed to the educational needs of individual clinical areas (Swansburg, 1995).

Working within a decentralised nurse education service model with autonomy and independence from an education service has also been shown to empower educators to be more innovative and creative in their approach (Cummings & McCaskey, 1992). Educators are effectively responsible for the education given in their department and, without the accepted practices of an education service directing their work, can develop new approaches and ideas when addressing educational needs (Haggard, 2006b).

Siehoff (2003) describes an example of a hospital in the US successfully implementing a decentralised nurse education service model by the development of a staff educator registered nurse role. This role comprised registered nurses who provided registered nurse functions for 80% of their time, with two days allocated every fortnight to providing unit-specific education, in-service education and orientation. This position was responsible for coordinating all unit education activities to meet the educational needs of staff on the nursing unit. Although there were challenges, the implementation of this role was found to be successful and to enhance the effectiveness of learning within the clinical areas (Siehoff, 2003).

A study by Swisher, Woodard, Quillen and Monroe (2010) compared centralised and decentralised organisational models for interprofessional education for physical therapy and medical students. In comparing the strengths and weaknesses of the centralised and decentralised models, the authors found that the centralised model increased sustainability and stability and facilitated comprehensive evaluation, but that it was also more time consuming for planning and limited innovative learning experiences. The authors found that the decentralised model was easier to implement as it did not require system-wide changes, but that there were difficulties with consistency of delivery and seeing the whole picture when planning. They concluded that a centralised model requires organisational commitment but it holds the greatest

potential to sustain long-term change and support greater educational outcomes for educators and students.

2.4.3 Combination Model

The third nurse education service model outlined in the literature is the combination or hybrid model. In a combination nurse education service model, there is a centralised education department onsite that delivers programs across the whole of the organisation, such as orientation, and a decentralised component consisting of clinically placed nurse educators managed by nurse unit managers who work independently from the education service (see Figure 2.4). A combination service model allows for the use of the best aspects of the centralised and decentralised models (Cummings & McCaskey, 1992).

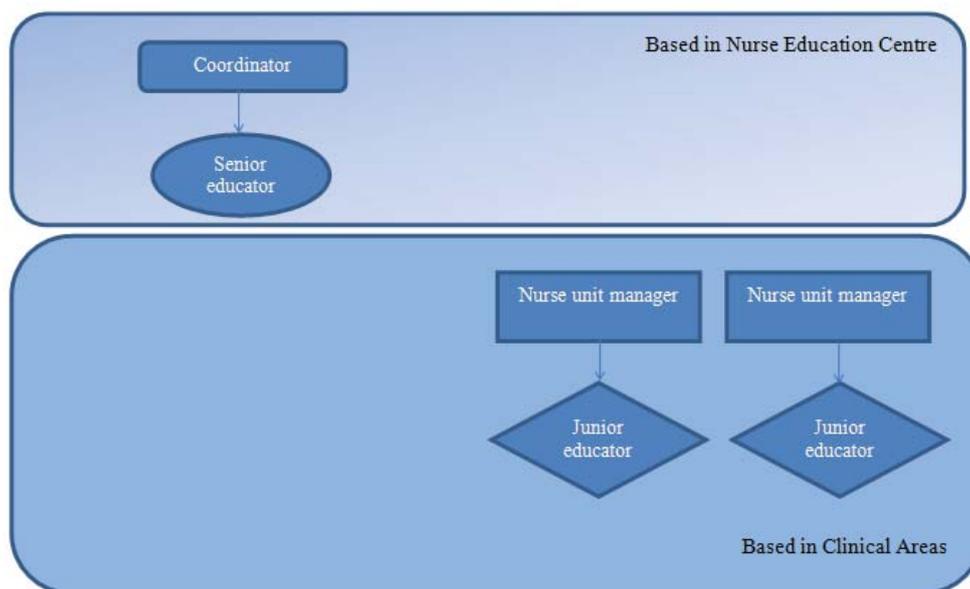


Figure 2.4. Combination Nurse Education Service Model

A combination service model can be advantageous as it is effective in meeting the many conflicting demands for nurse education. These include maintaining ongoing routine programs such as hospital orientation, while also being able to rapidly respond to emergent local unit needs (Gundlach, 1994). A combination model allows for the education service to meet organisational-wide training requirements and for some standardisation, but also supports increased flexibility to meet the needs of specialised

clinical areas. It gives the ward based nurse educators autonomy within their individual clinical areas while allowing for greater liaising and collegial support between educators (Swansburg, 1995).

