



**Community-University Partnership**  
for the Study of Children, Youth, and Families

# **Evaluation of the Edmonton In-School Mentoring Program: Phase II**

## **Final Report**

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Community-University Partnership for the Study of  
Children, Youth, and Families  
University of Alberta

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## **Evaluation of the Edmonton In-School Mentoring Program: Phase II**

### **Context**

In-School Mentoring (ISM) is the most common and rapidly expanding type of site-based mentoring program for children and youth (Foster, 2001). Unfortunately, little systematic research has been conducted to substantiate whether ISM programs benefit participants (Portwood & Ayers, 2005). Despite the lack of research, the popularity and number of programs have grown tremendously during the last 10 years, likely due to the widespread belief in their effectiveness (Foster, 2001; Herrera, 1999, 2004). As this growth continues, it becomes increasingly necessary for careful, systematic evaluation to be conducted to determine whether and under what circumstances ISM programs are effective in helping students and mentors. Phase II of the evaluation of the Edmonton In-School Mentoring Program represents one of the first comprehensive investigations of ISM and its impact. Two research questions were addressed: (1) How is mentoring practiced within a large-scale ISM program, and what outcomes does it have for mentors? (2) Is the amount of mentoring children receive associated with positive outcomes for children? Few other studies in existence are comparable in terms of breadth of research goals, diversity of methods and measures, and amount of data collected. The knowledge gained from this study will help shape the future existence and programming of ISM programs across the country.

The few preliminary studies of ISM programs that do exist provide some tentative evidence that participants may benefit from their mentoring experience. For instance, mentors and students can and do form strong relationships (e.g., Opinion Research Study, 1995). Many factors likely contribute to the strength of the relationships that develop between mentors and students, including program practices and individual characteristics of the participants. Research

is needed on the measurement and development of mentoring relationships over time, including the effects of any disruptions or terminations.

As part of the current investigation, 18 studies of ISM programs were reviewed that were most relevant to the evaluation of the Edmonton ISM program. These studies provide some tentative evidence that is consistent with the views that ISM programs may have benefits for students, and that these benefits are more likely to be socio-emotional than academic during the first year of mentoring. Early socio-emotional changes that appear to be related to mentoring may be precursors to subsequent changes in attendance and academic development, which may occur after the relationship has had an opportunity to develop (Herrera, 2004). Similarly, changes in the outcomes of students appear to be reported earlier in studies with qualitative measures based on interviews and observations than in those with quantitative measures based on standardized tests.

Less research exists on the factors (e.g., quality of mentor-student relationship, program practices, and individual characteristics) that may contribute to whether and how much mentoring benefits participants. Researchers have suggested that the emotional bond that forms between the mentor and student is a necessary condition for students to benefit from mentoring (e.g., DuBois, Neville, Parra, & Pugh-Lilly, 2002). In studies of mentor programs, stronger relationships have been associated with more beneficial impacts for students, at least in community-based programs (e.g., Grossman & Johnson, 1998). Little comparable research has been conducted on ISM programs. There is also preliminary evidence that ISM programs that have practices in place for supporting mentors and students are more likely to be associated with positive outcomes for participants than programs that are not as supportive (Hansen, 2006). Additionally, it is likely that the more mentoring students receive, the more benefits they incur,

with the greatest number of positive results appearing for relationships longer than 12 months in duration (Herrera, 2004). Time is necessary for positive relationships between mentors and students to develop (Carmola, 1995; Styles & Morrow, 1992). As these relationships develop, subtle changes may begin to occur, with more substantial and more quantifiable changes in students occurring later. Finally, although there is not much evidence that the age or gender of students influences program impact, students who are from backgrounds of environmental risk or disadvantage may be more likely to benefit from mentoring (e.g., Portwood, Ayers, Kinnison, Waris, & Wise, 2005). Characteristics of mentors may also influence program impact. In a recent study, Hansen (2006) reported that students with high school mentors showed more academic improvements than students with college or corporate mentors.

