

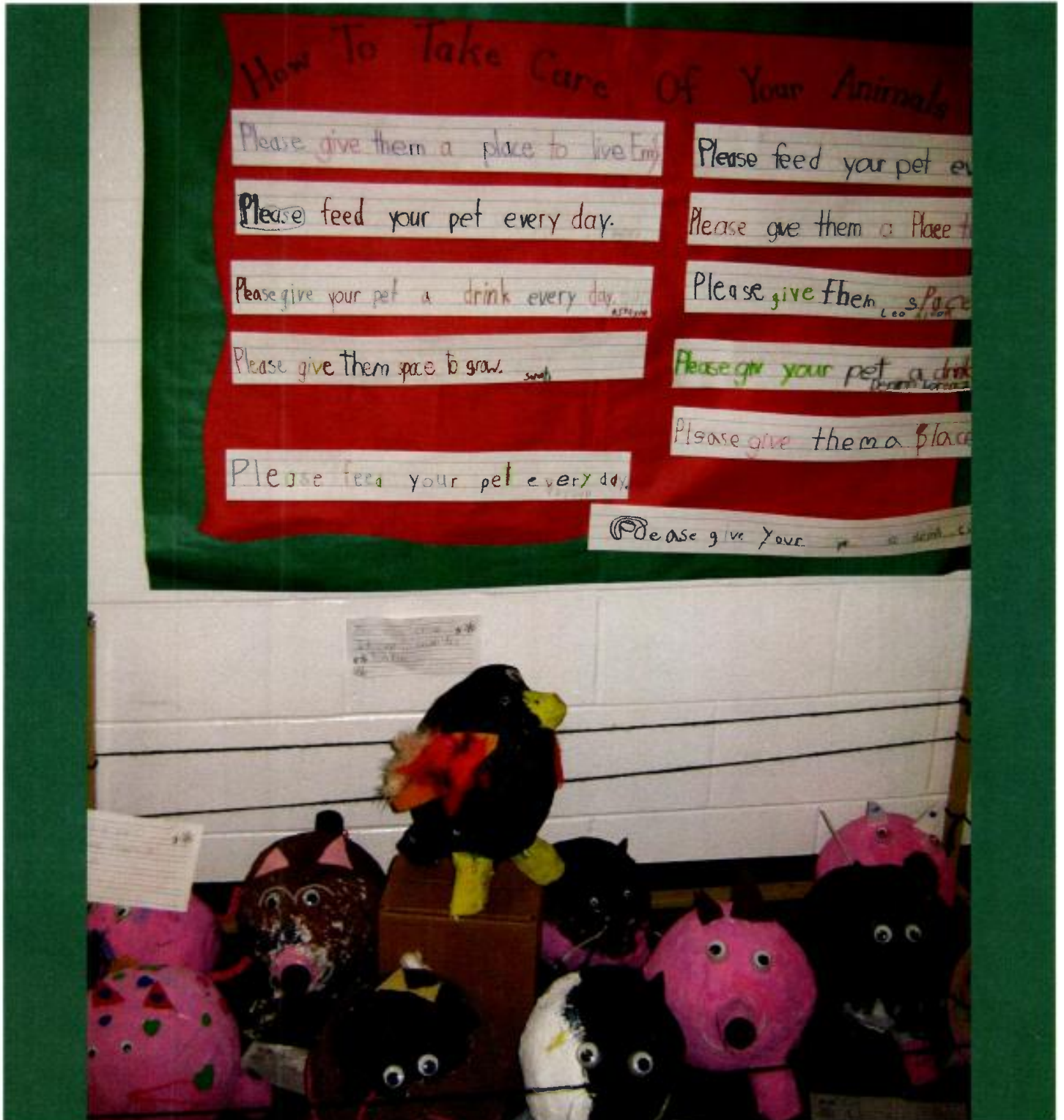


Early Childhood Education

The official journal of the Early Childhood Education Council of The Alberta Teachers' Association

Volume 39, Number 2

2011



Early Childhood Education is the official journal of the Early Childhood Education Council (ECEC) of The Alberta Teachers' Association (ATA). The journal assists the ECEC to achieve its objective of improving practice in early childhood education by publishing articles that increase the professional knowledge and understanding of teachers, administrators and other educationists involved in early childhood education. The journal seeks to stimulate thinking, to explore new ideas and to offer various points of view. It serves to promote the convictions of the ECEC about early childhood education.