As shown in Figure 2.4, in a combination nurse education service model, there is no connection between the two governance areas of the nurse education service and individual nurse educators situated in the clinical areas. This can raise a number of issues. Coordinators of the onsite nurse education service usually develop an informal relationship with the decentralised educators, to try to foster a coordinated approach to nurse education, maximise resource use and maintain standards to take advantage of the benefits of the combination model. However, as the coordinator lacks authority over these educators, who are accountable to the nurse unit managers, he or she may not always be successful in fostering a coordinated approach (O'Connor, 1986).

In 1992, Blocker undertook a study looking specifically at nurse education service models. This was the first of only two studies undertaken in this area, with the other being the Sheriff and Banks (2001) study discussed in Section 2.4.1. Blocker (1992) conducted a national survey to examine organisational models employed by staff development departments within similar healthcare facilities in the US. The organisational models were categorised as centralised, decentralised or combination. Staff development departments of non-governmental, not-for-profit and general medical-surgical hospitals containing 300 to 1000 beds were included, with the survey being sent to all hospitals meeting these criteria: a total of 117 hospitals across 30 states. Forty-eight responses were received (a 41% response rate). The responses showed that 11 (23%) staff development departments used a centralised organisational model, 11 (23%) used a decentralised model and 26 (54%) used a combination model.

The study posed questions relating to departmental organisation, instructor role, staff title, core responsibilities, percentages of work for the various departments, instructor educational preparation and demographic data to assist in categorising the model used and allow for comparison of the data between the different models. The results of this study were used to support the development and implementation of a combination staff development service model in the author's home institution, as this model was used by the majority (54%) of the respondents. The data indicated that a combination model

had a greater number of instructors with more varied educational preparation, supported larger hospitals and had more diverse core responsibilities (Blocker, 1992).

The article concluded that the data from this study were useful for staff development departments when deciding which organisational model to use and that the questions asked for this study could be used by others in the future to determine the most appropriate model for individual hospitals. The limitations of this study, however, were that the data were self-reported and that the effectiveness of the education and development departments were not examined. Further, the interpretation of the questions varied between sites, the validity and reliability of the survey were not calculated, and analysis was limited to simple descriptive statistics (Blocker, 1992).

Table 2.1 Summary of Key Research Findings

Study	Date	Country	Findings
Blocker	1992	United States	<p>Eleven (23%) staff development departments used a centralised organisational model, 11 (23%) used a decentralised model and 26 (54%) used a combination model.</p> <p>The combination model had a greater number of instructors with more varied educational preparation, supported larger hospitals and had more diverse core responsibilities.</p>
Sherriff & Banks	2001	Canada	<p>All of the educators, clinical managers and directors expressed the desire to maintain the current centralised model. The senior manager group felt that they were not in a position to make recommendations about any particular education model.</p> <p>The centralised model was overwhelmingly the preferred choice for educators and clinical managers. The educators, clinical managers and directors all expressed the desire to maintain the current centralised model.</p>

This section has described the centralised, decentralised and combination nurse education service models and discussed their structure and approach in delivering a hospital-based nurse education service. In outlining the advantages of each service model, it is important to remember that centralisation and decentralisation are opposite points on a single continuum and that the advantages of one model can be the disadvantages of the other. Each service model has different advantages and disadvantages that can affect service delivery, quality of service and cost (Haggard, 2006a).

2.5 Theories that Impact on Nurse Education

Numerous theories around the areas of education can be found in the literature, including adult learning theory, functionalist education theory and education motivation theory. For the purpose of this study, the researcher has chosen to analyse three theories that most closely relate and impact on the delivery of nurse education within the healthcare setting, these are lifelong learning, organisational learning and role theory. The following sections discuss the theories of lifelong learning, organisational learning and role theory. See Figure 2.5 below.