Mentors may also benefit from the experience of mentoring, although very little research has been conducted to confirm this possibility. Researchers have reported that mentors enjoy talking and developing relationships with their students (Fouts & Miller, 2002) and facilitating students' growth and development (Herrera, 1999), and that they achieve satisfaction from their experiences (Opinion Research Centre, 1995). Factors that support the formation of strong relationships and provide support, training, and supervision to mentors are also likely to improve mentors' overall satisfaction with the program, their relationships with students, and the likelihood of their continuance in the program (Stukas & Tanti, 2005). In addition to identifying mentor outcomes, research should be conducted to investigate the role mentors play in the process of mentoring. For instance, it seems plausible that mentor outcomes, such as mentors' perceptions of their own effectiveness, may contribute to their judgments of relationship quality, the frequency of times they meet with students, their retention rates, and ultimately, student outcomes. Unfortunately, little research of this type exists.

In conclusion, research is needed on ISM mentoring to improve our understanding of whether, how, and under what circumstances beneficial impacts can be obtained for students. Many of the studies reviewed lacked rigorous research methods due to the substantial investments of time, effort, and resources required to conduct such studies (DuBois & Silverthorn, 2005). Too often these studies relied on small sample sizes, data collected from single informants (e.g., mentors), research designs unrelated to the questions of interest, measures that reflect perceptions rather than actual change, and inadequately described or chosen data analysis procedures. Also lacking are studies on the benefits of mentoring programs for students in elementary schools (Cavell & Smith, 2005). Given that ISM programs are often implemented for elementary-aged students and that early intervention may be one of the most effective ways to improve childhood outcomes, more research on in-school mentoring is needed.

### **Implications**

Specific findings of the present study are described in subsequent sections of this report.

Several implications of these study findings are described below.

- If the success of in-school mentoring (ISM) is measured in terms of the benefits perceived by participants, then the Edmonton ISM program has been successful. Students and mentors reported that they benefited from the relationships that they developed together and from the significant growth that they experienced as individuals. Students reported that they improved socially, and to some extent academically, although it may take some time for substantial improvements in academic growth to occur.
- The benefits reported by mentors were diverse and striking, and they underscore the need for program planners to focus on the role of mentors and whether and how mentors benefit from the experience of mentoring. After all, the consequences of participation for

mentors and students are likely to be mutually dependent. That is, mentors' perceptions of their own efficacy likely affect their relationships with their students, and the same may hold true for students.

- Programs that have practices in place to support participants may be more successful than programs that do not. Schools with mentor caseworkers who were responsible for only one school and who had additional resources or programs available were viewed as being more supportive of mentors. More positive stories also came from schools with (a) well established programs, (b) large numbers of mentor-student matches, (c) leadership from school and BBBS staff, (d) awareness, buy-in and support for the program, (e) availability of space and resources, and (f) established communication among participants and partners.
- Mentors recognize the importance of building relationships with children and improving children's social skills. The development and maintenance of good relationships between mentors and students is likely to be a crucial component of program success. It will be important to consider how program supports can be put in place to help participants develop relationships, develop rapport and trust, define boundaries, and eventually close relationships.
- The amount of mentoring children receive, as measured by time in the mentoring program, is related to some specific aspects of students' socio-emotional development, depending on gender and grade. In the future, it will be important to determine why these relations exist and how programs and policies might be altered to maximize the benefits of ISM programs for all children.

- There is both need and opportunity for researchers, practitioners, and policy-makers to work together to determine how best to plan and implement ISM programs.

### **Approach**

Phase II of the In-School Mentoring (ISM) project was a multidisciplinary community-university partnership involving Alberta Education, the Big Brothers and Big Sisters Society of Edmonton (BBBS), University of Alberta researchers and graduate students, and Edmonton Public (EPS) and Catholic School (ECS) school systems. Project partners were involved in various aspects of the study. During the planning of the current study, an attempt was made to address many of the methodological issues raised through review of the mentoring literature. First, data were collected from different types of participants, including elementary students, their mentors, and their teachers. Second, diverse methods were used for data collection, including assessment measures, surveys, focus groups, individual interviews, and observations. Third, a variety of techniques were employed to analyze data.

Assessment measures were used to collect data from students at three times (Spring and Fall, 2004, and Spring, 2005) over a one-year period. Self- and teacher-reported measures that were shown to be both reliable and valid, and with established norms for comparison, were employed. For the analyses discussed in this report, the original sample of 186 mentored students was restricted to students who were in Grades 1 through 4 in the Spring of 2004, and who were tested during at least two of the three assessment periods. Information about this sample is provided in Table 1. For all three assessment periods the majority of students were female (over 60%). Students were fairly equally distributed across Grades 1 through 4 initially (Spring 2004), and moved to a higher grade for the second (Fall 2004) and third (Spring 2005) assessment periods. Students joined and left the study during each of the three assessment

periods. The average amount of mentoring that students had experienced also increased over the three assessment periods.

