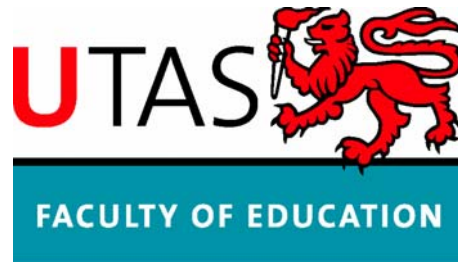


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Paper:

Positive Educational Gains in Kindergarten for Full-Day Children

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ABSTRACT

Nationally and internationally, there has been a heightened interest regarding the quality of educational provisions for young learners within kindergarten settings. To this end, in 2004 a study was undertaken to investigate the educational advantages for kindergarten children, associated with different attendance modes within Tasmanian schools. The study sourced quantitative data from results of the PIPS (Performance Indicators of Primary Schools) testing procedure, mandated by the Tasmanian Department of Education for all children at the commencement of their year in Prep, the year after kindergarten. Prep teachers from thirty eight (38) Tasmanian state schools, both primary and district high, provided data in response to a postal survey. Test scores, in the areas of early literacy and numeracy, were received for 884 Prep children. Results showed there were clear academic advantages for children, when commencing Prep, associated with having attended full-day sessions of kindergarten the previous year. When the children's PIPS scores were analysed according to the mode of kindergarten attendance undertaken, full-day students' results were statistically significant in maths ($p=.007$), in reading ($p=.045$) and in their overall total scores, (once maths, reading and phonics scores were combined; $p=.038$), when compared to half-day children's results.

INTRODUCTION

Within Tasmania, over the past decade, changes have occurred in the mode of attendance being offered for kindergarten children when they commence school. Increasingly, four and five year old children in Tasmania have been experiencing a move from four half-day sessions to two full-day sessions of kindergarten each week, with many parents and some teachers supporting this changed provision. Boardman (2001) revealed that Tasmanian kindergarten teachers reported increased pressure from many parties, especially parents, to move from half-day to full-day kindergarten provisions within their school. A 2002 study, involving parents of Tasmanian kindergarten children, revealed that the majority of parents supported full-day kindergarten attendance as it was convenient for family reasons and it was perceived as beneficial for children (Boardman & Kelly, 2002). Further, results from these two studies indicated that many teachers, and some parents, perceived there were academic advantages for children who attended full-day kindergarten sessions in the areas of readiness for future education. However, this data from the Tasmanian studies (2001-2003), although rich in nature did not supply statistically significant results concerning advantages associated with different kindergarten attendance modes, to inform the debate which was continuing across Tasmania. Thus a further investigation was deemed important.

Investigation of previous research seeking clarification of significant benefits for full-day attendees was undertaken in relation to research from the United States of America. These writings highlighted a positive relationship between children attending full-day kindergarten and later academic success (Cryan, Sheehan, Wiechel & Bandy-Hedden 1992; Tatum, 1999). Further, da Costa and Bell (2001) reported that full-day students experienced greater growth in pre-reading skills than their half-day counterparts. In addition, other researchers showed that children who had attended full-day kindergartens scored significantly higher in maths and reading (Gullo, 2000; Wang & Johnstone, 1999). Conversely, Hildebrand (2001) found no

significant differences in standardised maths and reading test scores between full and half-day students, whilst earlier studies by Karweit (1992) indicated there was limited evidence of the long-term benefits of full-day attendance, although she highlighted consistency in academic gains for children from materially and/or socially disadvantaged backgrounds. However, given the twelve months age disparity between kindergarten children in the United States and in Tasmania, no conclusive recommendations were able to be made from the American research regarding the academic advantages of either attendance provision for young Tasmanian kindergarten children. Therefore, the study reported in this paper was a further investigation of the Tasmanian full-day/half-day kindergarten debate which aimed to address this lacuna, and also focussed on providing reliable, factual quantitative data to add rigour to the debate.

