

2010

Building Roads for Students' Success HIGHLIGHTS



Ottawa Region MISA PNC

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Ottawa MISA PNC Member Boards

Algonquin and Lakeshore Catholic District School Board
Catholic School Board of Eastern Ontario
Hastings and Prince Edward District School Board
Limestone District School Board
Ottawa Catholic School Board
Ottawa Carleton District School Board
Ottawa Children's Treatment Centre
Renfrew County Catholic District School Board
Renfrew County District School Board
Upper Canada District School Board

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MISA RESEARCH CAPACITY BUILDING PILOT PROJECT REPORT

Building Roads for Students' Success

Introduction

During the 2009-2010 school year, the Ontario Ministry of Education provided research funding to each of seven Regional Managing Information for Student Achievement Professional Network Centres (MISA PNCs). MISA PNCs were to undertake activities designed to expand and strengthen education research and evaluation capacity within and among school boards, MISA PNCs, regional networks, and the Ministry with a focus on the use of evidence to inform practice and increase student achievement.

The Ottawa Region MISA PNC partnered with researchers from Carleton University and Queen's University to undertake a project that aimed: 1) To better understand the extent individual, class, and school factors were associated with successful academic outcomes for students, and 2) To better understand the impact of the school effectiveness framework on classroom practice.

The project entitled "Building Roads for Students' Success" included both a predictive modeling approach (quantitative), and a review of policies, structures and practices associated with school improvement efforts, specifically using qualitative procedures focused on the School Effectiveness Framework. A full report, complete with all analyses and an in depth discussion of the implications of those results was developed. The purpose of this report is to provide a summary of the full report.

Participants

Each of the nine school boards in the Eastern Region was invited to participate in the *Building Roads for Students' Success* project. School boards who volunteered to participate in the project were required to provide student and school data for the quantitative analyses, and help organize interviews and focus groups within each board for the qualitative analyses. Six school boards provided data for the quantitative analyses, and eight boards participated in at least one interview or focus group.

Methods

There were two main components to the research project; the Quantitative Analysis (HLM), and the Qualitative Analysis (interviews and focus groups). A critical review of the SEF was also conducted to examine the theoretical and structural foundations and practices upon which the Framework was based.

Quantitative Analyses -Hierarchical Linear Modeling (HLM)

The quantitative analyses were guided by the underlying principle that student achievement is a complex construct not easily explained by the examination of single variables, or reliance on single outcome measures.

Those interested in school effectiveness research are looking for ways to explore the effects of teachers' practices and school policies while also recognizing the differences in the groups of students that communities, schools, and teachers serve. These student and school level effects are important to separate if we want to fairly explore the differences in achievement we see amongst schools. Student effects represent the students' backgrounds and experiences that may have an impact on their learning.

These include their gender, IEP status, family background, access to resources, school attendance, and educational related activities, just to name a few. School effects include contextual school variables (e.g., school size, community location, or class size), and school practices and policies (e.g., leadership style, literacy teaching practices, or homework policies) that may also impact students' learning.

The primary analytic procedure used was Hierarchical Linear Modeling (HLM). As a statistical method, HLM can help to assess the nature of the relationship between student outcomes, and class, school and regional outcomes (e.g., Rogers, Ma, Klinger et al, 2006). Hierarchical linear models are the most effective ways to investigate complex educational relationships, enabling the simultaneous exploration of both the student and school level factors associated with students' educational outcomes.

The last 4 years of MISA funding has allowed most boards to organize their databases in such a way that student achievement and outcome data is reasonably accessible. Similarly, Ministry requirements for reporting on certain key indicators in high school has meant that every board now organizes specific data pieces around OEN's and in relatively accessible formats. An initial meeting with representatives from each of the school boards in the region was used to determine which variables would be available for inclusion in the data sets. A data template was created and provided to each board. A data analyst from each of the six participating school boards used the template to create the student and school level database and submit the database to a secure website. Data was depersonalized to ensure confidentiality. Once the data bases were downloaded onto the website, the process of data merging and preparation began.

