

Outcomes of Early Childhood Education: Do we know, can we tell, and does it matter?

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Jean Herbison lecture

NZARE Annual Conference, Palmerston North NZ, 2008

The topic of my address, 'Outcomes of early childhood education',¹ fits well with the conference theme, 'Policies, research and practice to improve student outcomes', particularly when considered in the New Zealand context. The history of early childhood education in this country as a non-compulsory, voluntary sector, ensured that student outcomes have not been a major focus of early childhood programmes. Historically, programmes were child-centred and developmentally-oriented rather than driven by predetermined objectives or an outcomes focus. Notwithstanding, an interest in outcomes has evolved, as attested by the Ministry of Education's recent Statements of Intent, and its commissioning of the literature review, *Outcomes of early childhood education*, prepared by NZCER (Mitchell, Wylie & Carr, 2008). My reading of this substantial review led me to pose three questions in my subheading with regard to the outcomes of early childhood education in New Zealand, namely:

Do we know?	The evidence question
Can we tell?	The methodology question
Does it matter?	The significance question

My answers to these questions also encapsulate the major conference theme 'Education in change'. Early childhood education in this country can be viewed as a case study of the interface of policy, research and practice in a context of change, following the reorganisation of early childhood education and care provisions as an integrated system in the late 1980s. On this basis my analysis is consistent with the view of several commentators that the trajectories of early childhood education following the 1980s reports, *Education to be more* (Department of Education, 1988), and *Before five* (Department of Education, 1988) illustrate tensions between the opposing ideologies of economic rationalism and education for the rights of the child (Loveridge & McLachlan, 2008); and between the discourses of quality and diversity and increasing regulation and accountability (Scrivens, 2002). How the early childhood sector has negotiated these on-going tensions is a fascinating story in its own right (See Keesing-Styles & Hedges, 2007; Nuttall, 2003). The positive international image early childhood education in New Zealand now promotes does not, however, negate the responsibility of policy makers, practitioners and academics to ask the hard questions about the outcomes of a publicly-funded early childhood education system.

My gaze has also been sharpened by my move to Australia, and my reading of recent Australian reports, books and policies relating to early childhood education. As perhaps fits the harsh Australian terrain I perceive Australia to be far more direct about disadvantage than in New Zealand, which in early education has been strongly influenced by the credit-based view of childhood promoted by *Te Whariki*, the early childhood curriculum (Ministry of Education, 1996) and an increasingly strong pedagogical voice.² Yet, Australia's educational

¹ For the purposes of this paper, early childhood education (ECE) refers to early childhood education and care in accordance with NZ's integrated services model.

² For Australian debate see Cheeseman, 2007; Stanley et al., 2005; Sumsion, 2006. For current Labor Federal government universal initiatives see www.mychild.gov.au

debate draws upon the same international themes that appear in the New Zealand context: best evidence, teachers make a difference, social inclusion/diversity, joint agencies/one stop shops, quality, cost-benefits/productivity, choices for parents. The presence of this global discourse emphasises how important specific cultural contexts and educational systems can be for the trajectories of educational reform, including the non-compulsory early childhood sector. I believe that this lecture in honour of Dame Jean Herbison's contribution to education is an appropriate forum in which to explore such issues in view of Jean's long-term interest in educational systems.

As I prepared this paper the implications of the dramatic global credit crunch for those living in poverty in the developing countries were being aired in the media. Philip Gammage (2008), in a recent report prepared for the Bernard van Leer Foundation, points out that around "10 percent of the world's children are born into a rich OECD country ... and will normally have the opportunity to study up to and beyond university level" ... whereas "the remaining 90 percent are born into poverty Their education will be sporadic, tenuous, serendipitous or non-existent" (p.3). Against these statistics a focus on the outcomes of early childhood provisions for New Zealand's young children could perhaps seem inconsequential. Yet, as Gammage states, poverty is not restricted to the developing countries and New Zealand, the one-time 'welfare state', is not exempt from the ramifications of poverty with regard to young children's well-being and education. Consequently, my gaze has also been sharpened by the current global financial crisis to examine more directly the impact of provisions for all children in New Zealand, including those sometimes labelled as disadvantaged, at risk or with special needs. Such terminology has become unpopular in New Zealand as early childhood educators have advocated for children's rights to be perceived as confident and competent learners, and as Maori and Pasifika leaders have argued increasingly that their values, meanings, expectations and practices should guide educational provisions for their children.

Meanwhile the 2006 OECD PISA results indicate that while overall mathematics and literacy results for NZ 15 year olds are amongst the highest of the OECD countries wide variability is also present. Significantly, this variability refers to marked disparities in results for European/Pakeha and for Maori and Pasifika students, which are also associated with socioeconomic status³. A recent OECD report that New Zealand is one of five countries with the most marked increase in the income gap between rich and poor between the mid-1980s and mid-2000s,⁴ provides further compelling impetus for a stronger focus on social disadvantage and what this might mean for children's life chances. There is now widespread acceptance of the claim that early childhood education should be seen as a public good (Gammage, 2008; OECD, 2006) but at a time of competing challenges for government funding it is timely to ask: are early childhood provisions good for some children, but not for others? It is particularly apposite to raise this question at a time when globally the goal points are changing and likewise, economic imperatives.