Obtaining reliable data for the proposed study, whilst children are in kindergarten, can be (and to some extent in this case was) fraught with difficulties. Children of this age have limited skills in providing written information for analytical purposes, in the areas of early literacy and numeracy. Investigations of previous studies with four and five year olds undertaken in the United States of America revealed research practices founded upon one-on-one activities completed by each child in the presence of a researcher in the kindergarten settings. The financial impact of this mode of data gathering was not feasible for this study as a large cohort of children, considered to be representative of an entire Tasmanian kindergarten population, was to be the study's focus. In addition, given the busy nature of schools at the end of each school year, it was deemed inappropriate to attempt any research in kindergartens when teachers are undertaking reporting to parents and engaged in end of year celebrations. It was considered advantageous to undertake the data gathering procedures at the commencement of the children's year in Prep, for the following reasons. Firstly, the availability of reliable data (sourced from the Tasmanian Department of Education) from the Performance Indicators for Primary Schools (PIPS) assessment procedure, conducted with all children at the commencement of their year in Prep, was considered advantageous. The results of the PIPS tests, the content of which is to ascertain the academic development of children in the areas of early literacy and numeracy following their year in Kindergarten, are considered to be of great value to this study. Secondly, the fact that all Tasmanian children are tested using the same test over the same period of time was seen as highly beneficial in adding reliability and validity to the proposed study. Therefore, the research project aimed to investigate the academic development/progress of five and six year old students in Tasmanian state schools, in the area of early literacy and numeracy, at the commencement of their year in Prep (following their previous year in kindergarten), in respect to their kindergarten attendance mode (full-days or half-days) the previous year.

METHOD FOR THE STUDY

The study employed a two-pronged data gathering process, utilising focus group interviews and questionnaires, which were designed to seek qualitative and quantitative data. The study's population comprised Prep children and their teachers from state schools in three of the six state school districts in Tasmania. Permission for participation by each Prep class and teacher was initially sought from school principals, prior to communication with the teachers. A total of 884 students' results from 38 primary or district high schools, in urban, rural and isolated locations, were sourced for this study.

Quantitative data obtained, via postal surveys, related to Prep children's level of competence in the areas of early literacy and numeracy utilising the PIPS test results. This data gathering process was seen to be efficient, in the terms of the number of children who could be surveyed within an cost-effective time-frame (Burns, 2000; Thomas, 2003). During April to May 2004, Prep teachers were asked to complete a set questionnaire which had been designed to provide relevant information for each child from the PIPS test results. The questionnaire also sought details related to the mode of kindergarten attendance undertaken by each child in 2003.

Analysis of the questionnaire data, involving records for 884 Prep children, was a complex process with each set of information from the questionnaires being entered into an Excel spreadsheet, where it was summarised and reduced to allow distribution of the variables to be shown. Following this, the data were imported into the statistical program Statview, allowing descriptive and inferential analysis to be undertaken. This was seen as providing 'precise information' (Thomas, 2003, p.50) which enabled correlations between variables to be expressed in a statistical form.

During August 2004, focus group interviews were undertaken with three groups of self-nominated Prep teachers (n=5-8 participants per interview), from the three educational districts involved. This approach allowed Prep teachers at all three school districts equal opportunity to participate. These interviews, which were audio-taped, allowed the researcher to ask key questions of each group of respondents, providing opportunities for negotiation, discussion, and expansion of responses (Hitchcock & Hughes, 1995). Data from the interviews were transcribed and then coded using the constant comparative method of analysis (Merriam, 1998), where one segment of data was compared with another to determine similarities and differences.

RESULTS FROM THE STUDY

Results received from the survey data were considered in relation to the modes of kindergarten attendance, full-day or half-day, the children had undertaken in 2003. The results received for their first PIPS maths, reading, phonics and total (maths + reading+ phonics) score were also investigated and are summarised below. It should be noted that the higher the score received by the children, the better their results.

Maths Results from PIPS testing

When the raw scores for the PIPS maths results were analysed (see Table 1) it was found that half-day children (32.71) scored a mean score of 2.3 lower than their full-day peers (35.01), who scored higher than the total mean score (33.57) for maths when both sets of results were considered.

PIPS Maths' Scores Considering Children's Kindergarten Attendance Mode	
	Mean Score
full day children (n=536)	35.01
half day children (n=287)	32.71
Total	33.57

Table 1: Comparison of Maths' Raw Scores Considering Children's Attendance Mode of Kindergarten

When Scheffe post hoc statistical analysis was undertaken (see Table 2), it was evident that there was a statistically significant result of $p=.007$ between full-day and half-day kindergarten children's raw maths results.

Statistical Results of Maths' Scores Considering Children's Kindergarten Attendance Mode		
	Mean score difference	<i>p</i> value
full day, half-day children	2.30	.007

Table 2: Statistical Analysis of Maths' Raw Scores Considering Children's Attendance Mode of Kindergarten

Reading Results from PIPS

When considering the results of the PIPS raw reading scores (see Table 3), it was found that the full-day children scored the highest mean of 48.55, which was 4.75 points higher than the half-day children's mean score of 43.80.