While the data were merged relatively easily, the process of data preparation was much more complex. Many of the school boards report data in different ways and there was difficulty aligning reporting formats. Some of the boards were able to convert the raw data into numerical values described on the template while others were not. Also, many of the requested data were not readily available across school boards, for example, family background, individual attendance figures, suspensions, and IEP status. Similarly, school level data were not equally available across the schools (e.g., ratio of students to teachers). An important finding of this aspect of the project is the ongoing need to create a more universal system for data collection and management across school boards.

Student level variables examined included gender, number of parents (2 parent family vs. other family structure, typically 1 parent family), IEP status, immigrant status, first language, attendance, suspensions (both number of days and if the student had ever been suspended), report card marks for language arts, mathematics, and science, learning skills (from students report cards) and where appropriate, EQAO results. School level variables included school type (public or catholic), inclusion of a French program (extended French or French Immersion), percentage of students with an IEP, Immigrant status, and percentage of non-English First language students. We also included absentee and suspension rates. Separate analyses were conducted for elementary (K-6), intermediate (Grades 7 - 8) and secondary students (grades 9 - 10).

Qualitative Analyses

A series of interviews with board level SEF leads, and school principals selected by the SEF lead in the board were conducted. To examine the actual implementation of the SEF across schools and school boards we worked with the SEF leads to organize and conduct focus groups with teachers from the school board. Interviews were conducted in person or by telephone by one of the research team.

Analyses of the interviews and focus groups were completed using NVivo, a qualitative analysis software program. These analyses enabled the identification of themes , including commonalities and important differences between groups.

OUTCOMES - Impact on Practice and Student Achievement

A summary of results has been organized into three parts:

- Summary of the Review of the SEF
- HLM analyses of elementary, intermediate and secondary data
- Summary of qualitative data including interview and focus group results

Summary of Review of the SEF Framework

The School Effectiveness Framework represents the current effort of the Literacy and Numeracy Secretariat and Ontario educators to build capacity within schools and school boards for the purpose of improving academic achievement of students in Ontario. This review provided a critical overview of the framework along with supporting research that has helped shape the current educational plan in the province.

After a review of the SEF framework and supporting references, it was suggested that there is an ongoing need to explore in critical detail the operational mechanisms that actually improve teaching and learning and to provide research evidence supporting the efficacy of policy positions around key concepts found in the School Effectiveness Framework, such as Professional Learning Communities, Assessment For Learning, and Capacity Building. These concepts are extremely complex and the components of them have yet to be fully explored.

The review suggested although many of the theoretical foundations on which the SEF is based have intuitive appeal, they have yet to be supported by empirical research at the school or classroom level. For the most part, it appears that the successes realized through implementation of the SEF are primarily anecdotal and based on individual or small group reports. Typically, there are no centrally collected data in schools, or school boards regarding practices or processes, making it difficult to determine if student successes' resulted from implementation of the SEF or individual school improvement efforts undertaken independent of the SEF. Furthermore, principals and specifically teachers reported that they continued to work with concepts presented in the SEF framework, but few had a complete understanding of the document. This does not mean the SEF is ineffective, but it does mean there is still much to learn, particularly with respect to teasing apart those aspects of the SEF that are likely to yield the greatest return in terms of student success. Without ongoing efforts to examine, promote, and communicate the results of sound educational research, the effective operational components of the SEF will remain elusive and the SEF may struggle to be an effective framework to guide school improvement. It was suggested that there is a need to continue research such as partnerships between school districts and universities to create systematic, evidence-based mechanisms to support principals and teachers in delineating the most effective learning and assessment practices for student success.

HLM Quantitative Results

In order to better understand factors impacting on students' success, quantitative analysis were done at the Elementary, Intermediate, and Secondary levels.

Elementary Student Analyses (K-6)

Multilevel analyses were conducted with the Kindergarten to Grade 6 data, using students' final language arts, math, and science report card marks as dependent variables. Factors at the student level and at the school level that affected final mark.

