



# LESSONS IN LEARNING

Summer learning loss

June 12, 2008

The Canadian school year reflects the historical demands of the agricultural cycle. Students attend school in the winter and spring but not during the summer harvest. Despite the shift from a rural and agrarian society to one that is primarily urban, this academic calendar remains dominant across the country.

Under the current calendar, the summer vacation creates a gap in the learning cycle during which students forget some of that they have learned, requiring teachers to devote significant instructional time to review when students return to school. The summer break also contributes to an achievement gap between students from higher socioeconomic backgrounds and their less-advantaged classmates.<sup>1</sup>

### *Student achievement declines during the summer vacation*

A synthesis of the research on summer learning loss that integrated 39 studies (including three Canadian studies) revealed that, when students' standardized test scores from the fall are compared to their scores from the previous spring, summer learning loss is equivalent, on average, to at least one month of instruction. This work also showed that summer learning loss is more pronounced for mathematics-related subjects than for reading or language arts—most likely because many students continue reading over the summer, but few of them practice their math skills.<sup>2</sup>

### *Summer learning loss is greater for less-advantaged students*

Cumulative summer learning losses contribute to the gap in reading skills between low-income and middle-income children that is observed by the end of elementary school.<sup>3,4</sup> Students from all economic backgrounds experience summer learning loss in mathematics. In reading, however, summer learning loss affects lower-income students but does not appear to be a problem for their more advantaged peers. For example, one study showed that, when comparing spring and fall reading scores, middle-income students show a slight gain in reading scores, while lower-income students show a significant loss.<sup>5</sup>

## **Lessons in learning: What can be done to counteract summer learning loss?**

### *Summer reading programs*

Summer reading programs are one way to improve achievement scores and help reduce the gap between advantaged and disadvantaged students. Results from a recent study of student progress over three summers in the Teach Baltimore Summer Academy showed significant gains for participating students. Compared to their non-participating peers, students in the program achieved improvements in vocabulary (equivalent to half a grade level), in comprehension (40% of a grade level), and in total reading (41% of a grade level).[6] Another recent

### **Teach Baltimore Summer Academy Program**

The program begins with a 3 week training session for its volunteer instructors followed by the 7 week program. After a morning breakfast, students engage in reading and writing instruction. In the afternoon, students engage in physical and hands on activities, including arts and crafts and science projects. Students also take part in weekly field trips to museums.

study—evaluating the BELL Summer Learning Program—showed a strong impact on reading scores, as well as an increase in parental involvement in children's reading.<sup>7</sup>

In Canada, there are a number of summer literacy programs designed to prevent or alleviate the effects of summer learning loss. Some of these are specifically designed for disadvantaged students. For example, in Ontario the Aboriginal Literacy Summer Camps initiative maintains 35 summer literacy camps in 29 north-western Ontario First Nations communities. The goal of the camps, according to their founder, former Ontario Lieutenant Governor James Bartleman, is to ensure that, during the summer, Aboriginal children "remain in touch with books and literature, and also that they are involved in things which are fun and which raise their self-esteem."<sup>8</sup>

In Winnipeg, the Digital Media Education Summer Camp extends beyond traditional literacy and provides urban Aboriginal children with hands-on experience with digital media tools. Central to the camp theme is the transmission of cultural knowledge and world-view perspectives through digital media forms. Participants complete the experience by producing an online product that is showcased on the World Wide Web.

Other summer literacy programs are directed toward a broader segment of the population. For example, the Toronto Dominion Summer Reading Clubs (TDSRC) are the most widespread and numerous library reading programs in Canada. Out of 747 library systems in the eleven provinces and territories, 575 participated in the TDSRC program during the summer of 2007, and nearly a quarter of a million children registered for the TDSRC 2007 program. Parents, caregivers and teachers report that children are reading more frequently and at a higher level as a result of taking part in the clubs.<sup>9</sup>

Across Canada, many school jurisdictions offer summer learning programs. Going beyond compulsory remedial summer courses, these programs keep youth safe, actively occupied and engaged in learning during the summer. In Winnipeg's inner city, for example, the Summer Learning Enrichment Program: Community Schools Investigators (CSI) is the product of a combined effort on the part of several organizations, including the Social Planning Council of Winnipeg, the University of Winnipeg, the Winnipeg School division and the Centre for Aboriginal Human Resource Development. Started in July 2005, the goal of the program is to prevent learning loss by engaging students considered to be at risk of school failure in learning opportunities throughout the summer. Key elements of the program include parental involvement, educators who come directly from the inner-city community, a focus on learning and fun, and a strong emphasis on cultural activities.<sup>10</sup>

**Building Educated Leaders for Life (BELL) Accelerated Learning Summer Program**

This program features small group tutoring in reading and math; adult role model mentoring; field trips; guest speakers and community service; support and outreach to parents to increase involvement in their children's education; frequent monitoring and evaluation.

The Ottawa Catholic School Board offers numeracy and literacy instruction during the summer for grades 6, 7 and 8. The non-credit, half-day courses are designed to enhance student's knowledge and skills in language arts and mathematics. The aim is also to give students encouragement, confidence and training to improve study and organizational skills required at the Grade 7, 8 or 9 levels.

