The shaping of midwifery education in Aotearoa, New Zealand

ABSTRACT
This paper reviews approaches to midwifery education from the 1900s to 2013. During this time, education has been influenced by various factors such as: midwifery registration, perinatal mortality rates, pain relief and technology for childbirth, educational theory, the consumer movement, midwifery autonomy and economic imperatives. The various factors have not only influenced what has been taught in midwifery education but how it has been taught (the pedagogical approach). Uncovering what has shaped the pedagogy assists in understanding assumptions about the way midwives are educated and opens the potential to consider new pedagogical approaches, such as narrative pedagogy.

KEY WORDS
Pedagogy, midwifery education, narrative pedagogy.

INTRODUCTION
Over the course of the last century, midwifery education in Aotearoa, New Zealand, has undergone many transformations. Learning to be a midwife has been transformed from solely learning through experience (apprentice model) to the current three year Bachelor’s degree (now encompassing the equivalent of 4 years’ learning). Midwifery education has been shaped by social, medical and economic influences as well as learning theories. These various drivers have not only influenced what has been taught in midwifery education (curricula content), but also how teaching and learning happened. The how of teaching and learning is termed ‘pedagogy’ which, in this paper, is further defined as: the philosophical underpinning of educational research and practice (Diekelmann & Diekelmann, 2009). Uncovering what has shaped the pedagogical approach assists in the understanding of taken-for-granted assumptions about the way midwives are educated and opens the potential to consider new pedagogical approaches, such as narrative pedagogy. This paper reviews the pedagogical approaches to midwifery education from the pre-1900s to 2013.

LEARNING MIDWIFERY THROUGH AN APPRENTICESHIP MODEL
Up until the end of 19th century in Aotearoa, New Zealand, the pedagogy which underpinned midwifery education was based on learning through observation and experience. Women would typically learn about helping during childbirth in what has since been described as an apprenticeship model; through helping friends and family during childbirth, or observing and assisting an experienced midwife (Kalisch, Scobey, & Kalisch, 1981). It is acknowledged that, prior to colonisation by European settlers; Māori in Aotearoa, New Zealand had well established birthing practices. These included the passing on of knowledge and skills from men and women in one generation to the next, so Māori had specialist knowledge to help in childbirth (Clarke, 2012; Makereti, 1986; Rimene, Hassan, & Broughton, 1998). It is not within the scope of this article to examine childbirth practices in general, or the way that midwifery was learned by Māori. Our focus is on midwifery education post-colonisation.

In the early 1800s, the majority of women who settled in Aotearoa/New Zealand, emigrated from Great Britain and followed the practice of giving birth in their own homes as they had done in Europe. Women called upon an experienced friend, relative ‘handywoman’ or midwife (who was sometimes a missionary) to assist them, during and after the birth (Clarke, 2012). Various stories from that time, told in women’s diaries and letters sent ‘back home’, captured the way that midwifery skills were learned. One story refers to Sarah Herbert (1814-76), of Wānui, who “became an experienced midwife, and with so many children of her own, knew what to do in times of sickness” (Macgregor, 1973, p. 90) Herbert was famous for having walked 15 miles through the bush when Mrs. White, the wife of the head shepherd at Oakbourne station, was confined (Macgregor, 1973).

Stories show that with no formal midwifery education or registration available, a handywoman was often a relative or a neighbour who had learned her skills of midwifery in several ways. Through her own experience of childbirth, through the experience of attending other women alongside another experienced handywoman, trained nurse or doctor, and though sharing of practice stories (Donley, 1986). As she had no formal midwifery education or registration, it was the practice and skills of a handywoman which established her reputation, and the fee which she could expect for her services. At the time handy women could determine whether or not they referred to themselves as midwives because there was no requirement for education or registration.
professional midwives” (Neill, 1961, pp. 49-50). Neill wanted to establish ‘proper’ training and registration for nurses and midwives. She promoted the idea that a midwife who had no formal training was ignorant and superstitious compared with a more knowledgeable and skilled midwife who had attended a formal training programme.