- The final model could explain 56.2%, 46.9% and 52.2% of the differences in students' language arts, math and science marks, respectively.
- School level factors only accounted for a relatively small portion of the school level variance, typically less than 5%.
- Work habits were the strongest predictor of student achievement.
- Very few school level differences were found. Schools that had a French track within the school had slightly higher marks in each of the three subject areas.

A second set of Multilevel analyses were completed using the Grade 3 and 6 EQAO reading, writing, and mathematics results as outcome variables. Prior to conducting these analyses, the relationships between EQAO scores and report card marks were determined.

- The report card grades (e.g. language arts, math, and science) had a stronger correlations to other report card grades than to corresponding EQAO assessment . The science scores had the lowest correlations with the EQAO results.
- Grade 6 science report card marks had lower correlations with all of the other report card marks and EQAO measures as compared to the Grade 3 science marks.
- Approximately 85% of the variance in students' EQAO reading (EQAO-R) scores can be attributed to student level factors, independent of the schools the students attended. In comparison, the remaining 15% of the variability in students' EQAO scores could be attributed to the schools these students attend. Similar results were found for students' EQAO writing and mathematics scores.

Multilevel models were created to determine which student and school level factors were significantly associated with differences in student outcomes. The results provide the change in the EQAO score that could be expected per each unit change in the predictor variables.

Generally, all three models were relatively similar, although some interesting differences were found.

- The positive coefficient for Grade indicates that Grade 6 students did slightly better than Grade 3 students on their respective EQAO assessments, when other variables were controlled.
- Students with an IEP obtained EQAO scores that were approximately 0.1 to 0.2 of a level lower than their non IEP counterparts, with the greatest difference occurring for the reading results.
- In the absence of other variables (e.g., IEP status, French language program, immigrant status, number of parents, English as a first language)), females reported higher scores than males. In contrast, in the presence of other variables, the relationship between gender and EQAO reading scores was negative (females scoring lower). Students in French Immersion programs had slightly higher scores on the EQAO assessments. Students whose first language was not English had lower EQAO reading scores.
- Students' school marks were positively associated with their EQAO scores, and positive work habits were also associated with higher EQAO scores. School level effects revealed students in larger schools had slightly higher EQAO scores whereas students in schools that had a greater

range of Grades within the school, tended to have slightly lower EQAO scores. Schools with a larger proportion of students with IEP's had lower EQAO scores.

- Surprisingly, there was a negative association between EQAO scores and program tracks. Schools that had both an English and French program had lower EQAO scores, though students in French Immersion themselves tended to have higher scores.
- The final model explained 40.9% of the variability in students' EQAO reading scores. This model also accounted for 44.4% of the school level variance, with the majority of this variance (40.9%) explained by the school level factors. Similar findings were obtained for the EQAO writing and mathematics scores.

Intermediate Student Analyses (Grades 7 & 8)

Multilevel analyses were conducted with the Grade 7 and 8 data, using students' final language arts, math, and science marks (expressed as a %) as dependent variables.

- Due to missing data issues, students' Grade 3 or Grade 6 EQAO scores were not included. The original sample contained 178 schools. However, due to missing school level data for suspension rates and attendance, the sample was reduced to 158 schools.
- The Null model provides a measure of the amount of variance at each level, in this case at the student and school levels. Not surprisingly, the majority of the variance was at the student level (within schools). As an example, just under 90% (89.9%) of the variance in students' language arts marks can be attributed to student level factors, independent of the schools the students attend.
- In contrast, just over 10% (10.1%) of the variability in students' language arts marks can be attributed to the schools these students attend. Similar results were found for students' math and science marks.

The next step was to create multilevel models to determine which student and school level factors were significantly associated with differences. The results provide the expected change in the average percentage grade that could be expected per each unit change in the predictor variables.