Demographic Characteristic	Assessment Periods		
	Spring 2004	Fall 2004	Spring 2005
Sample Size ( <i>N</i> ) <sup>a</sup>	113	115	72
Gender ( <i>N</i> , %)			
Male	45 (40%)	46 (40%)	26 (36%)
Female	68 (60%)	69 (60%)	46 (64%)
Grade ( <i>N</i> , %)			
1	23 (20%)	1 (1%)	0
2	30 (27%)	23 (20%)	9 (13%)
3	38 (34%)	32 (28%)	25 (35%)
4	22 (20%)	38 (33%)	22 (31%)
5	0	21 (18%)	16 (22%)
Amount of Mentoring <sup>b</sup>			
<i>M</i>	13.08	16.03	19.34
<i>SD</i>	9.32	9.62	9.46
Minimum	2.20	0.17	3.43
Maximum	37.30	41.33	43.23

<sup>a</sup> Although the total sample of students retained for analysis was 121, not all of these students participated during each assessment period (Spring 2004, Fall 2004, Spring 2005).

<sup>b</sup> Months in the mentoring program through the last assessment period for a given child.

Surveys were mailed to active mentors who were over the age of 18 years of age during the spring of 2004 and again during the spring of 2005. In the spring of 2004, 169 of approximately 525 active mentors completed the mentor survey and provided consent (a return rate of 32%), and in the spring of 2005, 152 of 525 active mentors did so (a return rate of 29%). For both years the majority of mentors were female (over 80%), over the age of 45 years of age (52%), had a university education (over 60%), and were employed (over 65%). Mentor focus groups (five in total) were held on June 16, 2004; November 22, 2004; November 24, 2004; May 24, 2005; and May 26, 2005. Each of the sessions lasted approximately 90 minutes and during



each session mentors were probed using a series of questions. A total of 30 mentors voluntarily participated in the focus groups with approximately eight mentors attending each focus group.

During May and June of 2004 and 2005, case study research was conducted with a total of seven mentor-student pairs in four schools. Five pairs were studied per year, including three pairs who were studied both years. Students, mentors and teachers were interviewed and mentoring sessions were observed. The majority of mentors were female ( $n = 5$ ), 45 years of age and under ( $n = 4$ ), and employed ( $n = 3$ ) in Spring 2004. The majority of students were male ( $n = 5$ ) and in Grade 2 ( $n = 4$ ). The remaining students were in Grade 3 ( $n = 2$ ) and Grade 1 ( $n = 1$ ).

It is expected that knowledge mobilization activities will continue in the fall of 2008 after subsequent reports have become available. Meetings will be held with partners to discuss planning, implementation, and evaluation of knowledge mobilization activities, including those that reach beyond immediate partners.

## **Results**

### **Mentor Practices and Outcomes**

Evidence about mentor practices and outcomes was obtained from the mentor survey data, focus groups with mentors, and case studies involving observations of mentor-student pairs and interviews with mentors, students, and teachers. Mentors reported that facilitating students' social development (e.g., self-worth, self-esteem) and developing a friendship with the student were goals they considered most important (Table 2). Improving reading was also considered an important goal, although not as important as the socially related goals.

<b>Goal</b>	<b>Rated Importance of Goals</b>	<b>Among 3 Most Important Goals (%)</b>
Support sense of self-worth	4.82	34.9
Enhance self-esteem	4.78	52.3
Develop friendship	4.71	43.0
Encourage aspirations	4.49	33.6
Encourage sense of purpose	4.46	28.8
Encourage sense of hope	4.32	26.9
Improve reading	4.19	20.2
Guide social behaviours	3.98	4.7
Guide social attitudes	3.91	2.6
Expand world knowledge	3.80	16.8
Improve writing	3.57	4.0
Develop extracurricular skills	3.48	6.0
Develop extracurricular interests	3.27	9.3
Help with schoolwork	3.26	12.1

Note: Scores are based on a 5-point rating scale: 1 = Not At all Important; 5 = Very Important.