It was a political motivation that was to drive the call for midwifery registration and training. New Zealand’s Liberal government was embarking on a programme of social legislation (Hill, 1982). The perinatal mortality rate was high at the time and the Prime Minister, Richard Seddon, stated in his 1904 manifesto that, “humanity for the mother and infant” was a priority for his government. Neill lobbied Seddon and others, expressing that she was appalled that the only way of becoming a handymon was through a woman’s own experience (Neill, 1961). Neill’s mission was accomplished when Seddon introduced the Midwives Act (1904), which established the legal requirement for registration and training of midwives. As well as the first Register of Midwives, the Midwives Act (1904) provided for the establishment of state-funded maternity hospitals, named St. Helens hospitals after Seddon’s home town back in England.

When Seddon gave his speech introducing the 1904 Midwives Act, he made a point of discrediting untrained midwives’ sources of knowledge. He stated that “midwives are usually of advanced years and when asked how they obtained their knowledge would say ‘Oh, I just picked it up’” (cited in Neill, 1961, p. 54). The knowledge that was ‘just picked up’ through experience was now judged as inferior to the kind of knowledge a student midwife would gain from a formal lecture or textbook. Midwifery registration, legally required under the Midwives Act, marked the end of the apprenticeship-style of learning through experience as the only form of learning. A pedagogical approach founded on learning midwifery through a combination of lectures, practical work and examinations over a defined period of time emerged.

Formal midwifery education commenced with the opening of the first St. Helens hospital in Wellington in 1905, followed soon after by hospitals in three other cities. St. Helens hospitals continued as the principal location for midwifery teaching from 1905 through to 1980. This early education model provided a maternity workforce, with student midwives working shifts on the wards and then attending lectures given by medical doctors and senior nurses or midwives (Neill, 1961). The Midwives Act (1904) specified the practical and theoretical requirements for student midwives, and also set the midwifery examination, the passing of which was established as a legal requirement if wanting to practise as a midwife. A woman who had been practising as a handymon or unregistered midwife could also apply for registration as a Class B midwife, providing she had been in practice for three years and could show evidence of being of good character (Hill, 1982).

THE NEED FOR MORE TECHNICAL KNOWLEDGE: TO PROVIDE PAIN FREE BIRTH

After the First World War (1914-18), the maternal mortality rate in Aotearoa, New Zealand was one of the highest in the developed world and was mostly attributed to puerperal sepsis (Mein Smith, 1986). This was an international embarrassment for the New Zealand Government, and led to an enquiry into puerperal sepsis and the maternal mortality rate. The enquiry resulted in recommendations for procedures for asepsis and sterilisation in maternity care. These procedures were published in two pamphlets, ‘The general principles of maternity nursing’ and ‘The management and aseptic technique of labour and the puerperium’, together known as H.-Mt.20 regulations (Mein Smith, 1986). The H.- Mt. 20 regulations were first issued in 1926 and resulted in the adoption of strict routines and teaching asepsis and sterilisation techniques for all births. These regulations, with their emphasis on learning aseptic procedures and routines, were to dominate midwifery practice and education from the 1920s to the 1960s. Midwifery teachers were charged with training students to the standards laid down in the H.-Mt.20 regulations. Integrated within the teaching of these standards was the assumption that practical experience was all that was needed to become a ‘proper’ midwife and that if students had plenty of practical experience and followed the rules then they would learn to be ‘good’ midwives. Formal teaching at this time was didactic with tutors ‘instilling’ knowledge. Mary Lambie (1956) writes of her experience as a student midwife in the 1920s. Whilst Lambie recalled formal lectures, she particularly noted the excellent learning she had gained informally when attending home births with a midwifery sister.

In the 1930s, although asepsis was still very much emphasised in midwifery curricula, relieving pain became a new responsibility for those attending women in labour. Relief from the pain of labour came to be seen by middle-class women as a modern and superior approach to the childbirth experience. Dr Doris Gordon and women’s organisations of the time, became active in lobbying for the right of women to have painless childbirth (Mein Smith, 1986). Up until the late 1930s, St. Helens hospitals had remained the preserve of midwives. As women’s demands for pain relief increased, they were choosing to have their babies in hospitals supervised by a doctor and under the care of nurses - not necessarily midwives. The provision of pain relief for labouring women became significant for midwifery education and practice because it established in the lay public’s mind, the link between childbirth and medical and nursing care. Midwives were not initially authorised to administer pain relieving drugs, so the provision of pain relief gave doctors an area of specialist expertise in maternity care, and reinforced medicine’s growing influence on childbirth practices, midwifery practice and education. Thus institutional birth gained ground and medicine gained dominance over midwifery practice.