For the remainder of this address I will consider, firstly, the international evidence about the outcomes of early childhood education and then my three questions in relation to the New Zealand context in the post *Te Whariki* (Ministry of Education, 1996) period. To address question 1, I will examine the New Zealand evidence; for question 2 I will examine the interface of policy, research and practice. To address question 3, I will return to my initial point that there is a tension between economic rationalism and beliefs about the rights of children, in New Zealand's system of early childhood education.

³ See www.pisa.oecd.org

⁴ www.oecd.org/statsportal/

Outcomes of ECE – International evidence

Internationally, developed countries have adopted policies and provisions that differentially emphasise universal access to early education or to targeted provisions. Both directions focus on the establishment of early childhood education and care provisions as “a public good, an investment and a definite advantage to subsequent schooling and long-term social capital” (Gammage, 2008, p. 10). New Zealand has largely opted for a universal approach, but with a unique twist that aims to cater for specialised groups through a strong focus on diversity and an inclusive curriculum.

Concurrently, there has been a large expansion of the ‘for profit’ childcare sector, driven by a market-driven philosophy as women’s employment rates have escalated. New Zealand’s policies therefore also appear to merge both a right wing, “purchase and choice” philosophy with a left wing philosophy of producing “a more equitable and balanced society” (see Gammage, 2008, p. 10). The OECD (2006) report, *Starting Strong II*, notes that pedagogical and curriculum philosophies also influence the nature of provisions: an early education tradition is associated with a more centralised and pre-academic approach and a social pedagogical tradition with a more local, child-centred and holistic approach (OECD, 2006). Again, New Zealand draws upon both traditions, with a centralised curriculum and regulatory framework under the control of the Ministry of Education, combined with a holistic inclusive curriculum that promotes diversity.⁵

International studies of the outcomes of early childhood education provide a strong platform on which governments are building policies for early education (e.g., Mitchell, Wylie & Carr, 2008; OECD, 2006). Educational studies have been bolstered by the work of neuroscientists and increasing evidence about the substantial learning that takes place during the early childhood years as well as the long-term effects of impoverished early learning environments (Greenfield, 2008; Mustard, 2008; Shonkoff & Phillips, 2000). Further, governments have listened as economists have calculated the cost-benefits to society of early intervention initiatives, in terms of outcomes such as reductions in special education placements, juvenile delinquency, early drop-out from school and improved school achievement and employment rates. The prestigious US-based Brookings Institution, for instance, refers to investments in early education, or human capital, as an important source of economic growth (Dickens, Sawhill, & Tebbs, 2006).

Gammage (2008) argues that the contiguity of relationships between care, education and resultant advantageous social and psychological capital are clear and well documented in the literature. Some robust conclusions are that early childhood education can yield positive academic outcomes (particularly literacy and numeracy) but that positive effects are mediated by centre quality and socioeconomic variables, and subsequently by the school attended, particularly for disadvantaged children. Positive outcomes also appear to be mediated by changes in socio-emotional and motivational variables – or learning identity as this is sometimes called (See Mitchell et al., 2008).

At this point I looked more carefully at some specific international studies in countries that emphasise educational outcomes to track some of the important findings that have been in the foreground of the economic rationalist argument, and to identify the global themes that have been guiding initiatives.

⁵ Some targeted provisions are available through the Ministry of Social Development’s “Strengthening Families” initiatives catering for vulnerable families with children aged birth to three years, in collaboration with Education and Health agencies. See www.msd.govt.nz

Early longitudinal evidence comes from targeted programmes. In the US, the federally-funded Headstart compensatory programme that provides centre-based early intervention for disadvantaged children reported gains at school entry but with subsequent wash-out effects as children proceeded through school (Kamerman, 2008). Subsequently, modest long term effects on language and school achievement have been tracked. An important inference from the early Headstart evaluations was that targeted early intervention cannot act as an inoculation if quality education is not provided as children transition to school. Stronger long-term effects have been reported from small-scale experimental programmes but it has been claimed that the long-term cost-benefit analyses of such studies are based on a slim evidence base. Penn and Lloyd (2007) conducted a systematic review⁶ on the long-term economic benefits of centre-based early childhood interventions, through the University of London EPPI Centre, and identified only three studies that met their rigorous criteria of soundness, appropriateness, and relevance. The studies are well-known North American programmes (Perry/High Scope, Abecedarian, Chicago Parent-child Centres) aimed at targeted groups described as “African American children in ghettoized communities in the US” (p. 15). Unsurprisingly, the authors conclude that the long-term economic benefits from such studies cannot be generalised. Although the narrowness of this review is open to challenge, Penn and Lloyd’s conclusion that there is a need to develop “alternative cost-benefit methods based on a more straightforward calculation of benefits to young children in the here and now” (p. 16) does have some merit, particularly in small nations such as NZ. Notwithstanding, the targeted (and hence limited) nature of these US experimental interventions is not always acknowledged by governments aiming to justify universal provisions.