These findings were generally consistent with the issues that were emphasized during mentor training sessions at the time the study took place: developing a relationship, building self-esteem, and literacy and language development. Having a good relationship with a student may also help facilitate the mentor's opportunities for helping the student grow socially and academically. Observations shed further light on how mentors structured the sessions. Mentors often described how at first they tried to carefully plan the activities that would take place during the session, but that they quickly came to the understanding that it was more effective to be relaxed and flexible and to share decision-making with students. Many mentors also reported that they learned to structure mentor sessions by doing work first and having fun afterward. That is, mentors helped the student with homework or tasks assigned by the teacher during the first part of the session and gave the student responsibility for choosing the fun activities during the later part of the session. Mentors also reported that their understanding of the most effective

strategies to use with students changed as they became better acquainted with them. They rapidly learned to identify students' needs and to adapt their strategies to meet these needs.

Although improving reading was not identified as the most important goal of mentoring, reading was identified as the most frequent activity, with conversation and board games/puzzles mentioned almost as frequently (Table 3). That is, mentors recognized that the program was literacy-focused and frequently used literacy-based activities, perhaps with the intent or goal of developing rapport with the student and facilitating student social growth. The roles and responsibilities of a mentor were also reported as different from that of a teacher or tutor. Mentors saw themselves as facilitating students' development in many different ways and not as specifically tasked with the responsibility of teaching the student core subjects such as reading, writing, or math. They also saw their role as facilitating the work of the teacher by building on or extending ideas presented in class and working individually with students.

<b>Table 3: Most Frequently Reported Activities (2005)</b>		
<b>Activity</b>	<b>Mentors Reporting Activity (%)</b>	<b>Among 3 Most Frequent Activities (%)</b>
Reading	89.5	75.4
Conversation	88.2	53.9
Board games/puzzles	86.3	61.1
Arts/Crafts	64.7	40.7
Writing	42.5	9.6
Educational Games	42.5	15.8
School work (e.g., math)	35.3	14.3
Computers	28.1	6.1
Spelling	26.1	4.9
Baking/Cooking	15.0	0.7
Printing/Handwriting	14.4	2.1
Gym/Playing Sports	12.4	1.4

Mentors reported several challenges that were especially significant to them, such as the school environment, mentor-student relationships, and working with at-risk students.

Mentors consistently reported that the school environment played an essential role in determining the success of the program. Generally, the more positive stories about mentoring came from schools with well established programs that had large numbers of mentors and caseworkers who were accessible on a regular basis. These schools were described as having the following features: (a) leadership from the school administration and BBBS staff, which in turn resulted in (b) awareness, buy-in, and support for the program, (c) availability of space and resources for mentoring, and (d) established lines of regular communication.

*“There are piles of mentors, there’s a dedicated reading room and the caseworker is fabulous. She’s always got crafts going and she’s just great, it makes it very easy.” (mentor)*

Leadership from school administrators and BBBS staff was considered essential to gaining understanding and support from other school staff members such as teachers, secretaries, and even social workers. Schools with strong leadership and support for the program also provided better space and resources for mentoring and more effective lines of communication between school staff, BBBS staff, and mentors. Less positive stories came from mentors at schools new to the program or those with smaller programs and caseworkers who were rarely present or accessible. These schools often were described as lacking the features mentioned above.

*“The teachers don’t seem to really know why you’re there or what you’re doing. [There was also] a problem with calling to tell you the child is sick today, so when you’re leaving work it’s annoying to show up at school when the child is absent. . . . Those things happen, but at the same time it was more than a couple of times.... When the key people don’t buy into the program, it’s not going to succeed. ... I waited until October and finally decided, “well, we’ve got some kids at [another school] . . . so I moved.” (mentor)*

On-going contact between the mentor and teacher was seen as particularly important. Information on the student’s needs, background, what was covered in class, and whether the

mentoring was beneficial were mentioned as particularly important in facilitating the mentor's effectiveness. This kind of information was reported as helping mentors more effectively tailor session activities, be appropriately responsive to the student, and as improving the mentor's efficacy. Although mentors were appreciative of teachers who communicated what students were studying in class, they did not want teachers to direct session activities, which would devalue their own role, but rather to provide general goals for the mentor to accomplish based on the student's needs.

Some mentors also experienced challenges associated with developing relationships with students, such as getting to know students, establishing a comfortable rapport, and

*"I found it very difficult to connect with my student. She was hard to talk to." (mentor)*

defining boundaries. Ending the relationship was also difficult for many mentors who were unable to obtain closure or wanted to continue the relationship. Finally, many issues related to the challenge of working with at-risk students, such as finding it difficult to limit support to mentoring and wanting to give in other ways, but being limited by program restrictions.