By 1945 it was deemed that special training was required for midwives so that they could learn about safe administration of pain relief. This was one of the first delegated medical tasks which came to influence the content of midwifery curricula. It was incorporated into midwifery training as is reflected by the syllabus from 1945 which consisted of a list of practical work to be completed and a section on how to administer obstetric anaesthesia (Health Department of New Zealand, 1945).

Throughout the 1930s and into the 1940s, the student midwife was someone to be trained; it was assumed that midwifery could be learned if a set number of lectures and practical tasks were completed.

SOCIAL CHANGE AND EDUCATION THEORY: PROMOTING SENSITIVE MIDWIFERY

In the post-war environment of the 1950s, social circumstances were again changing. Parents were demanding more say in their care, a more satisfying birth experience, more cognisance of the mother and child relationship, and a more family-centred approach (Parents Centre New Zealand, 2009). In 1963, the Maternity Services of the Board of Health recommended that student midwives’ learning be augmented so that they could attend to the social, emotional and cultural needs of families (Hill, 1982). By this time, the midwifery curriculum looked quite different from the syllabus of the previous 60 years. Rather than a list of practical and theoretical requirements to be checked off, the 1962 midwifery curriculum included topics such as psychology, social conditions and cultural differences (Nurses and Midwives Board, 1962). The social circumstances of the time again influenced pedagogical practices.
Not only did midwives need knowledge about the technology used in obstetrics; they also needed the knowledge to attend to the woman's emotional experience.

Along with the societal expectations of the 1950s and 1960s, behavioural psychology and educational theories influenced and re-oriented the pedagogical approach to midwifery education. Psychological research of that period was founded on the idea that mental processes could be understood and human responses explained, because human beings were information processing systems and human behaviour was the result of mental processes (Earl, 1961). Psychological research influenced educational theorists to suppose that human beings processed new knowledge cognitively in a predictable way, and that learning could, therefore, be measured and evaluated in an objective manner.

In 1949, Ralph Tyler published his influential book ‘Basic principles of curriculum and instruction.’ Tyler held that it was the role of the curriculum to define educational objectives which should be stated in terms of measurable outcomes. Tyler's (1942, 1949) ideas were based on theory which came from behavioural psychology; that if the curriculum is stated in terms of predetermined measurable objectives, then the outcomes of learning can be controlled by the educational experiences in which the learner is required to participate. The assumption that learning is a rational, linear, orderly and sequential process, underpins the thinking around curricula based on pre-determined measurable learning outcomes. A pedagogical approach based on assessing students' achievement of learning outcomes has been referred to as ‘behavioural pedagogy because of its links with behavioural psychology (Diekelmann, 1993) and this is the term that will be used in this article.

A behavioural pedagogical approach became visible in midwifery syllabi by 1963, where aims and objectives were used in documents (Nurses and Midwives Board, 1963). Fifty years on, the midwifery curriculum continues to be stated in terms of learning objectives or learning outcomes (AUT University, 2012).

**PROFESSIONALISATION OF MIDWIFERY AND THE INCREASED USE OF TECHNOLOGY**

The period between 1970 and 1990 was distinguished by the convergence of some major influences on the way midwives practised and therefore in the way they were educated. Maternity care was marked by an increased use of obstetric technology, such as ultrasound scanning, electronic fetal monitoring, obstetric anaesthesia, and specialist neonatal paediatric care. At this time there were concerns that the six month St. Helen's programme was not adequately preparing new graduate midwives to understand and support the new technologies now being utilised to provide maternity care.

In 1970, the New Zealand Government invited Dr Helen Carpenter, a Canadian Nurse and World Health Organisation consultant, to undertake a review of nursing and midwifery education in Aotearoa, New Zealand (Papps & Olsen, 1997). In her report, Carpenter made the observation that nursing and midwifery education programmes had remained relatively unchanged since their inception, and that education remained outdated and unsuited to the needs of both students and health services. She stated that students were “trained to undertake activities in a certain manner rather than taught to think through the application of principles to different situations and to apply these in an appropriate manner” (Carpenter, 1971, cited in Allen, 1992, p. 31).