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Early Childhood Education is indexed in the Canadian Education Index.

On the cover: At Florence MacDougall Community School in High Level, Grade 1 students excel with hands-on learning! While learning about domestic animals, papier-mâché farm animals were created and a farm constructed. Their teacher, Jane Rosenberger, facilitates the students' understanding of new vocabulary and concepts by exploring themes over an extended period of time, weaving in many cross-curricular connections. She joined the Fort Vermilion School Division in 1994 and still loves watching her students learn.

From the Editor's Desk

Anna Kirova is a professor in the Department of Elementary Education, Faculty of Education, University of Alberta. She teaches courses in early childhood education in both the bachelor of education program and the master of elementary education (with specialization in early childhood) program. Her research interests include peer relationships and social inclusion of young children, particularly immigrant and refugee children; issues related to global migration and education; and collaborative arts-based research with children.

Once again, it is my pleasure to provide you with an issue of *Early Childhood Education*, the official journal of the ATA Early Childhood Education Council (ECEC). It begins with an overview of the research on the importance of full-day kindergarten, an issue of consideration by researchers and school boards across the province of Alberta, Canada and the United States. As part of the completion of her master's degree specializing in early learning at the University of Alberta, Joy de Nance thoroughly reviews the studies conducted on the topic and recommends policies on full-day kindergarten. The ECEC executive reviewed her recommendations and are currently drafting a position statement. Without the background work provided by Joy de Nance, the council would not have had the solid scientific bases for its position. Such work represents the direction the council has taken; that is, to serve as a bridge between theory and practice, and promote the role of early childhood educators as leaders.

This issue features yet another article written by Lee Makovichuk, a recent graduate of a master's program specializing in early learning in the Department of Elementary Education at the University of Alberta. Her paper explores the learning occurring in her kindergarten classroom provoked by the introduction of a penny jar. Her rich description of the use of the tools of pedagogical documentation in the exploration of mathematical concepts that would normally be considered too difficult for kindergarten children is compelling and engaging. Although learning such concepts as place value is important but may or may not happen in another kindergarten classroom, the culture of listening to children's questions and guiding their own curiosity and exploration is what any teacher can take away from the article. The use

of pedagogical documentation in our own Canadian context is an example of how ideas typically associated with the Reggio Emilia approach can and should be applied in a meaningful and creative way in everyday practice in local contexts.

This issue also offers a concrete example of a wraparound support in an early learning classroom that serves children from refugee and immigrant backgrounds. Donna May Ford and Rebecca Georgis, along with cultural brokers Mulki Ali, Sabah Tahir, Saida Khalif, Josephine Aroub and Kiki Ibrahim, provide a comprehensive picture of the needs of newcomer families and the amount of work the cultural brokers do, mostly behind the scene, to support these families in their transition to life in their host country. As the number of children from diverse cultural and linguistic backgrounds increases, many teachers feel overwhelmed by the difficulty of communicating the schools' expectations, routines and regulations to the parents and children. Some often feel that they are left to their own devices in addressing these families' needs and may feel discouraged if they do not see the immediate results of their efforts. This article reveals the complexities of these families' lives and highlights the role of cultural brokers in helping schools address their needs, and advocates for the ongoing involvement of cultural brokers in schools. Making provisions for wraparound services for newcomer families is not only a matter of social justice and equality but also about building Canada into a place where all people belong.