*"It's tough to hear these little souls that you really take into your heart are going through that and you really can't do anything to stop or to, to protect them from it." (mentor)*

The benefits that were most frequently mentioned by mentors were related to their relationships with their students, the student's growth and development, and the mentor's own satisfaction, growth and development. Mentors generally reported that they were very satisfied with the relationships they had with

their students, they found the reaction of their students to be very

*"I think the real reward for the mentor is the fact that you're giving, you know it's not about what you're accomplishing or what you're learning or what you're doing, but it's the fact that you're giving of yourself and in so doing you know you receive a lot of rewards." (mentor)*

rewarding, and they enjoyed various attributes of their students, such as intelligence and humor. Making contributions to their students' growth and development and on occasion the well-being of the entire family was also mentioned as a great source of personal satisfaction. Mentoring a student also facilitated the mentor's own growth and development. For example some mentors reported learning patience, how to listen, and how to interact with children. Skills gained from mentoring were also described as being valuable for the mentors' careers and relationships with their own children.

Finally, some differences among types of schools were found in mentoring practices and mentor outcomes. Schools with mentor caseworkers who were responsible for only one school, and who had resources available in addition to the in-school mentoring program, appeared to provide more supportive environments for mentors than schools without these features. For example, mentors were more likely to rely on their caseworkers rather than others for ideas and support in those schools, and they felt their experiences were more worthwhile.

## **Student Outcomes**

### ***Relationships***

Students often appreciated their relationships with mentors in a variety of ways. They reported, for example, that they liked their mentor, the mentor was somebody to talk with, being with the mentor was fun, the mentor made them feel special, and their mentor was a good listener.

*“Really fun, because it’s somebody to talk to...Silly stuff that’s happening in the family that I don’t really like and I’m not that comfortable telling my mom or my dad...I have a little brother too. And he looks up to me like I look up to [mentor’s name].” (student)*

Relationships that students had with their mentors were also described by teachers as different than the relationships that students had with their parents or teachers. That is, students often were more likely to form friendships with their mentors than their parents or teachers.

*“I think [student’s name] really differentiates between the two. He really, in this mind, really has separation: ‘Teachers and parents are on one side, and they do what’s best, and they’re on my case because they want me to do well. And so is [mentor’s name], but then [mentor’s name] is also a buddy of mine.’ ” (teacher)*

### ***Student Development***

To assess development, two kinds of information were analyzed. First, we obtained comments and judgments from students, mentors, and teachers from surveys, focus groups, and case studies. Second, we administered a large number of measures that assessed socio-emotional development and literacy.

**Surveys, focus groups, and case studies.** Students who participated in the case studies reported that they made academic improvements such as reading writing, spelling and math as a result of mentoring.

*“I like reading with her. Ever since I had...a mentor, I’ve been getting better at reading.” (student)*

*“It makes me get way better at spelling and stuff. And handwriting. She just shows me how to make it all good – better. I don’t know how, but it just makes me get twelve out of twelve.” (student)*

In contrast, teachers who participated in the case studies typically attributed improvements in students’ social but not necessarily academic growth to mentoring. Students were described by teachers as improving in self-esteem, confidence, interaction with peers, and as taking more pride in their work and being more willing to participate in class.

*“He goes out, just skipping out, and comes back just glowing. He’s walking taller almost; he just feels good about himself in that time.” (teacher)*

*“I believe maybe he is a little more willing to take risks in learning activities and so on because of the increase in confidence. But I haven’t seen a specific improvement in any particular subject area. It’s more his self-esteem.” (teacher)*

*“At the beginning of the year her printing was very, very, very messy and kind of all over the place, and she wasn’t writing very much. And you could see that she didn’t feel very good about some of the work that she was doing. And the very fact that now she’s attempting her neatest work and she’s taking a lot more pride in her work. To me, it shows that she’s got a lot more self-esteem and has become much more proud about what she’s doing, and confident.” (teacher)*

In keeping with teachers’ reports, mentors who participated in focus groups and the case studies also perceived improvements in students’ social growth (e.g., self-esteem, confidence, and pride). Some mentors also reported progress on school tasks (e.g., reading, spelling, and handwriting) that they performed with students.