Fortunately, the story does not stop here. Population studies in several US states have reported positive outcomes for school achievement following introduction of universal preschool. Oklahoma showed a four-to-seven month gain in premath, prewriting, and prereading skills across all ethnic groups following the introduction of preschool for all 4-year-olds. A feature of the Oklahoma initiative is the requirement for degree qualified teachers with early childhood certification, along with pay parity with other public school teachers (AERA, 2005; Dickens et al., 2006). Such outcomes provide encouraging evidence that universal provisions which give attention to structural requirements such as teacher qualifications, group size and adult-child ratios, can provide effective preparation for formal schooling (Smith, 2003). A 2005 AERA *Research Point*, which argues “that investing in quality makes sense”, refers to two components of centre-based quality programmes: a rich curriculum with specified aims, and well educated, responsive staff. NZ’s approach stresses structural components although its holistic curriculum departs from the skills-based approaches of some US systems that give greater emphasis to pre-academic objectives.

The importance of evaluating excessive claims about the positive outcomes of early childhood provisions is evident from the UK-based study: The Effective Provision of Pre-school Education (EPPE). This large-scale longitudinal study of the effects of a universal approach to early education, guided by an explicit preparation for school philosophy, teased out predictor variables for subsequent primary school literacy and numeracy achievement at age 7. (Melhuish, Phan, Sylva, Sammons, Siraj-Blatchford & Taggart, 2008; Melhuish, Sylva, Sammons, Siraj-Blatchford, Taggart, Phan & Malin, 2008). The study included the range of early childhood provisions available to children at age 3, and a ‘home’ sample of children without preschool experience. The EPPE researchers draw conclusions of interest to both policy makers and researchers, viz.

Primary education is more important than preschool education but that both are sufficiently large for any government wishing to maximise educational achievement.

⁶ UK term for a best evidence synthesis review which uses rigid reviewing criteria to exclude studies.

The influences of parenting are pervasive, suggesting that policies for disadvantaged children should support programmes that encourage parenting strategies.

Predictors of academic achievement at age 7, in order of strength of effect, were:

Mothers' education

Home learning environment, measured by activities such as frequency read to;
painting, drawing; being taught letters, numbers, song, poems, rhymes

Primary school effectiveness

Socioeconomic status

Family income

Preschool effectiveness, measured by whether children performed better or worse than average.

Changing home environments, however, can be fraught with practical and philosophical issues. Changing systems and institutional practices is not easy and requires on-going monitoring to ascertain the extent of change. The UK Sure Start local programmes (SSLPs) illustrate some of these challenges. This programme aims to enhance the life chances of young children and their families by improving services in areas of high deprivation (NESS, 2005, 2008). Accordingly, the Sure Start programme is targeted but also aims at universal access for all children under four years and their families in the prescribed areas. All services within an SSLP area are universally available across health, education and welfare and follow an integrated joint agency model of service delivery. Initially the SSLPs had a high degree of autonomy with regard to operation and services within SSLP areas. Following the first national evaluation (NESS, 2005), which reported only limited evidence of effects of SSLPs, the importance of establishing joint training and careful management when adopting a multiple agency approach was stressed.

The 2008 national evaluation outcomes are more promising, partly the researchers argue because providers have learned from the initial experiences. Programmes now have clearer guidelines and the more clearly focused Children's Centres operate as hubs of integrated early childhood services (Anning, Cullen & Flear, 2008). Importantly, the SSLP personnel were now more aware of the need to access the most disadvantaged families who had previously failed to access services. Positive effects, based on data sweeps at 9 months and 3 years, were obtained on 7 of 10 child outcomes including better social development, more positive social behaviour and greater independence/self-regulation. Other positive outcomes involved parenting skills - less negative parenting, better home learning environments; and greater use of services by families. These effects although modest were obtained across all sub groups: gender, ethnicity, workless households, teen mothers, lone parents, or income below poverty level. Critically, changes in cognitive and language development were not obtained, leading the executive research director Ted Melhuish to report to a 2008 conference of Sure Start centre leaders that his top priority was now the need to focus on child language development.⁷

Can we apply these international findings in the New Zealand context? Numerous methodological issues mean that generalisations from international studies can be fraught with pitfalls. Different types of provisions and philosophies may be major hurdles whether the provisions are universal or targeted. Educational philosophies and practices change so that findings of longitudinal studies may have limited applicability in different contexts and times. The same terminology may have different interpretations internationally. For example, the concept of one-stop-shop or joint agency working can vary considerably according to country contexts.

⁷ www.surestart.gov.uk_doc/P0002559.pdf

The difficulty of tracking ECE effects is also an issue. ECE experience is not simply additive or linear, the assumption underlying the use of regression procedures in longitudinal studies. As Mitchell et al. (2008, p. 11) point out “the ECE experience is not standard, and its relation to children’s learning identities is dynamic rather than fixed.” Each child’s experience differs in terms of their learning experiences and the interaction of cognitive and non-cognitive variables in specific contexts. Variability may be associated with difference attendance patterns, across different service types; or reflect interaction with family or other life experiences.

It is noteworthy that few longitudinal studies have originated in countries that favour social pedagogical approaches, such as the Nordic countries. A plausible reason could be the underlying ideological assumptions regarding children’s and families’ rights to access universal early childhood services. School entry at 6-7 years certainly suggests a more low-key approach to formal education; as does the Nordic emphasis on warm home-like childcare environments (Gammage, 2008). The limited data available do indicate that day care attendance has positive outcomes for school achievement (See Mitchell et al., 2008).