- In the presence of the other predictor variables, students from two parent families had slightly higher grades in each subject area (0.84% in language arts to 1.15% in Science) than those students from other parental situations (typically single parent).
- Students with an IEP would be expected to have achievement marks that were 2.5 to 2.9% lower than their non IEP counterparts.
- Absenteeism had a small but significant effect on students' achievement. For every 10 days a student was absent from school, their average mark would be predicted to be 0.37% lower than a student who was not absent at all during the year.
- Students who were suspended also obtained lower average marks, first if they were suspended at all, and secondly depending on the number of days the student was suspended. The largest impact was on students' science marks.
- Lastly, students' learning skills marks on their report cards predicted levels of achievement. Work habits were strongly related to achievement marks. Students' average grades increased by 6.31% (language arts) to 7.85% (science) for each level of increase in reported Work Habits, from "needs improvement" to "satisfactory" to "good" to "excellent." The other learning skills factor, Conflict Resolution was associated with slightly lower grades. It is possible that students

who scored higher on this factor were also those who were more likely to have to deal with issues of conflict resolution in their school.

- Gender was associated with differences in language arts (girls' average marks were 1.92% higher) and math (boys scored 1.31% higher).
- Students in French language programs had higher average marks in both language arts and math. There was no significant differences associated with students who were immigrants or whose first language was not English.
- Very few school level differences were found. Similar to the elementary panel, schools that had a French track within the school had slightly higher marks in each of the 3 subject areas. These results indicate that students' average marks would be .78% higher in language arts and 1.16% higher in science in schools with an Extended French track. In contrast, schools with higher suspension rates had lower average marks for their students. For every 10 students suspended, the average language arts mark decreased by 0.62 % and the average math mark decreased by 0.57%. Again, this was a decrease in the average mark across the school.
- Schools that had higher proportions of immigrant students had higher average marks in language arts and schools with higher proportions of students whose first language was not English had higher math and science marks. For every 10% increase in the proportion of students whose first language was not English, the average math mark was 0.48% higher across students in the school. One interesting finding was that Grades 7 and 8 students whose school structure included High school grades had slightly higher science marks.

Finally, the proportion of the unexplained variance (as found in the Null model) that could be explained by the student and school level factors was determined.

- The final model could explain 51.6% of the differences in students' language arts marks. Further, this model could account for 53.8% of the school level variance. However, the school level factors accounted for 25.6% of this school level variance, with the remainder being accounted for student level variables. The final models accounted for 38.7% of the student level variance in math marks (44.2% of the school level variance) and 41.8% of the student level variance in science marks (48.4% of the school level variance). Again, the school level factors only accounted for a relatively small portion of the school level factors, indicating that student level variables were more prominent at some schools than others.

Secondary Student Analyses

Multilevel analyses were conducted with the Grade 9 and 10 data, using students' credit accumulation, and Grade 9 EQAO scores (Applied and Academic) as dependent variables. OSSLT results were not included at this time, nor were language arts achievement or math achievement.

- Due to missing data issues, students' Grade 3 or Grade 6 EQAO scores, school level data for socioeconomic status or teacher/student ratios were not included.
- The majority of the variance was at the student level (within schools). As an example, just over 76% (76.4%) of the variance in Grade 9 students' credit accumulation can be attributed to student level factors, independent of the schools the students attend.
- In contrast, over 23% (23.6%) of the variability in Grade 9 students' credit accumulation could be attributed to the schools these students attend. There were some surprisingly high amounts of school level variances found for these sets of data.