*“I think the difference is the pride I see. I think children needing support very quickly realize that they’re not quite like the rest of the group and that being able to struggle with words or work out a math solution in the privacy of one other person whom they’re learning to trust is pretty special.” (mentor)*

*“[She] has taken responsibility for the crafts that we do and, “I’ll bring this and you can bring this” and she organizes it. It’s really quite amazing. First of all it was sort of like, “what are we going to do?” you know...but she just blossomed as a person.” (mentor)*

Mentors who completed the survey also reported (using a 5-point scale) that they tended to observe progress in their students’ social development ( $M = 3.71$ ,  $SD = 1.05$  for 2004;  $M = 3.91$ ,  $SD = 0.95$  for 2005) and reading ability ( $M = 3.76$ ,  $SD = 1.07$  for 2004;  $M = 3.90$ ,  $SD = 1.14$  for 2005).

**Assessment measures.** A variety of tests designed to measure aspects of socio-emotional development and literacy were administered to students and teachers (see the Appendix A). The study included two groups: (a) students who entered the mentoring program during the first



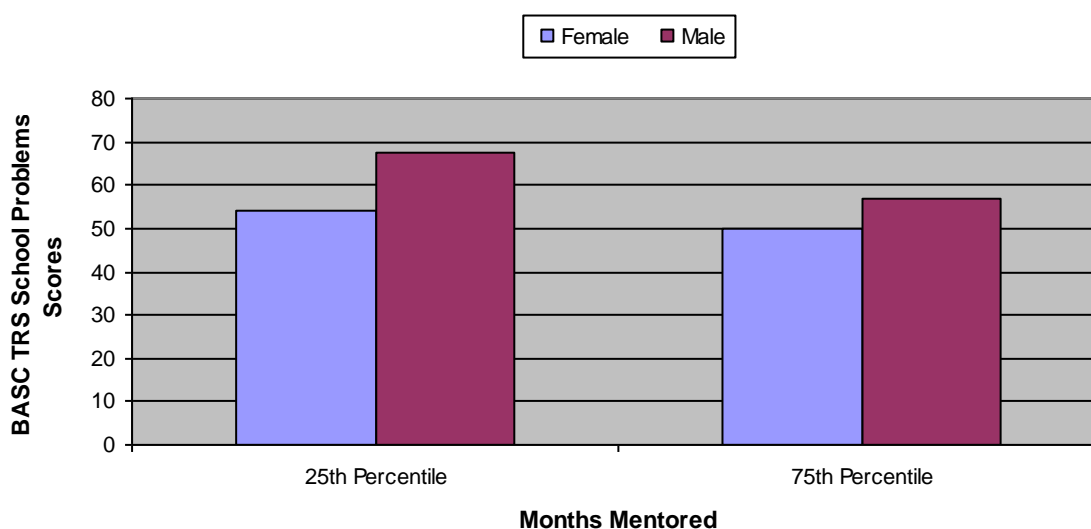
several months of our study; and (b) students who participated in mentoring prior to our study and who continued in the program. We sought to determine whether differences in socio-emotional and literacy development were related to the length of time students participated in the mentoring program.

Many children in the study were not available during all three assessment periods (Spring 2004, Fall 2005, Spring 2005), so we used hierarchical linear modeling (HLM), a form of multi-level modeling that allows for estimates of growth in cases where data are missing. We limited our analysis to children who provided data during at least two of the three assessment periods. Thus, in these analyses the sample sizes vary (maximum = 121) and are smaller than the total sample. We used HLM to estimate children's assessment scores at Spring, 2005, as an index of their final level of progress during the study. Consequently, we were able to address whether students who received more mentoring showed higher levels of progress at the final time of assessment (Spring, 2005).

The Behavior Assessment System for Children (BASC) was used to assess aspects of **socio-emotional development**. A version completed by teachers provided five composite measures: Adaptive Behavior, Externalizing Problems, Internalizing Problems, School Problems, and Behavioral Symptoms. Analyses of these measures yielded a consistent pattern of results showing that the relation between months in the mentoring program and socio-emotional development scores, as rated by teachers, depended on the gender of the children. An example of this relation is illustrated in Figure 1, where estimated scores for children who were in the 75<sup>th</sup> percentile in terms of months of mentoring are compared with the scores of children in the 25<sup>th</sup> percentile. Two observations were confirmed by the statistical analyses. First, teachers rated girls, on average, as having fewer school problems than boys during the final assessment period.