Do we know? NZ evidence

At this point I returned to the NZCER literature review on the outcomes of early childhood education (Mitchell et al., 2008). Although not claiming to use a best evidence approach, these reviewers have presented a balanced analysis of the relevant international and New Zealand research. Effect sizes for the bulk of the reviewed studies have been calculated where possible. A few studies fall into the category of what could be termed the ECE-error (i.e. calculated on its promise rather than measurable outcomes) but provide useful contextual and process indicators for the NZ setting. The review concludes with this statement which is my starting point for considering the New Zealand evidence:

When compared with the contribution to children’s development and wellbeing of family income levels (or rather, poverty), or the human capital from their parents’ education, the size of the ECE contribution is much smaller: usually around a third to a half at most. But countering the trend for income disparities to widen, or making a large shift in parental human capital, is a much harder policy and practical task than improving the provision of good quality ECE. The review provides substantial support for continuing to give good quality ECE priority in New Zealand’s efforts to improve outcomes for our children. (Mitchell et al., 2008, p. 97)

Here the plot thickens. New Zealand’s most recent policy initiative, the Early Childhood Strategic Plan, *Pathways to the Future: Nga Huarahi Arataki* (Ministry of Education, 2002) outlines the Labour government’s early childhood agenda for improving outcomes for children. To consider NZ evidence that would justify early childhood policy I accessed reports on longitudinal studies, process studies and reports on intermediate variables. All point to constraints and limitations in NZ-specific knowledge of outcomes.

The paucity of relevant longitudinal research is a major issue when considering NZ evidence. The two relevant longitudinal studies, the Otago Health and Development Study (Fergusson, Horwood & Lynsky, 1994) and NZCER’s Competent Children study (Wylie, Thompson & Lythe, 1999; Hodgen, 2008) illustrate one of the major difficulties of evaluating the effectiveness of early childhood education – systems and philosophies change. Both studies have reported positive effects, lasting into secondary school but both originate in early childhood provisions that differ significantly from those available today. The Otago Health and Development study commenced at a time when playcentres and kindergartens were the predominant provision and prior to the upsurge of mother’s employment. The Competent Children study commenced in 1992 prior to the influence of *Te Whariki*, the early childhood curriculum that has supported a stronger pedagogical focus in early childhood programmes;

and prior to the rapid growth of full-day childcare and home-based provisions. The Otago study obtained small effects on school achievement but researchers were cautious about interpreting these to promote early childhood education because of methodological uncertainties. The Competent Children study has been used by policy makers to justify the direction of early childhood initiatives in New Zealand, and it appears frequently in international reviews.

A second difficulty is the *sampling limitations of the NZ studies* which are unable to attract the substantial funding that can exist in other countries (e.g. the US, and the UK). The Competent Children study is Wellington based, and its sample over represents higher income groups and under represents Maori and Pasifika. These are significant limitations. New Zealand has put its efforts and funding into supporting diversity through *Nga Kohanga Reo* and Pasifika language nest provisions, but a higher proportion of Maori children, in particular, attend other centres and little is known - or accessible - about outcomes of immersion programmes. My web-based search failed to locate any relevant research on outcomes of the *Kohanga Reo* programme on the Ministry's education counts website, or on other links.

A further issue is illustrated by the Competent Children findings. *Disentangling the effects of early childhood education from social variables* is not easy and indeed often ignored by policy makers when promoting the value of early childhood education. The positive effects on literacy and numeracy, strongest in the early school years, linger in diminished forms to age 16 (See Hodgen, 2007). These findings are qualified by the mediating effects of both centre quality and socioeconomic variables, including maternal qualifications. The Competent Children researchers have been careful to acknowledge the intertwining of home and centre-based variables but this does not make it easier to track findings that tend to differ at each data collection point, and which have often been reported as single ANOVA effects, or controlled for only one or two variables.

Given these limitations, we know that early childhood education in NZ can have positive cognitive outcomes for some children, but consistent with international research, such effects are strongest in centres of good quality and when parenting, as measured by socioeconomic and parent qualification variables, is supportive of educational outcomes. The 8-year-old findings from the Competent Children study (Wylie, Thompson & Lythe, 1999) gain credence from their consistency with the large-scale UK EPPE study findings for children of a similar age group, with respect to impact on cognitive measures of literacy and numeracy, influence of socioeconomic variables, and non-cognitive outcomes such as perseverance and individual responsibility. Family variables are the main factors associated with differences in competencies in the NZ and UK studies. Little is recorded about long-term outcomes for Maori and Pasifika children but I did locate a positive clue about immersion programmes from *Nga Haeata Matauranga - The Annual Report on Maori Education (2006/7)* - year 11 students attending Maori schools achieved higher NCEA attainment rates than those attending English language schools⁸. Such results possibly help to address the question about the outcomes of a *Kohanga Reo* education. However, longitudinal information about transition to *Kaupapa Maori* schools and the socioeconomic distribution of graduates of immersion centres and schools are likely influences on this indirect type of outcomes data. Currently, there is an empirical gap about such variables.