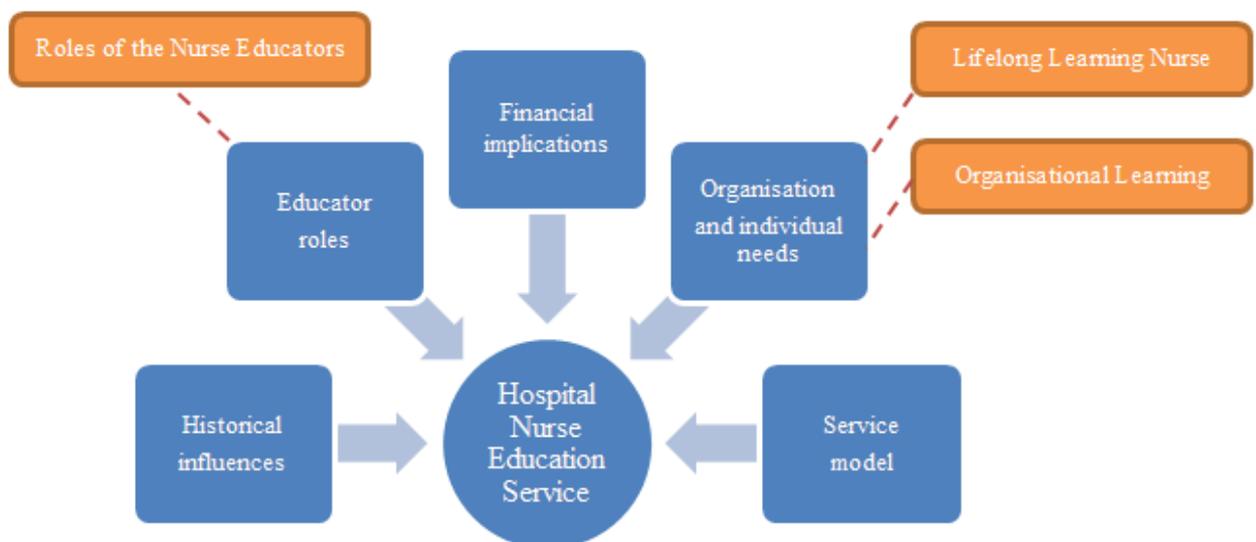


Figure 2.5. Impact of Theories on Nurse Education Service

2.5.1 Lifelong Learning Theory

Lifelong learning is defined as ‘the development of human potential through a continuously supportive process which stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding they will require throughout their life-times’ (Longworth & Davies, 2003, p. 2). The term ‘lifelong learning’ is not clearly understood and is often used interchangeably with continuing education, continuing professional development or professional development (American College

of Nursing, 2010). Lifelong learning is considered learning that occurs after the formal education years of childhood and into adulthood. Lifelong learning encompasses all types of ongoing learning through one's life time. It is a dynamic process, which includes both the informal and formal learning experiences of the person's personal and professional life. Lifelong learning involves seeking new knowledge and always questioning one's environment, knowledge, skills and interactions (Boulhuis, 2003).

This theory was chosen because lifelong learning has been clearly identified as a necessity to support professional nursing practice and is affected by the efficacy of the nurse education service (Davis, Taylor & Reyes, 2014). Lifelong learning supports the progression of nurses from novice to expert practitioners throughout their career by the acquisition of knowledge and skills (Benner, 1984). Lifelong learning in nursing requires a conceptual shift from the notion that registered nurses are merely competent health service providers to the view that they are highly skilled clinicians who engage in professional learning continuously throughout their career to keep their knowledge and skills current (Gopee, 2005). Although important in maintaining a level of competence for nurses, lifelong learning can be influenced by a number of factors, including individual/personal, organisational and socio-political factors. The nurse education service model is one of the organisational factors that can influence nurses' lifelong learning.

As individuals, nurses can commonly view the end of their compulsory nursing training as the end of their obligation to learn the concepts of their discipline. Schools of nursing and healthcare organisations have a responsibility to prepare nurses to become lifelong learners by teaching them how to learn (Davis, Taylor & Reyes, 2014). Reflective learning and critical thinking can help nurses to become more self-reliant by learning how to learn, making them better able to direct, manage and control their own learning process. The characteristics of a lifelong learner include questioning, enjoying learning, understanding the dynamic nature of knowledge and engaging in learning by actively seeking learning and development opportunities (Jarvis, 2005).

Socio-political factors can also influence the need and support for lifelong learning. Lifelong learning is essential for nurses to stay up to date with technological advances, deliver the latest evidence-based care, keep up with changes to societal attitudes and maintain their professional registration by meeting the requirements for continuing professional development (Mullins, 2005). It is imperative that hospital and nursing executive teams recognise the importance of lifelong learning, support lifelong learners and educate managers on how to best respond to them (Jarvis, 2005). At the organisational level, nursing education can thrive in organisations that embrace a culture of lifelong learning. A strong culture of learning is critical in developing opportunities for and supporting learning in the workplace. A learning organisation continually expands its capacity to create its own future by being committed to encouraging staff to develop themselves (Queensland Health, 2011).