To address this problem, one of the recommendations that Carpenter made was that nursing and midwifery education shift from being based in a hospital setting to a polytechnic (tertiary) institution, and that midwifery become a postgraduate nursing specialty in maternal and infant nursing (Allen, 1992).

Carpenter’s report, along with the need for midwives to be competent with advancing technology, ultimately resulted in midwifery education being moved to polytechnics. The length of midwifery education in the polytechnics was increased from six to 10 months, and the course was only available to registered nurses. Students attended classes alongside registered nurses and midwives who were studying for an Advanced Diploma in Maternal-Infant Nursing. Some classes were specifically developed for student midwives to prepare them for midwifery practice and the final state midwifery examination. In the polytechnics, although the course was longer (10 months), student midwives had less practical experience than they had had at St. Helens hospitals with only 10–12 weeks being spent gaining practical experience.

At the same time that midwifery education was moving into the tertiary setting, social changes were affecting the way that childbirth was perceived. Authors such as Suzanne Arms (1975), Danaë Brook (1976), Frederick Leboyer (1975) and Ina May Gaskin (1978), challenged the ‘medicalisation’ (increasing use of technology) of childbirth and promoted ‘natural birth’. Questions about the importance of the time around birth resulted in women demanding a more emotionally satisfying and family-centred birth experience (Parents Centre New Zealand, 2009). It was argued that not only did midwives need knowledge about the technology used in obstetrics; they also needed the knowledge to attend to the woman's emotional experience.

With midwifery education's move from the practice setting of St. Helens hospitals to the academic setting, knowledge acquired through research findings, journal articles and textbooks became more valued than knowledge gained through experience and practice. The position was also established that theoretical knowledge was required prior to students going into the practice setting. This was different from the St. Helens training which was composed primarily of practical experience, supplemented with one day of lectures each week over a 6 month period.

The midwifery classes were smaller in the polytechnics, and learning theories of the time such as Knowles (1990) theory of adult learning and Kolb’s (1984) experiential learning cycles influenced the pedagogical approach. Teaching and learning in the polytechnics comprised more small group work, discussions and interactive learning than had occurred at St Helens.

The change to midwifery education through the Advanced Diploma in Nursing (A.D.N.) was problematic and resulted in fewer midwives being trained in New Zealand, leading to a shortage of midwives. The six month St. Helens courses had trained between 157 and 185 midwives per year, whereas in seven years the A.D.N. had produced only 179 midwives (Guilliland & Pairman, 2010). There were also concerns that midwifery education had become too theoretical and was being subjugated by medicine and nursing. Midwives and women's groups became increasingly motivated to re-establish midwifery as a separate profession with an education programme distinct from nursing (Donley, 1986). The pathway to midwifery through the A.D.N. lasted less than ten years.

**THE POLITICISATION OF MIDWIFERY AND THE DEMAND FOR AUTONOMY**

When midwifery education moved from hospital-based education to the polytechnics, concerns about the adequacy of midwifery education was raised by groups such as the Midwives Special Interest Section of the New Zealand Nurses Association (1978), the Direct Entry Midwifery Taskforce (Save the midwives direct entry midwifery task force, 1990), Parents Centres, Home Birth Associations, and midwifery educators (Guilliland & Pairman, 1991). The consumer and midwives groups
argued that midwifery had been downgraded to obstetric nursing rather than preparation to be a midwife, and that this was in part, due to the education provided through the A.D.N.

As a result of these groups lobbying government, a parliamentary committee was set up in 1986 to report on midwifery in New Zealand (Women’s Health Committee, 1986). A considerable number of submissions raised issues related to midwifery training; in particular that direct entry to midwifery was desirable (rather than only after having completed nurse training), that there should be more practical experience, and that the course length be extended. The report of the Women’s Health Committee added impetus for the major reforms which occurred in midwifery practice and education between 1989 and 1992. In this short space of time, midwifery was separated from the A.D.N and a one year diploma in midwifery for registered nurses was offered for three years at the polytechnics (Auckland Technical Institute, 1989) until a three year direct entry midwifery programme was commenced in 1992.