A further set of studies comprises small-scale qualitative studies that define outcomes as *process variables*, or in socioeconomic terms 'participation practices'. Much of this work has been conducted by early childhood postgraduate researchers, often stimulated by *Te Whariki* to explore aspects of teaching and learning in early childhood settings (e.g., Brennan, 2005; Hedges, 2007; Jordan, 2003). The Ministry of Education's Centre of Innovation (COI) programme has also had the effect of guiding teacher-researchers into process research (see

⁸ www.educationcounts.govt.nz/publications/series/5851/16867

Meade, 2007), as has the Ministry's Teaching-Learning Research Initiative (TLRI) funding. These studies have been stimulated to a large extent by the need to explore ways of working with the *Te Whariki* curriculum, which itself is process oriented. *Te Whariki* largely defines learning outcomes in terms of processes, summarised as dispositions and working theories, so it is not surprising that research has followed this lead. The poststructuralist and sociocultural perspectives that underpin *Te Whariki* (Loveridge & McLachlan, 2008) have further guided researchers towards a focus on processes rather than measurable outcomes. These studies yield rich data on the learning experiences of small numbers of participants, and provide practitioners with insight into teaching-learning variables, particularly their pedagogical role. However, the findings of the qualitative process outcome studies do not as yet provide a robust base for predicting longer-term outcomes as follow-up to achievement outcomes in school settings is rare. This limitation has much to do with the nature of postgraduate research, which typically encompasses a relatively short time line but arguably also reflects a long-held belief in early childhood that provisions should enrich the development and learning of children at preschool, rather than focus on preparation for school. Perhaps inadvertently the sociocultural-historical perspective that schools should be prepared for children, not the other way round, has strengthened this view point.

A second type of process study involves *parenting variables*. While, strictly speaking outside this paper's focus on student outcomes, it is not sensible to exclude parent/caregiver variables particularly in the early childhood years. The early childhood years are arguably the stage at which the child is most vulnerable to the effects of parenting. Moreover, the sociocultural perspective foregrounded in recent interpretations of *Te Whariki*, as well as the voice of Maori, Pasifika peoples and others, makes it essential to view the child in relation to family, whanau and community. The ability of the community early childhood centre to assist with building social capital has been noted in three studies (Duncan, Bowden & Smith, 2005; Powell, Cullen, Adams, Duncan & Marshall, 2005; Thesing Winks, 2006). As with the teaching-learning process studies, it is assumed that increases in social capital impact positively on parenting and hence, outcomes for children.

A further cluster of studies describes *intermediate outcomes*, identified on the basis of the logic model (Rogers, 2003, 2005) adopted by the Ministry of Education to assess the impact of the 10-year Strategic Plan. This work conducted as contract research or drawing upon the Ministry's annual statistics for ECE reports on progress towards the Strategic Plan's core goals of increasing participation, improving quality services, and promoting collaborative relationships. Each of these goals is assumed to relate to improved outcomes for children. An impressive array of reports is now providing a 'big picture' of the intermediate effects of the Labour government's early childhood policies.⁹ These reports indicate that some progress is being made towards the core goals but that unevenness is still present across the country and particularly in areas of social disadvantage¹⁰. The evaluation of Promoting Participation Project (PPP) in Maori and Pasifika communities reports that the degree to which targets were met across regions varied widely although it is encouraging that some instances of community capacity building were noted (Dixon, Widdowson, Meagher-Lundberg, Airini & McMurchy-Pilkington, 2007). Mitchell and Hodgen (2008) reported that centre-based variables believed to affect outcomes for children's learning foundations, such as assessment for learning, self review, teachers' understanding of *Te Whariki*, and teacher qualifications, have improved. However, quality remains uneven across centres and there are inequities of access.

A search of the Ministry statistics indicators reveals the continuing existence of ethnic disparities in attendance (footnote 9). In 2000 91% of new entrants reported prior ECE attendance. By 2007 the figure had increased to 94.7% overall, but European/Pakeha children had the highest rate of prior attendance (98.2%), followed by Asian (96%), Maori (90.6%),

⁹ See www.educationcounts.govt.nz

¹⁰ See also Statement of Intent 2008-2013, www.minedu.govt.nz

and Pasifika (84.4%). There is also a clear relationship between school decile (SE mix) and attendance, with the lowest decile at 83.1% prior ECE attendance.

Other reports emphasise the value of monitoring systemic changes to identify uneven or unexpected outcomes. For example, the equity funding policy is having positive effects for three of its four target groups – centres catering for children in low socioeconomic areas, with language other than English, and from non-English speaking backgrounds. The policy has been less effective for the fourth target group, children with special needs (Mitchell, Royal Tangaere, Mara & Wylie, 2006). A report on the early effects of the 20 hours free ECE for 4-year-olds (introduced 1 July 2007) indicates a decrease in playcentre attendance although this has occurred unevenly across regions. In urban areas where free access is likely to be available, playcentre rolls were more likely to have fallen than in rural and minor urban areas with fewer service options (Morrison, 2008). Although complicated by the overall decrease in playcentres, assumed to relate partly to difficulty meeting licensing requirements, the impact of the free ECE policy has highlighted the continuing issue of lack of parent choice in some regions.

Can we tell?

Are we able to assess the outcomes of NZ's early childhood initiatives using this national evidence base? The national data suggest that NZ's slim evidence is in line with international outcomes findings but that there are considerable gaps in the available evidence. The Ministry data on intermediate outcomes indicate a pattern of movement towards the Strategic Plan goals despite unevenness of implementation across and within regions. Given the progress that is documented, the persistence of 'hard-to-reach' children and families, and the inevitable time it takes to bring about change in centres and other agencies, should not discourage current policy. Nevertheless, the consideration of the NZ context involves more than just policy. The interface of policy, research and practice is of central significance in the trajectory of early childhood education. On the whole this interface has worked well for the sector during the *Te Whariki* era but it also complicates the quest for outcomes. My central argument is that the synchrony of Ministry funding for key researchers and developments within the field has contributed to an apparent coherence across policy, research and practice which could have the effect of discouraging the use of some effective practices for improving outcomes for children. This risk seems particularly salient in a small country with a national curriculum, a small researcher population, and in a sector known for its commitment and positive ethos. To illustrate this point I need to consider the significance of New Zealand's early childhood curriculum.