Although newcomer children go through a silent period while they are new to learning English or French as an additional language, the article by Debra Harwood and Po-Ling Bork discusses reasons for some children to become silent (that is, children with selective mutism) out of fear of being seen or heard speaking. This condition may occur as children enter kindergarten or another early childhood setting and can remain for several years. All early childhood educators must be aware of and utilize the pedagogical strategies, based on the Reggio Emilia approach, suggested by the authors if there is a child with selective mutism in their classroom.

Last but not least, in an article by Jonas A Cox, Charles V Salina and Fay C Mascher, a school-based study in Alberta suggests that environmental education, taught through place-based, experiential activities, builds environmental empathy and responsibility. The authors demonstrate how such

an approach with 5- and 6-year-old children results in expanding their awareness of the natural environment and increasing their empathy and respect for the natural world. Now, when the environmental concerns are amplified by the recent disasters that have global effect, all educators must adopt a proactive approach to environmental education and use any opportunity in their local contexts to teach a responsible and caring attitude toward the environment.

This issue also includes a book review of the book *Play* by Stuart Brown. Because the book will be presented as a gift to ECEC members, readers can

get a glimpse of the book by Rebecca Ghelfi's engaging review. Without stealing the pleasure of reading the book itself, Rebecca outlines the main points and shares with the reader why she finds the book important and enjoyable.

I would like to thank the authors for their invaluable contributions and the Editorial Review Committee for working with the authors to expand and deepen their ideas. As a collective effort of early childhood educators and researchers, *Early Childhood Education* is an important vehicle for change in the field. 🐾

—Anna Kiroua

Full-Day Kindergarten: An Overview of the Literature

Joy de Nance

Joy de Nance currently teaches two half-day kindergarten programs at a primary school in Calgary, Alberta. She has taught kindergarten in Calgary for 28 years in small and large schools with diverse populations. Lifelong learning has always been her passion, and it was that passion for learning and kindergarten that led her to completion of a master's degree with the early learning cohort at the University of Alberta in November 2010.

Abstract

Full-day kindergarten exists in some capacity in each province of Canada and is a common option for parents in the United States. Early studies suggest that full-day kindergarten produces many academic gains for young children; however, longitudinal studies indicate that, as the elementary years pass, the gains fade for average and above average students. This paper is a summary of the research on, interest in and perceived benefits of full-day kindergarten. Also discussed will be possible reasons for the lack of long-term benefits, questions arising from the research and educational policy recommendations.

Introduction

The Early Childhood Education Council (ECEC), a specialist council under the umbrella of the Alberta Teachers' Association, is an organization committed to the education of young children. To further this goal, ECEC requested a position paper to examine the

research and make recommendations on full-day kindergarten programming.

To facilitate the preparation of the position paper, this paper is a literature review of the research on full-day kindergarten. The review was part of the capping paper written as a master's of elementary education degree requirement at the University of Alberta. In this paper, I examine the reasoning behind and interest in full-day kindergarten, summarize the research on full-day kindergarten as it currently exists in Canada, Alberta and the United States, and provide suggestions for future directions for research and policy recommendations.

Full-Day Kindergarten: A Canadian Perspective

The *Early Childhood Education and Care in Canada Manual* (Beach et al 2009) provides a wealth of statistics on the state of kindergarten in Canada. Of the 10 provinces and three territories, kindergarten is compulsory in only Nova Scotia and New Brunswick. Provincial and territorial governments are responsible for the funding, direction and execution of kindergarten programming. A range of kindergarten attendance options exist across the country. From the 1980s to 2009, kindergarten attendance has swelled to include some four- but mostly five-year-old children across Canada. However, scheduling remains split between half-day and full-day options, which vary from province to province.