Second, this gender difference depended upon the amount of mentoring children received. That is, the difference between girls and boys was smaller for children who had received more months of mentoring (75<sup>th</sup> percentile) as compared with children who had received less mentoring (25<sup>th</sup> percentile).

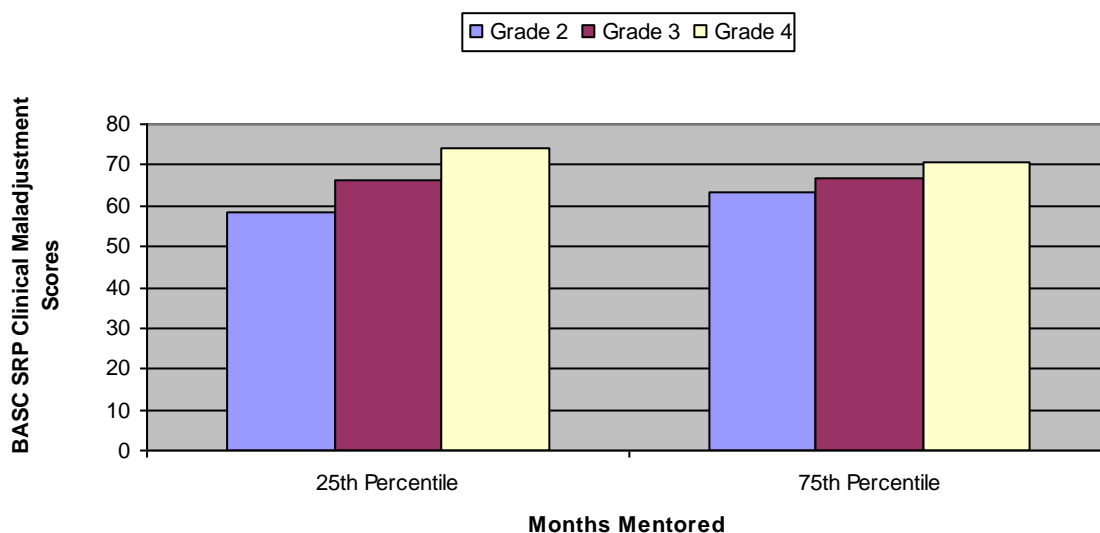
**Figure 1: BASC (Teacher Rating Scale) School Problems  
Final Scores at Spring 2005  
Relation Between of Gender and Months Mentored**



Similar patterns were found for the other four teacher-rated measures (Adaptive Behavior, Externalizing Problems, Internalizing Problems, and Behavioral Symptoms). In each case, teachers rated girls as performing better than boys at the final time of assessment (Spring 2005), but (a) the difference was smaller for children with more mentoring than for children with less mentoring, and (b) boys with more mentoring always performed somewhat better, on average, than boys with less mentoring, although this difference was not always statistically significant. These data are consistent with the conclusion that increased time in the mentoring program may have contributed to the socio-emotional development of boys, as rated by teachers. The pattern for girls was not consistent enough to permit firm conclusions.

Another form of the BASC was completed by the students themselves and provides composite measures of Clinical Maladjustment, School Maladjustment, Emotional Symptoms, and Personal Adjustment. Analyses of these measures showed that the relation between months in the mentoring program and socio-emotional development scores, as rated by students themselves, depended on the grade cohort in which children were in when they began the study. An example of this relation is illustrated in Figure 2, where estimated scores for children who were in the 75<sup>th</sup> percentile in terms of months of mentoring are compared with scores of children in the 25<sup>th</sup> percentile. Two observations are important to note. First, children in the youngest grade cohort tended to report that they had less Clinical Maladjustment (e.g., anxiety, social stress) than children in the oldest grade cohort at the final time of assessment (Spring 2005), although this trend was not statistically significant. Second, this grade cohort difference varied depending upon the amount of mentoring children received. That is, the difference between the grade cohorts was smaller for children who had received more months of mentoring (75<sup>th</sup> percentile) as compared with children who had received less mentoring (25<sup>th</sup> percentile). This latter observation was confirmed by statistical analyses.