The launch of *Te Whariki* in 1996 generated an impressive amount of Ministry-funded research and development activity aimed at supporting teachers to work effectively with the new curriculum. Its most recent resource, the early childhood assessment exemplars, *Kei tua o te pae: Assessment for learning* (2005), was developed to complement the *Te Whariki* curriculum. The *Te Whariki* curriculum has attracted positive international attention for its focus on diversity and associated research initiatives to develop a sociocultural pedagogy.

Te Whariki is ideologically driven rather than evidence based. Its outcomes are couched in terms of broad outcomes for children – well-being, belonging, contribution, communication, and exploration, each of which corresponds to a Maori strand. The curriculum is bicultural and its framework – the strands, and the principle of empowerment were contributed by Maori through the consultative process (Te One, 2003). The Maori section of *Te Whariki* is parallel to the English version, not a translation, while a third version is used in Maori immersion programmes (See Reedy, 2003). Sarah Te One (2003) argues that the conceptual framework of *Te Whariki* interweaves educational theory, political ideology, and a profound acknowledgement of the importance of culture. Others argue there is little specification of how to move from strands and goals to curriculum content (Brostrom, 2003; Cullen, 2003).

Teachers therefore have considerable autonomy in their use of the curriculum and also considerable potential for undervaluing the theoretical underpinnings of *Te Whariki*. Because *Te Whariki* is principled rather than prescriptive it relies heavily on teacher qualities to guide teaching practices. Hence it attracts an ideological commitment from teachers, rather than a primary focus on programmes that are grounded in evidence of children's learning. The narrative assessment approach that complements *Te Whariki* is holistic, strength and interests-based, rather than skills or content-based, meaning that assessment may also depend critically on the teachers' ability to notice what particular skills and content are relevant to children's interests. While at its best narrative assessment does build on evidence of children's learning, the systematic follow-up of specific goals for a child can be a distinct challenge given the holistic, and possibly incidental nature of narrative records (or learning stories).

I have suggested elsewhere (Cullen, 2007) that use of key researchers in curriculum initiatives could have the unintended effect that early childhood programmes are neglecting the robust international evidence on literacy learning in early childhood. This became evident as I explored the teacher handbooks and other Ministry documentation relating to literacy learning across the early childhood and early school years. I argued that the use of the term 'emergent literacy' for the beginning stage of reading in the primary school, which evolved from the research of Marie Clay, founder of Reading Recovery methods, has allowed both new entrant and early childhood teachers to misunderstand and neglect some of the critical features of literacy learning that impact on formal literacy education in the primary school. The granting of Ministry contracts to selected researchers then served to sustain the emergent literacy concept long past its use-by date. Without entering into the skills versus whole language debate it became apparent to me that the foregrounding of both culturally-grounded, co-constructivist theories of reading and the sociocultural philosophy of *Te Whariki* in curriculum contracts has worked to promote a low key, contextualised and incidental approach to literacy education that has failed to challenge the developmental concept of emergent literacy. The role of researchers is probably inadvertent in this regard, but nevertheless significant, because of the dominance of Ministry-funded research in curriculum development. Further:

... the foregrounding of some key researchers, in recent years, accords with the Ministry's central concern of "delivering education that will result in more equitable outcomes for all students in schools" (Ministry of Education, 2003a, p. 9). The socialisation model of early literacy, espoused by McNaughton (1995, 2002), explicitly acknowledges diverse home literacy practices and meanings.

(Cullen, 2007, p. 120).

Over time the credit-based diversity narrative reflected in co-constructivist, sociocultural perspectives became a more dominant rhetoric for the Ministry of Education than the 'Closing the Gaps' terminology with its connotations of deficit thinking and homogenisation of Maori. Whether this shift in terminology was associated with or independent of the rise of socioculturally-based educational theories there is no doubt that the selective use of researchers for curriculum initiatives has influenced both curriculum and pedagogy. In the early childhood context the research work of Margaret Carr, co-director of *Te Whariki* and director of *Assessment for learning: Early childhood exemplars*, has been critical to the holistic, credit-based approach to curriculum and pedagogy that aims to enrich children's learning in its own right and not simply as a preparation for school.

I now suggest that this apparent coherence could limit the potential outcomes of early childhood education in New Zealand. Currently, New Zealand relies on international literature to bolster the limited evidence available in New Zealand yet chooses to be constrained by the nature of the curriculum, research, and policies that impact on provisions. This leaves early childhood education at risk of neglecting some important bodies of research that could inform practice and, consequently, outcomes for children (e.g., Bowman, Donovan

& Burns, 2000). In the case of early childhood literacy education, skills such as phonemic awareness and phonological processing have been de-emphasised in preference to cultural meanings. I do not suggest that social practices and meanings should be ignored but rather that the strategy of embedding skills teaching in meaningful contexts can be difficult for early childhood teachers who are not always well prepared for literacy education, and moreover are not encouraged to review skills systematically because of the current use of the holistic narrative assessment model. In this regard Sophie Alcock's doctoral research has demonstrated how the potential of young children's play with sounds and rhythms for early literacy education is not recognised by teachers (Alcock, Cullen & St George, 2007).

