



FACT SHEET 07 ACADEMIC ACHIEVEMENT IN GRADE 4 OF ELEMENTARY SCHOOL

1 CONTEXT

Children's school readiness implies an adequate level of preparation in terms of basic cognitive, physical, social and emotional skills. It also presupposes that they manifest a certain enthusiasm for learning. These aptitudes can play an important role in children's academic success.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: PAGANI, Linda S., Caroline FITZPATRICK, Luc BELLEAU and Michel JANOSZ (2011). "Predicting Academic Achievement in Fourth Grade from Kindergarten Cognitive, Behavioural and Motor Skills," *Québec Longitudinal Study of Child Development (QLSCD 1998-2010) – From Birth to 10 Years of Age*, Institut de la statistique du Québec, Vol. 6, Fascicle 1. http://www.iamillbe.stat.gouv.qc.ca/pdf/publications/feuille/fascicule_reussite_scol_an.pdf

Note that the QLSCD has been following a cohort of children who were born in Québec in 1997-1998.

2 HIGHLIGHTS

Beyond differences in academic achievement that can exist among children according to various individual or family characteristics, such as age, sex, or mother's educational level, certain skills in kindergarten can provide a means of predicting such achievement in Grade 4 of elementary school.

- Greater knowledge of numbers in kindergarten was associated with better academic performance in all subjects in Grade 4 and with greater classroom engagement and interest in school.
- A larger vocabulary was associated with better academic performance in all subjects.
- Fine motor skills, such as holding a pencil, were associated with better performance in reading and writing and with greater classroom engagement.
- Better movement skills (running, jumping, sliding, etc.) were associated with better performance in writing and greater classroom engagement.
- Hyperactivity behaviours in kindergarten were associated with lower academic performance in most subjects in Grade 4, lower classroom engagement and less interest in school.
- Better gross motor skills (coordination, overall physical development) were associated with lower interest in school.

Certain competencies of children in kindergarten not only predicted their academic performance, but also their level of school engagement and the importance they ascribed to school in Grade 4.



3 DEFINITIONS AND MEASUREMENT INSTRUMENTS

Academic achievement

Children's academic achievement in Grade 4 of elementary school was assessed through questionnaires administered to their teacher using the following indicators:

1. Academic performance in reading, writing, mathematics and science
2. Overall academic performance
3. Classroom engagement (focus on the task, respect for rules, perseverance, autonomy, etc.)
4. School engagement (importance ascribed to school by the child).

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INTERVENTION PATHS

The results suggest that it would be important in early childhood to not only emphasize vocabulary development, but also the basic operations of mathematics. They also reveal the importance of targeting hyperactive behaviours and the development of fine motor skills for interventions in the preschool years and kindergarten. Motor activities or athletics could contribute to arousing interest in school among more physically active children as they progress through the education system.