**Figure 2: BASC (Self-Report of Personality) Clinical Maladjustment  
Final Scores in Spring 2005  
Interaction of Grade and Months Mentored**



Similar patterns were found for two other student-rated BASC measures: Emotional Symptoms and Personal Adjustment. In general, children in the oldest grade cohort who had more mentoring always performed somewhat better, on average, than the children in this grade cohort who had less mentoring, although these differences were small. The relation between amount of mentoring and performance is difficult to interpret in the youngest grade cohort because very few young children participated in mentoring for many months.

These data are consistent with the conclusion that increased time in the ISM program may have contributed to the socio-emotional development of children who were in older grades when they began the study, as rated by the children themselves. Similarly strong conclusions cannot be drawn about the impact of mentoring on children who were in younger grades when they began the study.

For the measures used to assess other aspects of socio-emotional development and **literacy**, relations involving amount of mentoring were found infrequently and no consistent

patterns emerged.<sup>1</sup> In addition, no differences were found among schools in student outcomes as a function of amount of mentoring.

The results of these statistical analyses must be interpreted with caution for three reasons. First, children were not assigned randomly to the mentoring program, and thus differences related to amount of mentoring could reflect other differences between the children who had more or less mentoring in these analyses. For example, it could well be that children who entered the mentoring program earlier had more significant difficulties than those who entered later, as more mentors became available. Second, data were collected only over one year, a period that may be insufficient for detecting growth in socio-emotional development and especially literacy. Finally, this report provides only a brief overview of the evidence and analyses that have been developed to date. Subsequent reports will contain additional evidence of diverse sorts that can be used by program developers, policy makers, and researchers who seek to improve the effectiveness of in-school mentoring programs.

### **Additional Resources**

Alberta Mentoring Partnership: [www.albertamentoringpartnership.ca](http://www.albertamentoringpartnership.ca)

Big Brothers Big Sisters of Canada: [www.bbbsc.ca](http://www.bbbsc.ca)

Big Brothers Big Sisters of America: [www.bbbs.org](http://www.bbbs.org)

Public/Private Ventures: [www.ppv.org](http://www.ppv.org)

Mentoring Canada: [www.mentoringcanada.ca](http://www.mentoringcanada.ca)

### **Further Research**

Because of the explosive growth of ISM programs and the importance of optimizing the success of these programs, research is needed to improve our understanding of whether, how,

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<sup>1</sup> Additional analyses are being conducted to evaluate the relation between amount of mentoring and changes in student performance that took place during the study.

and under what circumstances beneficial impacts can be obtained for students and their mentors. In particular it will be important to determine which circumstances affect the success of a program (e.g., leadership from school and BBBS staff, availability of resources, and strong communication) and which types of participants are most likely to benefit from mentoring (e.g., based upon gender, age, at-risk status). The development and maintenance of good relationships between mentors and students is likely a crucial component of program success. More work needs to be done to determine effective ways of developing, maintaining, and closing mentoring relationships. In particular, more attention should be paid to the role mentors play in the process of mentoring. It seems plausible that mentors' perceptions of their own effectiveness may impact their relationships with students, how often they meet with students, their retention rates, and ultimately the outcomes of their students. In conclusion, although a great deal of knowledge exists about the benefits of community-based programs, little comparable information exists on in-school mentoring programs. Thus, there is both need and opportunity for researchers, practitioners, and policy-makers to work together to determine how best to plan and implement in-school mentoring programs.

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### Appendix A: Assessment Measures of Socio-Emotional Development and Literacy

Assessment Measure	Subtest
<b><i>Socio-Emotional Development</i></b>	
Behavior Assessment System for Children – Self-Report of Personality (BASC-SRP)	School Maladjustment, Clinical Maladjustment, Personal Adjustment, and Emotional Symptoms
Behavior Assessment System for Children – Teacher Rating Scale (BASC-TRS)	Externalizing Problems, Internalizing Problems, School Problems, Behavior Symptoms, and Adaptive Skills
Self-Perception Profile for Children (Grades 3-5)	Athletic Competence, Behavioral Conduct, Global Self-Worth, Physical Appearance, Scholastic Competence, Social Acceptance
Systematic Screening for Behavior Disorders (SSBD)- Peer Social Behavior	Positive Social Interaction
<b><i>Literacy</i></b>	
Elementary Reading Attitude Survey	Recreational Reading, Academic Reading, Total Score
Wechsler Individual Achievement Test (WIAT)	Word Reading, Reading Comprehension, & Listening Comprehension
Narrative/Expository Tasks	Narrative Task A1, Narrative Task A3, and the Expository Task