Te Whariki has been influential in guiding postgraduate and Ministry-funded teaching and learning studies most of which comprise qualitative research. The increased use of qualitative methods corresponds to their increasing respectability and use in academic research internationally. Qualitative methodology has the potential to illuminate the finer detail of teaching-learning episodes, and this strength has been recognised by the Ministry of Education's funding of the TLRI and COI research programmes. In this way the Ministry of Education as the dominant research funding agency in the early childhood sector has had a major impact on the resultant evidence base. It is notable also that Ministry-funded contracts such as those investigating intermediates outcomes of the Strategic Plan rely heavily on participant perceptions. Others adopt a case study approach which may yield richer data but are restricted to specific contexts. These data have a place but do not provide robust data on learning outcomes for all children. My point here is not to criticise the value of qualitative research but to raise the issue of what research is *not* being funded because of the dominant strategy to fund qualitative research. The UK SSLP evaluations have shown how the 'big picture' can differ from the sometimes glowing reports depicted in some smaller qualitative site evaluations that were funded in conjunction with the national evaluation.

When is a national longitudinal study that can track the outcomes of *Te Whariki* to be funded? When will we know the outcomes of an inclusive curriculum – for children with special needs, for those from low income and from culturally diverse backgrounds? Currently we do not have an evidence-based big picture although small-scale studies do give us clues along the way.

Policy, research and practice have been strongly linked in the post *Te Whariki* initiatives which have been marked by extensive consultation processes throughout the sector and by researchers who were sensitive to the diversity of early childhood services as well as the policy agenda. This feature of early childhood education in New Zealand has had a strong influence on its emergence as innovative sector. The notion of lifetime dispositions for learning, promoted through Margaret Carr's (2001) research, has contributed to stronger links with the core competencies in the revised national curriculum, and is also consistent with recommendations from contemporary international advocates for children (See Edgar & Edgar, 2008). Remarkably, it seemed to me at times the Ministry supported curriculum and pedagogical developments that must have appeared to its policy team far removed from a mainstream programme concerned with raising educational outcomes. Interestingly, the Ministry early childhood curriculum contract with Waikato University¹¹ required that the curriculum be prepared as a bicultural curriculum and with reference to a separate Maori immersion curriculum for the Kohanga Reo context, thereby setting the scene for the innovative strands and principles that differed so markedly from the prevailing developmental domains that were guiding practice at that time.

I have highlighted a strong coherence between policy, research and practice, but there is a related topic that has yet to mesh research with policy and practice as it has done in mainstream services. I refer here to the gap in knowledge about long-term outcomes of early

¹¹ Helen May, cited by Te One, 2003, p. 28

childhood immersion programmes. In the case of *Nga Kohanga Reo*, which are now into their third decade, this gap appears to have been legitimised on ideological grounds leaving an empirical gap in non-Maori understanding about their nature and contribution. The recent Ministry-funded evaluation of the implementation of *Kei Tua o te Pae: Assessment for Learning* reported that teachers' use of bicultural and Pasifika assessment practices was rare. With the majority of Maori children still attending non-Maori early childhood centres the nature and outcomes of *Kohanga* pedagogy and curriculum could be of considerable assistance to non-Maori teachers. The work of Jennie Ritchie (2008) illustrates how difficult it can be for non-Maori teachers to meet Maori cultural requirements in non-Maori services. Ritchie highlighted the distinction between complying with language regulations versus tiriti-based practices¹² that are less visible for those for whom Maori content is a compliance inserted within a dominant paradigm. It is unhelpful to attribute blame in this situation but it is worth observing that supportive Maori colleagues who share their cultural understandings could be the best form of professional learning. I reflect here on Arapere Royal Tangaere's (1997) dissemination of her work on learning Maori, and how much this has been used in teacher education. I think also of the Samoan cultural learning in the Wycliffe Nga Tamariki kindergarten COI, which occurred as Pakeha teachers strengthened their relationships with the Samoan parents, aide and children (Haworth et al., 2006). Collaboration and relationships help in professional learning as much they do with young children.

Does it matter?

Do we need to know the measurable outcomes of early childhood education?

This is of course an ambiguous question with various answers depending on the underlying view of the purpose of early education. Does it matter if we know the actual outcomes as inferred from quantifiable measures? This is the position that has become the justification for the economic rationalism underlying government early childhood policies in the developed world. An intermediate position could adopt an incremental view which holds that positive learning experiences in the early years provide children with a strong foundation for moving to formal education, acknowledging that family experiences and each subsequent educational setting contribute to long-term outcomes. This approach is evident in the Ministry's Statements of Intent, as well as the Mitchell et al. review which refers to the lifetime skill formation model proposed by economists Cunha, Heckman, Lochner and Masterov (2005). Overall, New Zealand's early childhood services seem on-track to support the incremental view of outcomes. Its centres and schools do not demonstrate extreme differences in quality and there are systems in place to support those that do.