During the 1980s, there were moves by midwives and women’s groups to increase the midwifery scope of practice, so that midwives could regain the legal right to take full responsibility for maternity care. The Health Minister of the Labour Government, Helen Clark, was sympathetic towards midwifery autonomy. She supported the legislative processes that culminated in 1990 with an amendment to Section 42 of the 1977 Nurses Act. This amendment allowed midwives to take full responsibility and claim payment for providing maternity care. An amendment to section 39 of the Nurses Act allowed for the introduction of three year midwifery programmes, known as Direct Entry Midwifery, because nursing registration was no longer a pre-requisite for midwifery study.

In 1992, the first three year Diploma in Midwifery was offered at the Auckland Institute of Technology and a three year Bachelor of Midwifery at Otago Polytechnic (Pairman, 2006). By 1997, midwives could study for a stand-alone Bachelor’s degree at five polytechnics in New Zealand. Between 1977 and 2003, midwives continued to be registered by the Nursing Council of New Zealand (Nurses Act, 1977). As well as meeting the Nursing Council’s requirements for registration, midwifery undergraduate programmes were also obliged to meet another set of requirements which were set by tertiary institutions. For example, to fit in with the diploma and degree system, midwifery curricula separated knowledge into discrete modules (later called papers by some institutions). Each module had an aim, learning outcomes, specified content and assessment requirements. Each was worth a certain number of credits and had to be passed before a student could move on to the next module (Auckland Institute of Technology, 1994, 1997). Modules were either theoretical or clinical. The pedagogy that now dominated midwifery education suggested that to learn midwifery, students needed to study a series of individual subjects, each with predetermined learning outcomes. Learning experiences were designed by a teacher around the learning outcomes and at the end of the module were assessed by that teacher. If the student passed the assessment, she was deemed to be able to progress on to the next subject.

With the legislative changes, which allowed for midwives to take full responsibility for women’s maternity care, and the commencement of the three year midwifery degree programme, the imperative to ensure that midwifery students were taught ‘everything’ they needed to know to practise safely, became even stronger. To meet the demands of increased knowledge required for the increased scope of practice of a midwife, curricula development was characterised by the addition of increasing amounts of content, teaching of more skills and competencies. Along with larger class sizes, efficient teaching approaches such as lectures, multimedia presentations, and online learning tended to predominate.

Although the main influences on midwifery education came from within New Zealand, the tertiary education sector was following an international trend in which education became increasingly viewed as an economic industry (Malcolm & Tarling, 2007). When an economic view of education prevails, teachers and students may see learning as merely the acquisition of knowledge, skills and competencies, so that education is seen as more of a possession than a process. The priority of midwifery students in this context may be to attend a university to get a degree rather than to become a midwife. The impact of an economic approach on midwifery education is that the student outcomes are viewed as the measurement for the success of the programme, rather than the pedagogical approach, or how the learning happened.

Another influence on the pedagogic approach was the call for economic efficiencies with more students equating to more income for the institution. Technology became available which supported online learning thus students in provincial areas could access midwifery courses from their home base. With midwifery being a women-dominated profession, by providing courses within the provinces, the polytechnics supported women to stay in these areas for practice. Midwifery programmes in New Zealand quickly implemented distance-learning methods to support ‘satellite’ programmes for the provincial areas. This commonly involved the use of video-conferencing technology within the classroom setting so lectures could be viewed by distance students. These developments changed how midwifery teachers were able to teach. Large groups and online learning can lead to more formal ways of imparting knowledge being used and teaching becoming less interactive. Economic drivers led to less time to share stories and experiences because of the pressures to cover content and provide information to as many students, in as short a space of time, as possible.

**COMPETENCE TO PRACTISE**

The New Zealand College of Midwives (NZCOM) had long held that a separate regulatory body for registering midwives would more clearly define midwifery as a profession separate from nursing (Guilliland & Pairman, 2010). In 2003, changes to the registering body for midwifery came with the Health Practitioners Competence Assurance Act (HPCAA) (2003). This allowed for the formation of a separate Midwifery Council responsible for approving undergraduate education programmes and registration requirements for midwives (Midwifery Council of New Zealand, 2004). In 2006, the Midwifery Council undertook a review of midwifery education (Midwifery Council of New Zealand, 2007a) with midwives, midwifery teachers and midwifery schools. Many of the submissions to this review suggested that students needed more clinical experience. The review’s recommendations resulted in revised standards for approval of pre-registration midwifery education programmes (Midwifery Council of New Zealand, 2007b).