475 hours Half-day 2½ hours/day	Newfoundland, PEI, Manitoba, Saskatchewan, Alberta, Nunavut		
900 hours Full-day 5 hours/day	Nova Scotia, New Brunswick, Quebec	Ontario: 600 schools in September 2010, 200 more schools in 2011	British Columbia: half of eligible children in 2010, all in 2011
Both full- and half-day programs		Northwest Territories and Yukon (twice as many full as half) Alternate full-day not on consecutive days but several times per week	

Full-Day Kindergarten in Alberta: An Overview

In 2002 Alberta's Commission on Learning was established to provide a comprehensive review of Alberta's educational system. The Commission consulted with parents, teachers, school boards, educational experts and a variety of organizations and examined current research to establish a series of recommendations. The product of this review was the report *Every Child Learns. Every Child Succeeds* (Alberta's Commission on Learning 2003). Full-day kindergarten received a lot of attention in this report. Recommendation three was to "establish full-day kindergarten programs, ideally for all children, but as a first priority, for at-risk children" (pp 46–47). How have Alberta schools reacted to this suggestion?

In Alberta, kindergarten funding is for 475 hours of instructional time, which equates to a half-day program (approximately 2 1/2 hours per day). However, "the decision to offer full-day or junior kindergarten programs within a community is the decision of the local school authority, which has maximum flexibility to use their funds in whatever manner they choose" (Alberta Education 2010, 6–7). Full-day programming may include full-day (five hours), alternate full-day (every other day) and optional full-day kindergarten.

Examples of Alberta School Jurisdictions Currently Implementing Full-Day Kindergarten

As part of the comprehensive overview of the state of full-day kindergarten, I contacted several urban and rural school jurisdictions in January 2010 to inquire about their full- versus half-day options for kindergarten. I also examined public information

on school district websites. Although the survey was not scientific and its conclusions must be viewed as tentative, the rural and northern areas reported that they offer full-day kindergarten programming on alternate days because of transportation costs as opposed to any particular instructional reasons.

This was unexpected; the school districts' full-day programs were held up as a model for the province. I speculate the economic climate and the corresponding funding issues impacting education in Alberta might have affected their decision.

Reasons for the Pursuit of Full-Day Kindergarten

According to DeCicca (2005, 4) "the rationale for full-day kindergarten is simple: the more time children spend in school, the more they will learn." The interest in full-day kindergarten research was sparked by several societal and educational trends in the United States and Canada (Brewster and Railsback 2002; Cryan et al 1992; Elicker and Mathur 1997; Olsen and Zigler 1989; Vecchiotti 2003; Walston and West 2004).

- There are more single parents and dual-wage-earner families requiring extended child care (Baskett et al 2005; Brewster and Railsback 2002; Cooper et al 2010).
- Early language instruction for new immigrant children is thought to be the best way to set the stage for future academic success, and the extra time spent in kindergarten could be an effective way of meeting the needs of second language learners (Cooper et al 2010).
- Recent research shows large skill gaps between minority and nonminority children even before they enter kindergarten (Le et al 2006). Minority children come to school with lower literacy skills and poorer social development than white students (Le et al, p xi).

475 hours Half-day: 2½ hours/day	Red Deer Public SD No 104 Lethbridge SD No 51
Both half- and full-day 2½ hours/day or 475 hours/year 5 hours/day or 900 hours/year	Calgary SD No 19: half-day and 25 full-day locations in 2006/07 2010/11: 15 schools or 36 classrooms Programs offered for at-risk children Calgary RC Separate SD No 1: half-day and 22 schools with full-day—no mention of demographics Edmonton SD No 7: half-day and 25 full-day sites in 2010— at risk children Edmonton Catholic Separate SD No 7: half-day and 21 full-day sites in 2010/11—no mention of demographics Medicine Hat SD No 76— full-day since 2004 for all 2010. All schools offer a variety of half-day kindergarten programs, including alternating full-day and morning programs

- White (2006) suggests that the key to economic development and poverty alleviation is education. One of the national priorities for the United States and Canada has been to bridge the gap between the achievement levels of at-risk students and those from higher socioeconomic groups (Beach et al 2009; Brewster and Railsback 2002; Cooper et al 2010).
- According to da Costa (2008, 4), Canada and the United States, regardless of legislation, are offering full-day programming to “address the needs of children from socially and economically impoverished backgrounds.”