The next step was to create multilevel models to determine which student and school level factors were significantly associated with differences. The results provide the expected change in the outcome variable that could be expected per each unit change in the predictor variables

- In the presence of the other predictor variables, students from two parent families had slightly higher credits accumulated (0.08 for Grade 9 and 0.16 in Grade 10) than those students from other parental situations (typically single parent).
- Absenteeism and being suspended were also associated with lower levels of credit accumulation. For example, for every 10 days a student was absent, their predicted credit accumulation would be predicted to be .43 lower. Thus a student with approximately 25 days of missed school could be expected to have 1 full credit less than a student who was not absent at all during the school year (.43 X 2.5 = 1.15). Similarly, students who were suspended had lower levels of credit accumulation.
- Students in applied or locally developed language arts or math programs and those with lower levels of achievement in these subject areas also had lower levels of credit accumulation. Very few school level differences were found, although there were very few school level variables to include in the model. Schools with higher proportions of students with IEPs would be expected to have fewer credits accumulated across their population of students.
- Girls scored slightly lower in both the applied and academic Grade 9 EQAO math.
- Immigrant students did more poorly in the applied math test than in the academic math course. (Note: This may represent two distinct immigrant populations).
- Students with IEPs also performed more poorly in the applied program. Again, it is possible that students with IEPs are less likely to be in the academic math program or those students with IEPs in the academic math programs are well supported.
- Lastly, a student's math achievement served as a strong predictor of EQAO success. This is not surprising given that the correlations between math achievement and EQAO results were 0.63 between math achievement and EQAO results for both math programs.
- The only significant school level predictor for applied math results was that students in larger schools tended to do slightly better (0.05 of a level per every 100 student increase). This may reflect greater supports for these students in larger schools. In contrast, differences in the academic results were associated with the proportion of students suspended, the proportion of students with IEPs and the proportion of students with a first language other than English.

Finally, the proportion of the unexplained variance that could be explained by the student and school level factors was examined.

- The final model could explain 61.8% of the differences in students' Grade 9 credit accumulation and 90.7% of the school level variance. However, the majority of the school level variance was actually explained by student level variables. Similar findings were found for Grade 10 credit accumulation.
- The results suggest that schools in Eastern Ontario may be serving different populations of students, perhaps due to specialty programs offered in different schools, exacerbating the observed school level differences in measures such as credit accumulation.
- After analyses, it appears that these differences are due largely to student level factors rather than the schools that the students attend.
- School level factors were more prominent in explaining the observed differences in academic math achievement, accounting for 27.5% of the variance accounted for at the school level.

Part 3: Qualitative Results Perceptions of the School Effectiveness Framework (SEF) and its impact on school policy and student learning: A qualitative Study

Results

Note: Findings from any focus groups with a self-selected sample are at best, preliminary rather than definitive. Findings from focus groups in the present study can be used to guide further investigation with respect to the implementation and effectiveness of the SEF.

Analysis of interviews and focus groups revealed that teachers and school administrators, while agreeing on some general principles, had different perceptions and opinions as to how and to what extent the SEF may be contributing to students' success.

Overall Summary:

1. Both teachers and school administrators report that school culture seems to be improving and they attribute this to the SEF and its push towards greater consistency and accountability;
2. However, teachers and school administrators' perceptions differ in the extent to which they believe the SEF is benefitting student learning and their teaching practices.
3. Teachers express a serious concern for the fact that inequality within the classroom is promoted by the push to focus on students who can be moved from a level 2 to a level 3, thus neglecting the level 1 students;
4. Teachers expressed that the over-emphasis on literacy and numeracy may be resulting in a loss of skills in other areas, such as the arts;
5. Teachers also reported that they need more support from the boards in order to implement the SEF as it is intended;
6. Overall, the teachers' views as to whether the framework was impacting on students learning were mixed: on one hand they agreed that the SEF may have changed the focus of teaching away from a content based approach to the acquisition of higher level thinking and critical analysis; on the other hand they agreed that this approach is benefitting only a specific group of students and the gap between the children who are struggling and those who are meeting the goals is widening considerably.
7. Finally, teachers reported that in their opinion there is disconnect between the processes and the learning that is occurring in class and the type of learning that is evaluated by the EQAO testing.