A more extreme interpretation could discard reference to long-term outcomes if early childhood services are conceptualised as supporting the child in the here-and-now. From this stance, early childhood provisions would not be expected to solve societal problems. A counter argument could be that practitioners cannot meet the principles of *Te Whariki* if they are unresponsive to societal issues that impact on the daily lives of the children in their care. Nor can they engage with children as co-learners without respecting the funds of knowledge that children bring with them from diverse backgrounds. Does it then matter if children's programmes are predicated on ideological rather than empirical grounds: children's rights to be members of a society as children, rather than on their adult future?

Where do I stand in this debate? In a time when we may all have to restrict our wish lists because of economic constraints what do I consider to be important for the education of young children and how would I respond to the question 'does it matter?'

¹² Te Tiriti o Waitangi /Treaty of Waitangi

There is much in the history of the post *Before Five* reforms that maintains the mismatch between the constraints of publicly-funded and market-driven early childhood services and the current curriculum philosophies that favour localised diverse provisions. Early childhood personnel while welcoming increased funding have largely remained critical of policies that foreground productivity rather than rights of children, as children. In considering this conundrum I am much attracted to the wise words of Australian academics Don and Patricia Edgar (2008) in their recent book, *The new child: In search of smarter grown-ups*:

Most education policy is still driven by notions of investing in the futureAnd there's nothing wrong with that – every nation has to survive and thrive. But the goal of mastery, of not accepting any child's failure, should be driven by more than economic arguments. It should be driven by the goal of ensuring every citizen an informed, engaged and meaningful life, a goal of education for its own sake. (p.198)

Pragmatically, I believe that we will continue to need quality early childhood services and that quality control in the form of legislated requirements should be there to facilitate this. This was confirmed for me as I followed the debate surrounding the recent collapse of the ABC Learning childcare empire in Australia. Children and families need the assurance that centres meet established standards and are monitored. Possibly there could be more consultation about the monitoring criteria but in a diverse society there will continue to be debate that perceptions of quality are relative. I would also reconsider provisions for 'at risk' children and families. I do not believe this approach is necessarily deficit oriented if providers are sensitive to community profiles and the outcomes for children and families are positive. Consider for example, the work of Stuart McNaughton and his colleagues and research students at Auckland University who used culturally diverse parenting styles and practices as the basis of literacy education, rather than imposing mainstream values (e.g., Turoa, Wolfgramm, Tanielu & McNaughton, 2002). If I have a criticism of current government-sponsored targeted, family based initiatives, emanating from the Ministry of Social Development, this is that too often they exist on the periphery of the early childhood education sector. The conclusion from the 2008 SSLP evaluation in the UK that multi-agency approaches work best when embedded in well-functioning children's centres is perhaps something to be considered. As expensive restructuring is probably unviable in this uncertain era, perhaps too the *Te Whariki* strand of belonging needs revisiting, in order to generate much stronger working relationships with other community agencies and groups. The Strategic Plan has certainly signalled this direction.

My pragmatic gaze does not mean I am not concerned about potential outcomes for children *or* current ideologies. The absence of a strong NZ evidence base does not mean that NZ programmes should be clones of other countries where likely outcomes have been identified. NZ is entitled to have its own images of children, education and society and this to a large extent is what has occurred with systemic support for diversity and the *Te Whariki* curriculum. Of course we should prioritise a credit-based perspective on the social and cultural practices that children experience; that is now part of the culture of early childhood services and part of children's rights as members of New Zealand's bicultural and multi-cultural society.

But – I also believe that children deserve the full range of knowledge about effective teaching, and that this may just include a more systematic look at skills and content teaching than is current practice. This does not necessarily mean subjecting young children to overly formal programmes. NZ's academic and teacher researchers are accumulating a pedagogical knowledge base well suited to NZ conditions and I am sure that someone will work out how to do it – NZ's initiative isn't all about No. 8 fencing wire.

I also want educators who are knowledgeable about learning, who respect young children as learners and above all are themselves excited about learning and who interact with children in

ways that will strengthen children's motivation to learn. But – I also want systems, researchers and practitioners to take account of modern lifestyles. Not all children grow up in homes where they receive affection, or are even well fed. They may lack access to stimulating home environments or to adult-child interactions that support affective, language and cognitive developments. Alternatively they may experience positive home environments in conjunction with cultural practices that differ from the largely monolingual education system. For these reasons I suggest there is a continuing need to maintain awareness of the constraints on potential outcomes posed by the policy-research-practice nexus so that appropriate learning opportunities are provided for all children.

Finally, I could not conclude a paper on the interface of policy, research and practice in early childhood without referring to the extraordinary women who have worked in the field over the decades. This evocative quote from Kerry Bethell's doctoral thesis on the ideological origins of early kindergarten in Dunedin and Wellington, 1870-1913, highlights their determination:

... as the education of young children entered mainstream politics, a small but committed number of women teachers and educators took up the opportunities created over time to enter the political arena, in order to influence the direction of educational policy in Wellington. (Bethell, 2008, p. 295)

I believe it appropriate to conclude a lecture that honours the outstanding contribution of Dame Jean Herbison as an educational leader, to acknowledge the dedicated leaders (mostly, but not always women) who have taken up opportunities in practice, policy and more latterly research, and influenced the direction of early childhood education. The interface of policy, research and practice is very clear in New Zealand's early childhood system, and key figures – political advocates, practitioners, researchers, have all been foregrounded at different times. Their contribution is hard to quantify; perhaps that in itself is reason for having some faith in the intangible contributions of ECE.

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