PIPS Reading Scores Considering Kindergarten Attendance Mode	
	Mean Score
full day children	48.55
half day children	43.80
Total	46.18

Table 3: Comparison of Reading Raw Scores Considering Children's Attendance Mode of Kindergarten

Statistical Scheffe post hoc analysis of the PIPS raw score reading results (see Table 4) revealed that there was a statistically significant result, of .045, between the results of full-day and half-day children.

Statistical Results of Reading Scores Considering Kindergarten Attendance Mode		
	Mean score difference	<i>p</i> value
full day, half-day children	4.75	.045

Table 4: Statistical Analysis of Reading Raw Scores Considering Children's Attendance Mode of Kindergarten

Phonics Results from PIPS testing

The results from the phonics section of the PIPS test showed little difference between each group's mean raw scores (12.23 = half-day children; 12.01= full-day attendees).

PIPS Phonics Scores Considering Kindergarten Attendance Mode	
	Mean Score
full day children	12.01
half day children	12.23
Total	12.12

Table 5: Comparison of Phonics Raw Scores Considering Children's Attendance Mode of Kindergarten

No statically significant results (see Table 6) were found when scores from the phonics testing were considered comparing the two modes of kindergarten attendance.

Statistical Results of Phonics Scores Considering Kindergarten Attendance Mode		
	Mean score difference	<i>p</i> value
full day, half-day children	-0.22	.890

Table 6: Statistical Analysis of Phonics' Raw Scores Considering Children's Attendance Mode of Kindergarten

Total Results from PIPS testing

When the total score results (see Table 7) for phonics, maths and reading were analysed it was found that there was a statistically significant result of $p=.038$, between the total scores of full-day and half-day children, with there being a mean difference in scores of 6.82.

Statistical Results of Maths, Reading & Phonics Scores Considering Kindergarten Attendance Mode		
	Mean score difference	<i>p</i> value
full day, half-day children	6.82	.038

** Results for totals may not agree with results for individual cells because of missing values for split variables*

Table 7: Statistical Analysis of Maths, Reading and Phonics Raw Scores Considering Children's Attendance Mode of Kindergarten

DISCUSSION OF THE FINDINGS

In presenting a discussion on the findings of this study, it is important to consider the data received from Prep teachers in the focus group interviews. Those teachers were asked to respond to key findings from the quantitative results of this study (which revealed that there were clear academic advantages for children, when commencing Prep, associated with attending full-day sessions of kindergarten the previous year). Each of these issues will now be discussed.

Exploring the reasons behind why full-day kindergarten children achieved statistically higher results in maths than their counterparts in half-day kindergarten

When Prep teachers were asked to provide explanations as to why full-day students' PIPS results were statistically significant in maths ($p=.007$), they provided some noteworthy perspectives. To begin with, two groups of participants considered that a more formal, structured approach to the provision of a learning program was being undertaken by teachers in the area of maths in full-day sessions of kindergarten. Most teachers argued that by contrast, half-day teachers have to plan a more incidental approach to maths teaching and learning, owing to the shorter blocks of time available to cover so many aspects within the learning program. Teachers remarked that kindergarten teachers in half-day sessions often, in effect, have to say *"We will have this little block when I will actually do some literacy. I will have this little block when I actually will do maths"*. However, teachers pointed out that the 'reality' of a kindergarten means such planning is often not adhered to as many incidental aspects arise within the two hours in which children are at school. In addition, planned activities often have to be 'shelved' to deal with unforeseen issues. If this is occurring across many kindergarten sites it may well be one reason why half-day children received significantly lower results than their full-day counterparts. In other words, if teachers are not getting chances to actually spend specific time addressing maths, and are relying on an incidental approach to this essential aspect of early learning, there may be learning consequences for children.

In addition, a teacher commented that because she perceived there was a greater focus on literacy within the State, half-day teachers may be concentrating less on maths teaching to focus on literacy. This interviewee went on to say that she believed *"There's an expectation from the Department of Education that better results will be obtained by children in literacy than numeracy"*. If this is a view held by many teachers of

kindergarten then it could be assumed they would opt to undertake literacy teaching, rather than numeracy, if pressed for time, once again providing a potential reason for the lower results for half-day children.