The Perceived Benefits of Full-Day Kindergarten Programming

“Doubling the time does not necessarily double program quality” (Weast 2001). However, the potential benefits of full-day kindergarten compared with half-day programs could include

- better academic skill development, reading readiness, language development (especially for non-English-speaking students);
- fewer grade retentions;
- an easier transition to first grade;
- lower child-care costs; and
- decreased future educational costs because of a reduced need for retention and remediation. (Cooper et al 2010; Eubanks 2006; Plucker et al 2004)

Early Studies: An Overview

Much of the research from the 1970s and 1980s involved short-term, one-year studies encompassing the kindergarten year. Sample sizes were small, and academic measures were the only outcomes. The results were mixed, but when there was a significant difference, it was in favour of the children enrolled in full-day programs (Puleo 1988). Puleo (1988) and Burriss (2000) criticized the early studies for their problems with internal and external validity. One trend did surface in spite of the suggested inadequacies and that was the evidence of positive academic and social benefits of full-day kindergarten for children from low socioeconomic or educationally disadvantaged backgrounds, considered at-risk children (Clark and Kirk 2000; Olsen and Zigler 1989).

Overall, the early studies show positive gains for full-day programs when achievement is tracked over the kindergarten year. More specifically, literacy gains were more significant than gains in math, but progress tended to slow after Grade 1 (Koopmans 1991).

ECLS-K Studies: An Overview

The US Department of Education embarked on an ambitious project called the Early Childhood Longitudinal Study, Kindergarten Class of 1998/99 or ECLS-K. As Rathbun and West (2004) explain, the ECLS-K employed a multistage, probability sample design in a nationally representative study of 22,782 children in private and public schools.

Kindergarten children registered in the fall of 1998 were followed through to the end of Grade 5, and information was collected from the children, families, teachers and the 1,277 schools attended. The plan called for waves of data in the areas of literacy, math and general knowledge, to be collected at the beginning and end of kindergarten, Grades 1, 3 and 5 (Le et al 2006).

The large sample includes English language learners and children from a variety of racial, ethnic and socioeconomic backgrounds. The data controls for child and family backgrounds and, appropriately weighted, is representative of the 3,866,000 kindergarten children enrolled in 1998/99 (Yan and Lin 2005).

Summary of the ECLS-K Studies

The ECLS-K studies (Cannon, Jacknowitz and Painter 2006; Chang and Singh 2008; DeCicca 2005; Le et al 2006; Lee et al 2006; Votruba-Drzal and Li-Grining 2008; Yan and Lin 2005) provide an opportunity for researchers to examine a stable and reliable sample of students in the United States over time. The data reflects earlier studies in that gains are obvious within the kindergarten year and fade as the children progress into primary school.

Caution is necessary in interpreting the results. First, the ECLS-K databank pertains to American demographic information and does not necessarily reflect the composition of the Canadian population. Second, the results were contradictory. Some researchers found benefits for at-risk or minority students (Lee et al 2006; Le et al 2006; Yan and Lin 2005); however, others, for example, DeCicca (2005) and Cannon, Jacknowitz and Painter (2006), found few gains for at-risk or minority students.

Additional Studies

This national sample utilizing waves of data from the United States is not representative of all the research accomplished in the decade from 2000 to 2010. Other researchers have explored full-day kindergarten using samples outside of the ECLS-K

studies. The vast majority of research in the next section of this literature review was conducted in the United States. However, although only five projects involve Canadian children, the results are similar to the US studies. The bulk of the studies have been divided into two groups: short-term studies (encompassing the kindergarten year) and longitudinal (within the elementary school years).