Highlights of Themes from the Qualitative Portion of the Study:

- School administrators (both principals and SEF-leads), despite acknowledging the challenges of implementing the SEF in their schools and districts, expressed unanimous enthusiasm for what the SEF had brought to their institution(s). More specifically, principals and SEF-leads referred to dramatic changes in the *culture* within their organization which is described as more oriented towards accountability and transparency than before the SEF was implemented.
- Principals and SEF leads provided accounts of improved sense of *collegiality* between teachers, as well as *deeper learning* (i.e., higher order thinking skills; critical thinking) occurring among the students and the use of *common language* among both teachers and students were reported by these sources.
- Teachers' *accounts* were similar to the extent that they also reported an improved sense of *collegiality* which they attributed to the fact that by having to be more accountable they engaged more in meaningful interactions with their colleagues:

“There’s more accountability now ... Before ...you could close your door and nobody really knew what was going on behind it, and nobody ever really questioned the marks you were giving students or how you were coming up with those marks or how they aligned to other students.”

- Teachers’ accounts also included comments on *deeper learning* and the greater *consistency* in assessments and grading within the school:
- Teachers also talked about the increasing focus on *making connections and inferences* which is intended to make links between subjects, and subsequently, transforming the links into larger ideas:
- Teachers and administrators had similar perceptions about the general principles of the SEF, however, teachers were not as enthusiastic as the school administrator about other aspects of the framework. Specifically, teachers expressed great concern for how implementing the SEF is impacting on the students who are struggling or have specific learning challenges, such as , ELL’s or children with learning disabilities, behavioural, and/or emotional problems:
- The perception that the SEF has shifted the focus of the teachers’ efforts from teaching to all children to teaching primarily to those ‘in the middle’ was also very prevalent in the focus group discussions, and a reason for great concern for the participants:

“Well the conversations that happened time and time again with, through SEF and the OFIP was, you know, we have all of these populations of students in the Province who are just so close to the provincial achievement, like they’re just, if we could just get all of those many thousands of students who are so close to meeting the provincial standard, to the provincial standard, and I always thought am I the only one who thinks that maybe the problem is the provincial standard”.

- Teachers also indicated that students were lagging behind in the acquisition of basic skills and other broader subject areas such as social studies, science, physical education and visual arts. They attribute this to the framework’s over-emphasis on numeracy and literacy:
- Also, teachers worried that the type of learning that was occurring in the classroom was not adequately reflected in the EQAO testing and its results:
“Yeah it’s hard, it doesn’t align right. It doesn’t align”.
- In terms of assessment of student learning, school administrators and teachers alike reported that they perceived significant changes since the implementation of the SEF in the way students are assessed. Specifically, a shift away from the sole reliance of summative assessments was discussed:

“I find that I’m more focused because I have that goal, what we’re working towards, that summative task, whereas, before when I first started I was marking and doing all this assessment all the time, but I found that just with that focus plan you do less better, like you work on those quality pieces and feel confident that when you’re assessing those, ... you feel good at giving that mark instead of marking every single thing, so I think having that summative task and the diagnostic has just become kind of a routine. Starting a new unit you do a diagnostic to kind of find out where they are, where they’re starting at, and then work from there, find those weaknesses, and then you’re more focused on where you need to instruct... “

- Teachers and principals talked about the value of conducting assessments of children at the beginning of the year before any instruction has been delivered. They also talked about the value of involving the students in their own evaluations by means of students’ self-assessment tools such as instructional learning charts and peer conferences:
- When asked if they attribute changes in their classroom practices specifically to the SEF, several teachers pointed out that such practices were in place before the SEF was implemented in their school and therefore they do not believe they can be attributed to such initiative:

“The problem, this whole conversation I think and maybe I’m the only person who thinks this, about before SEF and after SEF, our board has had so many initiatives that whether it’s CODE or if it’s OFIP or if it’s SEF or if it’s SIF or if it’s ---, or if it’s, so my colleague and I when were looking at this, think back to a time before SEF and we talked about things, and we’re like is that before SEF?”