Interview participants maintained that full-day kindergarten teachers know they have all day to cover various aspects of the educational program, thus they tend to take a more structured, compartmentalised approach to planning. In turn, this results in teachers planning specific maths-based challenges for children. As two interviewees commented:

"It is pretty structured because ...they only come for the two full days".

"I think you try and fit more in because you don't see them as often"..

The interviewees stated that the difference between full-day and half-day maths PIPS test results could well be attributed to the nature and specificity of teaching maths in kindergarten, as teachers observed:

"It is about how you structure your day and what you fit in your day".

"Maybe the full-day [teacher] structures the program more than a half-day person".

"...in the whole day program you actually make time for it [maths] - you consciously make time".

Further, interviewees maintained that in full-day sessions of kindergarten, teachers have more time to sit and work on specific maths-related issues with small groups of children. This practice is applauded by Seefeldt and Wasik (2002) who observe it is important "for teachers to explicitly explain and demonstrate concepts"... and also "to take advantage of the opportunities that present themselves and find teachable moments to reinforce math concepts" (p. 254). Moreover, teachers stated full-day kindergarten sessions have the potential to also allow young children blocks of uninterrupted time to undertake problem-solving, exploration, and discovery pathways in their learning. As one teacher pointed out:

"When you have your full-day kinder, I think they have more time to sit and explore things", whilst a further two teachers from another interview group commented:

"You try to get through things quicker with half-days and don't give them time to...."

"They don't have time to explore, have (sic) they?"

"Yes, no time to explore, problem solve and that on their own". Seefeldt and Wasik (2002) support the importance of problem solving within the kindergarten learning program and note that "problem solving is a hallmark mathematical activity and a significant means of developing mathematical knowledge" (p.254).

Exploring possible causes behind full-day children' statistically higher PIPS results in reading when compared to their half-day peers

During the focus group interviews, teachers were asked to consider possible reasons why full-day children in kindergarten had achieved statistically higher results in reading ($p=.045$) than their half-day counterparts. Teachers had limited explanations for this discrepancy, but the one reason provided most frequently concerned the issue of quality morning time for learning in full-day sessions of kindergarten. Also they highlighted the fact that full-day teachers may have greater opportunities to not only read stories to the whole group, but to small groups of children, including one-on-one interaction and tutoring. In addition, teachers suggested that, because of the longer length of the session, there may be more opportunities to discuss literacy aspects in relation to each text read, without feeling constrained by the shortage of time.

Teachers also contended that in full-day kindergarten sessions there is time for children to engage in uninterrupted blocks of play. It is during such play times, Arthur (2003) asserts, that young children “will often show reading behaviours... (because) children feel safe and secure and willing to take risks. They will often have a go at reading and writing as it is part of pretending to be a bus driver or doctor” (p.15). This link between children’s play and their acquisition of early literacy skills is another crucial issue for consideration. Full-day kindergarten sessions provide blocks of uninterrupted, quality time for play and thus could have the potential to enhance the emerging reading skills of young learners within this less pressured time context. Could this be a significant variable between full-day and half-day children’ PIPS results in reading?

Another perspective posited by one teacher, related to the fact that many of the children who attend full-day sessions of kindergarten are also enrolled in child-care centres (during the days of the week when they are not at kindergarten, as their parent/s work full-time). That teacher had previously worked in child-care and so her observations were noteworthy.

“If they were full-day children in kindergarten then they have often been to childcare... they would experience a wide range of learning experiences – prior learning experiences which, we know, assist children in their learning...they do read stories and they do sing songs”. Could it be that many full-day children are exposed to ‘dual’ early literacy experiences at kindergarten and child-care? Could this be the central link in explaining the difference in the PIPS results between children when they commence Prep?

Exploring possible reasons for the lack of statistically significant PIPS phonics’ results between all groups of kindergarten children

Teachers suggested that a possible cause for there being no significant results in the area of phonics in the PIPS test could be that phonics is an integral component of all kindergarten teachers’ programs in Tasmanian schools. The researcher has observed when visiting kindergartens across the State that there is usually a pictorial alphabet displayed prominently within the learning environment. Moreover, it is not uncommon to see a focus letter of the week in a kindergarten classroom, with children bringing items from home for the completion of a class display. As one teacher commented *“All teachers spend time focussing on letters of the alphabet”.* That teacher went on to suggest this came about because all teachers, regardless of the type of kindergarten session offered at the school, focus on children learning how to write and recognise their own name, as *“...it is part of the cognitive things you focus on, I suppose like writing the name, (and) one to one correspondence”.* Initially, she pointed out teachers focus on the starting letter of each child’s name and then move on to other letters of the alphabet. Furthermore, another teacher noted that the child needed to be able to write his/her own name, as it was a requirement of the Kindergarten Development Checklist. Thus teachers are unilaterally focussed on children achieving that marker, and to do so successfully, some understanding of the alphabet is essential. Indeed it is interesting to note that, overall, full-day children scored the lowest group-score for phonics in the PIPS (12.01) testing, when compared to half-day children (12.23), although no significant results were returned during statistical analysis.