Summary of the Short-Term Studies

Results of short-term research (Baskett et al 2005; da Costa and Bell 2000; Hall-Kenyon, Bingham and Korth 2009; Hildebrand 2001; Kruse 2007; Zvoch, Reynolds and Parker 2008) comparing full-day kindergartens to half-day programs are consistent. The gains during the kindergarten year are stellar for all learners, particularly in the area of literacy. However, math gains do not match literacy gains. Based on the types of assessments used in these studies, many kindergarten programs spent much of their time engaged in literacy development. The majority of the short-term studies focused on the effects of a full-day kindergarten program on groups of children from socioeconomically or educationally challenged environments. Full-day programming appeared to benefit all learners; only Hildebrand (2001) did not make any judgments regarding the differences between middle- and low-income groups. According to the results from these short-term examples, full-day kindergarten would be a logical and educationally sound solution to increase the achievement levels, particularly in the area of literacy development, for all kindergarten-aged children. At-risk learners would reap the benefits of more time to learn. However, the short-term studies tell only one side of the story. The full-day or half-day kindergarten debate continues with the inclusion of studies from a longitudinal perspective. Are the gains seen in the kindergarten year maintained as the children progress through their elementary or primary school years?

Summary of the Longitudinal Studies

The results of this research mirror those found in the ECLS-K longitudinal studies; full-day programming produces excellent and significant gains in the kindergarten year, but the gains fade as the students progress through elementary school (Cannon, Jackowitz and Painter 2006; da Costa 2005/06, 2008; DeCicca 2005; Koopmans 1991; Le et al 2006; Saam and Nowak 2005; Wolgemuth

et al 2006; Votruba-Dzal and Li-Grining 2008; Zvoch 2009). The Medicine Hat kindergarten study demonstrated that students showed excellent gains up to Grade 3, but that study compared students to provincial averages from provincial tests as opposed to comparing full- and half-day kindergarten programs. Calgary SD No 19 compared the achievements of full-day students to those of regular at-risk (but not ELL) learners, ELL learners and special education codes, as opposed to comparing half-day to full-day programs.

Another highlight of the research on the full- and half-day kindergarten debate is that children considered to be at risk either socioeconomically or educationally benefit from full-day programming. The full-day program appears to narrow the achievement gap between disadvantaged and advantaged peers (Danysk and Xiang 2009; da Costa and Bell 2000; da Costa 2005/06, 2008; Kruse 2007; Le et al 2006; Lee et al 2006; Plucker et al 2004; Saam and Nowak 2005; Schroeder 2007; Yan and Lin 2005; Zvoch, Reynolds and Parker 2008). In contrast, “no study demonstrates academic advantages for children in half-day kindergarten” (Lee et al 2006, 175).

There are many hypotheses for the diminishing academic gains suggested in the research and, although not quantitatively proven, may provide insight into other confounding variables complicating the lives of our young learners and interfering with the learning process.

Reasons for the Lack of Long-Term Achievement Gains of Full-Day Kindergarten

As Koopmans (1991, 36) advises, “the lack of a long-term effect for the all-day groups could indicate that the circumstances under which learning takes place at the primary grades does not enable the all-day group to maintain their advantageous position.” Cooper et al (2010) propose several possibilities for the fade-out effect by Grade 3.

- “The effect of full-day kindergarten becomes a smaller and smaller influence as children accumulate more and more experiences in an academic setting” (p 64).
- Children receiving and benefitting from full-day kindergarten may not receive the same educational supports as half-day children receive, and the full-day advantage is negated as additional programs allow the “half-day children to catch up” (Cooper et al 2010, 64).

- Wolgemuth et al (2006) suggests that teachers spend so much time assisting students who come to school with little or no skills that other children who may be at or above grade level receive little attention.