- A participant eloquently summarized a common sentiment among the teachers with regards to the SEF and the need for more meaningful guidance through the process:

“...I need somebody to show me how to do it with this entire process, with the guidance that you two have discussed through what you’re experiencing at your school, that’s what we find in our school, where is our bump up, what do we need to do, show me, guide me, give me the tasks, show me how to bump it up and then I’ll do it again because as teachers that’s what we need.”
- Teacher’s accounts also speak to a tension the teachers are thriving for between keeping their own autonomy and decision making power on one hand and the need for clear directives from the school administrators as to how implement the SEF in their classroom.

Implications for Practice and Further Study

- While the foundations for the School Effectiveness Framework have been well established, the actual mechanisms that increase school effectiveness and result in better outcomes for all students is less clear.
- Principals do not refer to the document on a regular basis, suggesting that they do not have a complete understanding of the framework. Similarly, small groups of teachers in schools may be somewhat familiar with the SEF (through leadership positions in the school) and its underlying framework, but it appears that the majority of teachers in the Eastern Region of Ontario schools still have limited knowledge of the document itself. Rather, principals and teachers are working with aspects of the SEF to support school wide improvement efforts.
- Data integration across school boards is a challenge for subsequent analyses and monitoring. While it may be possible to conduct more complete analyses within each board, the merging of data across boards creates a much bigger challenge. School boards are not equally able to obtain and collate data from different sources. Further, the opportunity and resources to collate data are not equal across boards.
- There remains a real gap in available data to evaluate school policies and practices. As a result, it was not possible to examine existing policies and practices that may have a differential impact on student outcomes either at the school or district level.
- The majority of the differences in student outcomes can be attributed to individual student variables.
- Interestingly, there were greater between school variations at the secondary level, although student level variables accounted for much of these differences. This suggests that secondary schools may differentially select students, most likely due to specialty programs. This will have important implications for the SEF when it moves forward to the secondary level. Secondary schools will need to have a very good understanding of their students in order to make realistic and useful school improvement plans.
- EQAO results have a moderately high correlation with the marks determined by teachers. Similarly, the learning skills students’ receive are even more highly correlated with their achievement marks. Certainly, this would be expected as it is believed that the presence of

these learning skills will result in higher achievement. Yet it is unclear if teachers do actually attempt to separate these skills and the resulting marks.

- The relationship learning skills and achievement continues to be complex. Negative correlations between conflict resolution and cooperation skills and academic achievement warrant further investigation. Further study could be completed to better understand the process behind assessing learning skills.

Impact on Research/Evaluation Capacity within School Boards

Within participating school boards, researchers and board contacts worked closely with university partners to develop the methodology for the study. Board contacts were involved in conducting focus groups with teachers, and were able to observe (when possible) interviews with SEF leads and school principals. University partners worked with board researchers to explain the theory and process behind both the qualitative portion of the study (conducting interviews and focus groups, qualitative analysis), and quantitative portion of the study (data quality, data cleansing, data analysis including predictive modeling).

A follow up “debriefing” meeting took place to share and discuss results, and board contacts/researchers were able to follow up with additional questions and feedback about the research process. Further discussions are planned for the fall of 2010.

Communication of Results and Knowledge Mobilization

A summary of communication and knowledge mobilization efforts has been outlined below.

- Throughout the project, ongoing communication took place with board contacts and the MISA PNC Steering Committee.
- Board contacts have been involved in the design and implementation of the project in order to build capacity of board research staff who were involved in teacher focus groups and principal and SEF interviews when possible.
- Regular updates were provided at MISA PNC meetings for Steering Committee members.
- The final comprehensive report provides detailed information to inform key stakeholders such as board research staff, senior administrators, and board contacts.
- One page summaries or “reflection sheets” with key highlights and findings have been developed to help board contacts/research staff share key information with board staffs
- Final “debriefing” day was held with University Partners and board contacts/research staff to discuss process, findings, and next steps.
- University Partners will share key findings with key groups such as MISA, School Effectiveness, and SEF leads.

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