Exploring possible explanations for the statistically significant differences in the total PIPS' scores of full-day and half-day kindergarten children

Teachers in the focus group interviews were asked to suggest reasons why there were statistically significant differences ($p=.038$), between half-day children's overall PIPS scores (in respect of their combined maths, reading and phonics scores) when compared to their full-day peers' scores. Initially, when teachers were informed of that result they expressed surprise, as evidenced in the following dialogue from one interview.

"That surprises me!"

"It amazes me!"

"It amazes me too!"

"I look at my 'half dayers' here. They are more settled because they had been used to coming in for four days".

"I felt too that they had engaged with – they had had more time to engage with the teacher and the aide and learn more!"

The teachers in all focus interview groups explored this difference in the children's results more fully and one group suggested there could be one straightforward reason behind this difference. Teachers posited that because half-day children come for shorter blocks of time they are attracted to spending a substantial portion of that time engaged in play-based activities, as play is the first thing children typically want to engage in when coming to school and being with their peers. As well, the teachers argued that there are so many new and stimulating resources to use within the kindergarten classroom that children's interest and motivation are drawn to play experiences and sustained throughout the entire half-day kindergarten session.

Conversely, full-day children have the time to play for extended times but they are then interested in looking for other challenges in which to participate: Teachers use this time to channel the children's interest into more teacher-directed learning experiences. One teacher noted:

"Full-day kinders still have time to play – but the learning program is balanced over the six hours each day they attend – they play – they have time for small groups and whole class experiences".

This is a sound view and may well be the case in a number of kindergartens. However, an opposing view was presented by one teacher who noted that in her school's full-day kindergarten, the situation was not like that.

She stated:

"Our kinder teacher... feels that the afternoon is pretty much a write off 'cos the kids are so tired and it is more of a play time. She actually feels that the half days get more bites at the cherry at the structured, formal small group type stuff. So the question must be asked regarding what has caused the difference in the children PIPS scores?"

A further issue raised by teachers was that of the amount of quality time available in full-day sessions of kindergarten for learning. As one participant observed, the children tend to do more formal group work in the morning when the children are alert and ready to learn.

"They tend to do that more in the mornings. So they would be in small groups and they would do their focus teaching and in the afternoons, it is much more of a quieter time". It is noted that previously the availability of

extra time for individual and small group instruction, was highlighted as a benefit of full-day programs in research by Elicker and Mathur (1997). Another teacher in the interviews commented:

"I guess the gross amount of work you do – the focus stuff you teach with your kinders is done in the morning whether it be full-day or half-day that is when it is done".

This aspect raises an important consideration: Could it be that half-day students are not attending school for sufficiently long blocks of time in the morning, when young children are energised and ready to learn, resulting in them being denied blocks of time to undertake deep investigation and exploration of early learning principles? In addition, this allocation of prime learning time issues, another variable highlighted by one teacher was that *"full-days get about two hours longer at school each week – because they come from 9.00am to 3.00pm"*. Half-day children, on the other hand, come for a maximum of ten contact hours. In Tasmania, decisions related to the timing of kindergarten sessions are left to senior staff on each school site. However, it must be queried whether there are schools that are offering half-day kindergarten sessions where, in the worst scenario, children only attend four afternoons a week, or one morning and three afternoons each week. If this is the case, then the timing of the half-day provision could well be impacting negatively on the PIPS results of half-day children.

Another viewpoint was presented by a teacher who contended that, in full-day kindergartens, teachers are planning a program that resembles a Prep program where blocks of time are allocated to early literacy and numeracy. The following dialogue captures this viewpoint about full-day program planning:

"It is pretty structured because they (children) only come for the two full days".

"And you would have planned for blocks of time".

"And I think you try to fit more in too, because you don't see them as often".