The standards prescribed the theoretical content to be taught and the practice requirements to be completed. This included a longer programme (equivalent of four years) with increased clinical practice hours. The Midwifery Council also set down the pedagogical approach which schools of midwifery should take:

> *Theoretical content may be delivered through a variety of learning and teaching processes including online and face to face. These learning and teaching processes should promote self-responsibility, critical enquiry, autonomy, accountability, collaboration, integration, quality care, contextual understanding and life-long learning (Midwifery Council of New Zealand, 2007b, p. 15).*

The Midwifery Council standards emphasise the need to demonstrate competency to practise. The notion that ‘a competent practitioner is a safe practitioner’ was introduced under the HPCAA (Health Practitioners Competence Assurance Act, 2003), and has since become a dominant discourse in midwifery practice and education. The idea of competence to practise has also impacted on pedagogy. A pedagogical approach has emerged whereby students and practising midwives are assessed against competencies. For midwifery education a pedagogical approach is needed
Midwifery educators have always been cognisant that becoming a midwife is much more than acquiring knowledge and skills for practice.

which will define a competent midwife who has the knowledge and skills (the how) of practice, but also a practitioner who is able to know when, why and for whom, to apply those competencies in practice (Smythe, 2010).

LOOKING FORWARD TO NEW PEDAGOGIES FOR MIDWIFERY EDUCATION: NARRATIVE PEDAGOGY

Midwifery educators have always been cognisant that becoming a midwife is much more than acquiring knowledge and skills for practice. Narrative pedagogy is an approach which may promote additional strategies of learning that can more effectively prepare graduates for the increasingly complex nature of midwifery practice. This approach to teaching and learning is committed to the interpretation of teachers’, students’ and clinicians’ narratives about their experiences in education and practice (Diekelmann & Diekelmann, 2009). Drawing on the work of Diekelmann (2001) and Swenson and Sims (2000, 2003), a narrative-centred curricular approach was introduced into AUT’s midwifery programme in 2005. This approach emphasises the importance of students determining their own learning based on their interpretation of narratives, and teachers facilitating learning in tutorial groups rather than solely through lecturing. Studies exploring narrative pedagogical approaches, have found that when a learning environment fosters the interpretation of narratives, a space is created for dialogue, reflection and thinking about subject matter in a different way from the thinking which might happen in a lecture environment (Diekelmann & Diekelmann, 2000; Gilkison, 2011; McAllister et al., 2009; McGibbon & McPherson, 2006; Vandermusje & Townsend, 2010). Gilkison (2011) found when midwifery teachers and students jointly shared, discussed and interpreted a narrative, that learning about the art of midwifery practice was enhanced. It was the emotional involvement of students felt with the narrative, and the recognition of their own values and beliefs in relation to those of the narrator which helped them to see the women’s perspective, a skill which could be taken into practice.

The ability to listen to women and interpret their narratives is one of the cornerstones of midwifery practice. A midwife needs to critically evaluate evidence, support alternative choices, reflect on her own practice, and make clinical decisions in a myriad of contexts, modifying the approach in the light of the woman’s response. A narrative pedagogical approach to learning may support, enhance and model these skills so that the undergraduate is more easily able to do this in practice.

CONCLUSION

This exploration of the pedagogical approach to midwifery education in Aotearoa, New Zealand has shown that education has been influenced by many diverse factors such as political and social drivers, technology for childbirth, the educational environment and economic imperatives. Undoubtedly midwives have always learned about practice through sharing stories, but in terms of formal education those stories have been seen as examples rather than a recognised way of learning midwifery. The narrative pedagogical approach implemented at AUT values the learning which comes from narratives. An understanding of the prevailing pedagogy and its influences can help educators to consider the ways that new approaches, such as narrative pedagogy, can be implemented and sustained.

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