Canadian universities also play an important role in counteracting summer learning loss by providing learning programs to students during the summer that extend beyond reading and mathematics into other subject areas. For instance, the University of Toronto's Faculty of Applied Science and Engineering runs a non-profit science, technology and engineering summer-camp program for students from grades 1 to 12 that provides hands-on educational activities. The University of Waterloo offers several academic programs for students during the summer, including day camps in art, music and dance as well as computers and engineering.

#### *Modified school calendars*

Advocates have argued that restructuring the school year would make more efficient use of school facilities, engage more students<sup>11</sup> and help combat summer learning loss. In the United States, two million students follow a modified school calendar that does not eliminate summer vacations, but provides for breaks of shorter duration.<sup>12</sup> Reviews of research conducted in the United States suggest that such restructuring of the school year has a very small, but positive, impact on most students<sup>13</sup> and a larger impact on the achievement of students from economically disadvantaged backgrounds.<sup>14</sup>

#### *Systematic instruction*

Daily, weekly and monthly reviews help students to solidify what they have learned and diminish the likelihood that they will forget what they have learned. Increasing the frequency of the review process may diminish the learning decline that students experience during the summer months. This is especially likely for students who are more vulnerable to school failure, since those students appear to benefit significantly from systematic instructional practices in which review and small-step instruction figure prominently.<sup>15,16,17</sup>

#### *Research*

While summer learning loss is certainly on the radar of Canadian educators, parents and students, there is little Canadian research on the topic. In the absence of such research it is difficult to know the extent of learning loss during the summer break and hard to identify which Canadian interventions are most successful in counteracting the effects of the summer vacation.

The cumulative effects of learning loss increase the achievement gap that already exists between low and middle income students. Effective teaching practices and strong localized summer learning programs show promise in addressing summer learning loss. More concerted attention by the Canadian research community can also help to address the summer slide in achievement.

## References

- <sup>1</sup> ERIC Digest. (2003). Summer Learning Loss: The Problem and Some Solutions.
- <sup>2</sup> Cooper, Harris, Kelly Charlton, Scott Greathouse, James Lindsay and Barbara Nye, (1996). The Effects of Summer Vacation on Achievement Test Scores: A Narrative and Meta-Analytic Review. *Review of Educational Research*, 66, pp. 227-268.
- <sup>3</sup> Alexander, Karl L., Doris Entwisle and Linda Olson. "Schools, Achievement, and Inequality: A Seasonal Perspective." *Educational Evaluation and Policy Analysis* 23, pp. 171-191.
- <sup>4</sup> Chaplin, Duncan, Jennifer Capizzano. (2006) Impacts of a Summer Learning Program: A Random Assignment Study of Building Educated Leaders for Life (BELL).
- <sup>5</sup> Burkham, David T., Valerie Lee, Laura F. LoGerfo, and Douglas D. Ready, (2004). Social Class Differences in Summer Learning Between Kindergarten and First Grade: Model Specification and Estimation. *Sociology of Education*. 77, pp. 1-31
- <sup>6</sup> Borman, Geoffrey D. and Martiza N. Dowling, (2006). Longitudinal Effects of a Multiyear Summer School: Evidence from the Teach Baltimore Randomized Field Trial. *Educational Evaluation and Policy Analysis*. 28, pp. 25-48.
- <sup>7</sup> Chaplin, Duncan. And Jennifer Capizzano, (2006). Impacts of a Summer Learning Program: A Random Assignment Study of Building Educated Leaders for Life (BELL).
- <sup>8</sup> Bartleman, J.K. Summer of Hope. Retrieved May 22, 2008.
- <sup>9</sup> Decima Research. (2007). TD Summer Reading Clubs. Final Report of Program Statistics for Library and Archives Canada.
- <sup>10</sup> Lutter, Shannon, (2005). Preventing Summer Learning Loss. Manitoba Association of School Superintendents Journal. Pp. 27-29.
- <sup>11</sup> Sharp, Caroline. (2000). The Learning Benefits of Restructuring the School Year: What is the Evidence? National Foundation for Educational Research.
- <sup>12</sup> Davies, Brent. And Trevor Kerry, (1999). Improving Student Learning Through Calendar Change. *School Leadership and Management*. 19, pp. 359-371
- <sup>13</sup> Ibid.
- <sup>14</sup> Cooper, Harris., Kelly Charlton, April Melson and Jeffrey C. Valentine, (2003). The Effects of Modified School Calendars on Student Achievement and on School and Community Attitudes. *Review of Educational Research*. 73, pp. 1-52.
- <sup>15</sup> Brohy, J. (2001). Teacher Influences on Student Achievement. In Smith, P.K. and A.D. Pellegrini (Eds.) *Educational Psychology*. London: Routledge Falmer. pp. 365-384.
- <sup>16</sup> Rosenshine, B. (1983) Teaching functions in instructional programs. *The Elementary School Journal*, Vol. 83, No. 4, Special Issue: Research on Teaching pp. 335-351.
- <sup>17</sup> Ehri, L.C. and S.R. Nunes, (2001) Systematic phonics instruction helps students learn to read: Evidence from the national reading panel's meta-analysis. *Review of Educational Research*, Vol. 71, No. 3, pp. 393-447.