



Assessment of a Full-day, Four-year-old Kindergarten Program until the End of Elementary

Claire Maltais, Yves Herry, Catherine Mougeot,
and Lucie Bartosova

University of Ottawa
CANADA

EETC 2011
EARLY EDUCATION AND
TECHNOLOGY FOR CHILDREN

Assessment of a full-day, four-year-old kindergarten program until the end of elementary

Claire Maltais, Ph. D.
Professor
Faculty of Education

Yves Herry, Ph. D.
Associate Vice-President

Catherine Mougeot,
Project Coordinator

Lucie Bartosova, Ph.D.
candidate
Faculty of Education

Université d'Ottawa | University of Ottawa



uOttawa

L'Université canadienne
Canada's university



www.uOttawa.ca

Research Objective

To examine the impact of a full-day preschool program on the performance of children in kindergarten, grade 2 and grade 5 within a French minority setting in Ontario, Canada.

Research Question:

Is a full-day preschool program more likely to enhance, in the long term, linguistic, academic, social-emotional, and psychomotor development than a half-day preschool program?

Rationale

Importance and originality of the research:

- The preschool program evaluated is in a school setting rather than a daycare setting;
- The findings brought forth in this study reflect the general population and have a universal significance on the Franco-Ontarian school system;
- The program evaluation targets different aspects of child development;
- Longitudinal context of the research (three phases: kindergarden, 2nd and 5th grades).



Methodology

Research Model:

Quasi-experimental methodology used to compare the development of two groups of children at three phases: kindergarten, grade 2 and grade 5.

Participants:

Two groups of children, who were on average 59.2 months old at the end of the preschool program.

1. First group (N=403): attended a half-day 4-year old junior kindergarten program in 1999-2000.
2. Second group (N=418): attended a full-day 4-year old junior kindergarten program in 2000-2001.

Methodology



Instrumentation:

- KeyMath (Connolly, 2001);
- Peabody Picture Vocabulary Test (Dunn, Thériault-Whalen & Dunn, 1993);
- Reading and writing tests elaborated by the school board (CECLFCE);
- Behavioural Scale of the National Longitudinal Survey of Children and Youth (Statistics Canada, 1997);
- Questionnaires sent to teachers and parents (containing elements prepared by the Office of education quality and responsibility (OQRE), the Canadian Centre of Studies on Children at Risk (1999), Statistics Canada (2006) and Rowell's test (1972));
- Evaluation activities completed by children.

Data Collection

- Data was collected during the last two weeks of May of each year of the three phases.
- Selected university students in Education and Speech Therapy received training and were responsible for administering tests, evaluating the children's linguistic abilities, and interpreting the results.



Methodology

Data Analysis:

- Three main domains were evaluated: linguistic, academic, and social-emotional development;
- For each of the areas evaluated, average scores were contrasted amongst the two groups;
- Statistical data analysis ANCOVA was used to determine the differences (p-value: $p < .05$);
- Socio-demographic variables were considered.



Findings- Phase 1 (Kindergarten)

Effects of the full-day kindergarten program:

- Parents demonstrated greater satisfaction with the preschool program;
- Parents observed a higher level of progress in their child;
- Children demonstrated:
 - greater adjustment to school life;
 - significant linguistic development;
 - academic gains (reading, writing, and mathematics).

Findings- Phase 1 (Kindergarten)

- Only slight differences were reported between the two groups of children in the development of social skills and in behavioral issues.
- Children who attended the full-day kindergarten program had
 - a weaker level of psychomotor development;
 - a higher level of fatigue.

Findings- Phase 2 (Grade 2)

Short term benefits:

- Linguistic development;
- Reading comprehension;
- Positive attitude towards reading;
- Development of skills related to reading competence.

Findings- Phase 2 (Grade 2)

- Children who attended the full-day kindergarten program demonstrated a weaker performance in numeration compared to children who attended the half-day kindergarten program.
- Social skills, academic adjustment, task concentration, and energy level were all lower in children who attended the full-day kindergarten program.

Findings- Phase 3 (Grade 5)

Long term effects:

- The full-day kindergarten program positively influenced reading and mathematics skills.
- The parents of the children who attended the full-day program noticed that they had better behaviour while studying and doing homework.

Findings- Phase 3 (Grade 5)

- No significant difference was observed between the two groups regarding linguistic development and learning processes, such as an interest in reading or the ability to write or summarize a text.
- No differences were observed between the two groups regarding behaviour and the level of physical activity.

Findings Summary

The full-day preschool program is more likely to enhance, in the long term, linguistic and academic development in reading and mathematics.

The program has little effect on writing competence, as well as on social-emotional and psychomotor development.

Findings Summary

Effects of the program on children's behaviour:

In kindergarten and 2nd grade, teachers noticed an increase of behavioural problems for those children who attended the full-day program. They noticed that those children were more easily distracted, hyperactive and had more difficulty being attentive and following instructions.

In 5th grade, those effects seem to have dissipated because the results of the two groups are not significantly different.

Implications

- Positive relationship between the full-day program and the improvement of the children's linguistic and academic skills (through reading and mathematics);
- Limited influence on writing skills as well as on socio-emotional and psychomotor development;
- Positive impact on children's behaviour while completing homework at home;
- The findings are quite relevant for French language school boards in a minority setting.



Study Limitations

- Different developmental characteristics of the two cohorts may have influenced the results;
- An evaluation of the quality of the programs may have been useful;
- Time allotted to certain academic subjects, priorities established by the schools, and teaching strategies used may have influenced the consequences of the preschool programs.

Suggestions for Further Research

- Target a different population of participants;
- Compare and analyze the content and the quality of the programs being offered to children;
- Examine the activities at the preschool and explore the program's development from kindergarten to grade 5 offered to both groups of children.