As Cooper et al (2010, 66) reiterate full- and half-day children are a “collection of individuals who will be differently influenced by the intervention and its implications for latter instruction.” Cooper et al elaborate on this concept and suggest that kindergarten children, from educationally or economically disadvantaged environments, in the years subsequent to their full-day experience will have “challenges that erode the academic advantage they obtained in full-day kindergarten relative to their more fortunate and majority counterparts in half-day kindergarten” (p 66). Full-day kindergarten “may not be the ‘magic bullet’ that alters permanently poor and minority students’ academic trajectories” (p 66), but it could be considered one of a series of interventions to support disadvantaged learners.

Summary and Conclusion

The review revealed that according to research, full-day kindergarten produces significant gains for all students in their kindergarten year, and maintains, at least to Grade 3, gains for at-risk students, and levels the playing field between at-risk learners and those who are not at risk to at least Grade 5. Although the academic differences between students registered in full- and half-day programs from middle- and upper-income brackets are not statistically significant by Grade 6 (da Costa 2008) and the tremendous academic gains achieved in full-day kindergarten programs appear to diminish over time, it is reasonable to conclude that full-day kindergarten is not harmful for students. Perhaps increased student success in kindergarten and into the primary grades is an adequate reason to provide full-day kindergarten for all students. The problem is how governments and school districts decide who qualifies for this programming and who pays for it. Public school districts are debating whether to offer full- or half-day programs, whether to provide full-day only for at-risk children and how to finance this proposition (Lee et al 2006). Medicine Hat School District No 76 altering their full-day provision for all students and including half-day options may be one casualty of the economic costs of full-day programming.

The debate over full- and half-day kindergarten elicits many questions.

1. If there are few long-term benefits for middle and upper income children, are the dollars spent on

universal access to full-day kindergarten well spent (Gullo 2000; Le et al 2006)?

2. How will the community (government) finance twice the number of classrooms, expendable resources and teachers, and find more space for full-day programs (Fromberg 2006)?
3. Will the funding for full-day kindergarten be an additional expense, or will monies be redirected from other established programs within the school district (Medicine Hat School District No 76 Program Review, 2007/08)?
4. How will access to full-day kindergarten assist families who still require extended day care, and should the issues of child care be resolved at the school level? Is full-day kindergarten part of an educational solution to a social condition (Finne 2007)?
5. What else can be done to support English language learners and students from economically and educationally challenged environments to mitigate nonacademic factors that could interfere with future school success (da Costa 2005/06, 2008).
6. Are there beneficial and effective instructional strategies used at the primary level that would extend academic gains into the upper grades (da Costa 2005/06, 2008)?

Recommendations

1. Mandate kindergarten and include this valuable program in the *School Act* to ensure fully funded and pedagogically sound full-day programs taught by certified staff.
2. Establish a task force to examine the issues related to full-day kindergarten, including as members educators, school administrators and university educators from rural and urban centres currently involved in providing full-day programming.
3. Empower Alberta Education to create a provincial policy on full-day kindergarten; the policy should pay special attention to examining qualifying factors.
4. Provide funds for professional development to explore sound pedagogy supported by the Early Childhood Education Council philosophy statement to promote consistent educational practices from kindergarten to Grade 6.
5. Fund full-day kindergarten programs provincially for all at-risk children without expecting school districts to redirect monies from other established programs.
6. Initiate rigorous Canadian longitudinal studies of full-day kindergarten, similar to the ECLS-K, to compile a similar wealth of data on our early learners pertinent to Canadian culture.

7. Provincially fund educational supports at the school level to assist at-risk learners.
8. Support English language learners and students from economically and educationally challenged environments to mitigate nonacademic factors that could interfere with future school success.

Perhaps the issue is not the debate between the effects of full-day versus half-day kindergarten programs. Sound pedagogy will provide the best environment for all children to succeed whether they are enrolled in full- or half-day classes. The key may be to ensure full and equal access to children who would benefit the most.

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