2.5.2 Organisational Learning Theory

Organisational learning theory outlines the process of increasing the capacity for the effective performance of an organisation through the use of employee knowledge and understanding (Carroll & Edmondson, 2015). Organisational learning theory can be traced to 1978, when researchers Chris Argyris and Donald Schon began to develop psychological concepts around learning within an organisation. This theory was chosen because organisational learning is essential to support the delivery of safe patient care within healthcare facilities, with the nurse education service having a pivotal role in supporting this. Organisational learning can occur at four different levels within the organisation, including at the individual, group, organisational and inter-organisational level.

In healthcare facilities, opportunities for learning are created using a wide range of formal and informal mechanisms, including feedback to staff, audits, clinical incident investigations, performance appraisals, simulation and benchmarking (Frost, 2010). As individuals, staff within organisations acquire knowledge and experience over time and this learning has the capacity to increase organisational effectiveness and efficiency through the use of shared knowledge and understanding (Frost, 2010). In healthcare organisations, patient care is delivered by teams of specialist healthcare providers.

These teams are composed of experts and novices from different occupational groups and diverse backgrounds working together to provide coordinated care (Carroll & Edmondson, 2015).

Organisational-level learning in healthcare is essential, as hospitals consist of complex systems in which staff perform various roles and responsibilities, communicate and transfer information and collectively deliver patient care (Ratnapalan & Uleryk, 2014). Learning at the organisational level is a continuous event that is critical in ensuring safe service delivery and organisational performance improvement. An organisation learns successfully when it is able to retain knowledge and disseminate it throughout the various departments within an organisation (Argrys & Schon, 1996). Inter-organisational learning occurs when different organisations within an area or partnership collaborate and learn from one another (Frost, 2010). Organisations can improve their processes and service delivery by incorporating new knowledge and insights from other organisations. Inter-organisational learning is usually critical to the success of networks, partnerships and other inter-organisational structures (Carroll & Edmondson, 2015).

2.5.3 Role Theory

In role theory, each role within an organisation comes with a set of rights, duties, expectations, norms and behaviours that a person has to undertake and fulfil (Murray, 1998). Role theory's development began in 1966 and was prompted by the study of stage actors memorising their scripts to get into a role (Biddle & Thomas, 1966). Role theory is based on the observation that people behave in a predictable way, and that an individual's behaviour is context-specific, based on their position (Murray, 1998).

Role theory was chosen because it explains the interactions between individuals within organisations by focussing on the roles they play. Nurse educators especially play an important role within healthcare facilities as effective facilitators of training and in defining expectations for nursing staff (Brookes et al., 2007). The roles undertaken by staff within healthcare organisations shape the way they view themselves and define their behaviours. Staff in senior roles, such as nurse educators, are responsible for

motivating and leading others by communicating their expectations and modelling the behaviour they wish others to demonstrate (Lorette, 2015). The meaning of any given role is interdependent with other roles in the system. In healthcare, roles are reliant on one another and must complement each other. The role of the nurse educator is dependent on the role of the nurse interested in learning, and problems can arise when these roles either conflict with each other or become ambiguous. Role conflict, role strain and role ambiguity can be problematic across the many roles found in organisations (Bess & Dee, 2008).

Role conflict results when an individual encounters tensions as the result of incompatible roles (Bess & Dee, 2008). Role strain or pressure may arise when there is a conflict in the demands of one's role, or upon being asked to undertake work that is beyond one's capacity. Role ambiguity can be experienced when individuals have uncertainty about the expectations, behaviours and consequences associated with a particular role (Bess & Dee, 2008). The roles that staff play within the healthcare organisation guide the behaviour of the individual and influence the norms, expectations and behaviours of others. Role theory recognises the connection between individuals performing their duties effectively and the behaviour and performance across the whole of the organisation (Lorette, 2015).

2.6 Summary

The aim of this literature review was to provide a conceptual framework around nurse education services, examine the concepts within the framework and investigate the published findings and theories around nurse education service models. Much of the literature in this area is dated, with only two studies having been conducted to specifically examine types of hospital education service models. These studies were undertaken in the US and Canada, and both are difficult to generalise to the Australian setting due to their many limitations. It is clear that further study in this area is needed to inform future hospital-based nurse education services to ensure their sustainability into the future. The application of the existing literature in developing the methodology for this study is discussed next, in Chapter 3.