However, this teacher's viewpoint should not be supported. Planning a learning program in a manner more suited to older children must not be seen as appropriate for younger four and five year old learners in kindergarten. As Seefeldt and Wasik (2002) point out the learning program must "meet children's needs to learn through play and their physical, social and mental activity, and to make plans and decisions"(p. 83). A learning program that is totally structured and teacher-directed for children of this age is seen as inappropriate professional practice. Children deserve and need the best teaching practices, for, as Seefeldt and Wasik (2002) note, referring to the work of Kagan (1999), "our society has placed great expectations on children's kindergarten experiences. The belief that early educational experiences can affect children's future academic achievement and success in school is strong" (p.144). This pressure, from society in general, has also been juxtaposed with a loss of teachers who have specialised in kindergarten education, misconceptions about how young children learn, and powerful commercial enterprises marketing educational materials for young learners, which are often unsuitable (Meyer, 2001). These contextual aspects have resulted in what Beaty and Pratt (2003) describe as "an emerging dichotomy in what kindergarten is supposed to be and do" (p.144). These authors go on to say that kindergarten has traditionally been seen as a place to meet the needs of children, yet, increasingly kindergarten is becoming a place that emphasises the transition and preparation of children for formalised learning. A similar position can be drawn from talking with Tasmanian kindergarten teachers, who, whilst feeling the downward press of academic expectations from the Department of Education and experiencing dilemmas associated with the implementation of a new curriculum, *Essential Learnings*

Framework, are striving to meet the needs of young learners. However, this challenge is problematic for the most expert and experienced teachers, let alone those teachers who are struggling to bring a pedagogically-sound philosophy to the education of young children. This point is supported by a study undertaken by Nankervis (2005) who found that teachers with less than five years' teaching experience on kindergarten were more amenable to taking a more formalised approach to kindergarten teaching.

CONCLUSIONS

This study has raised some important issues related to the educational provision of young kindergarten children. It is evident from the representative sample of Tasmanian kindergarten children (n=884) involved in this study that the overall PIPS scores for full-day children were statistically higher than their half-day counterparts. Teachers' insights into the possible reasons for these results have, in part, been noted in this article. The teachers' opinions appear to be centred on issues such as the nature of the planning for, and the structure and provision of, the kindergarten learning program; the use of available time; and the total length of time available to each type of kindergarten. These results are an important finding and support research from the United States of America (Cryan et al, 1992; da Costa & Bell, 2001; Gullo, 2000; Tantum, 1999; Wang & Johnstone, 1999). This is a noteworthy finding as kindergarten children from the United States of America are twelve months older than their Tasmanian peers. However, in this Tasmanian study it does not seem to have made any significant difference as both groups of full-day children scored higher academic results than those children who attend half-days of kindergarten.

The academic advantage from full-day attendance at kindergarten supports previous Tasmanian research undertaken by Boardman (2001) and Boardman and Kelly (2002) which indicated that some teachers and a number of parents of kindergarten children perceived there were academic benefits for children enrolled in full-days sessions of kindergarten, in the area of preparation for children's future education. Nevertheless, kindergarten is not solely about the academic preparation of children. There are many other vital issues which must be addressed in that kindergarten year, including children's motor development (fine and gross skills), their personal growth (including self-concept, independence, concentration), and social interaction skills (including working and playing cooperatively with peers; accepting others; developing peer relationships with others). As Elicker and Mathur (1997) contend "play and socialisation (have taken) a back seat to preparation for an increasingly rigorous first grade curriculum" (p.460). It is hoped that this is not the case in Tasmanian kindergartens as the publication of the *Essential Connections* (Department of Education, 2004) materials certainly heralds a new perspective for the early year's curriculum.

In conclusion, a caution must also be given in relation to findings from this study at this point, the academic advantage shown in this study for full-day kindergarten children may not have long-term advantages for children. To ascertain the lasting nature of the academic gains made by children in full-day sessions of kindergarten further research (through the means of a longitudinal study tracking children through their prep, grade 1 and grade 2 years of schooling) would be needed. Previously, insights into the lasting benefits of full-day attendance at kindergarten have been shown in North American research conducted by Karweit (1992) who found that long-term benefits were forthcoming for students who came from disadvantaged backgrounds. Conversely, in an earlier longitudinal study, Koopmans (1991) found that "all-day children make a better start

(to school) than their half-day peers. Over time, it appears ... that the all-day advantage loses its significance" (p.17). Nonetheless, in the Tasmanian context, there is now reliable, statistically significant evidence to suggest full-day kindergarten arrangements provide a strong impetus to the academic achievements of young learners when they commence full-time schooling in Prep.

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